



March 1991  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

225 to 800 Ampere Frames

## Panelboard Replacement Breakers UL Listed

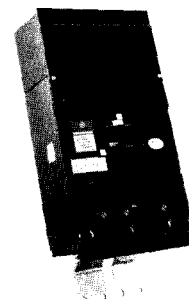
### Type RJ 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(at 40°C) | Catalog Numbers |         |
|---------------------------------------------|-----------------|---------|
|                                             | 2-Pole          | 3-Pole  |
| 70                                          | RJ2070          | RJ3070  |
| 90                                          | RJ2090          | RJ3090  |
| 100                                         | RJ2100          | RJ3100  |
| 125                                         | RJ2125          | RJ3125  |
| 150                                         | RJ2150          | RJ3150  |
| 175                                         | RJ2175          | RJ3175  |
| 200                                         | RJ2200          | RJ3200  |
| 225                                         | RJ2225          | RJ3225  |
| 225                                         | RJ2225K         | RJ3225K |



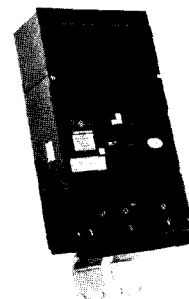
### Type RK 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(at 40°C) | Catalog Numbers |         |
|---------------------------------------------|-----------------|---------|
|                                             | 2-Pole          | 3-Pole  |
| 50                                          | RK2050          |         |
| 70                                          | RK2070          | RK3070  |
| 90                                          | RK2090          | RK3090  |
| 100                                         | RK2100          | RK3100  |
| 125                                         | RK2125          | RK3125  |
| 150                                         | RK2150          | RK3150  |
| 175                                         | RK2175          | RK3175  |
| 200                                         | RK2200          | RK3200  |
| 225                                         | RK2225          | RK3225  |
| 225                                         | RK2225K         | RK3225K |



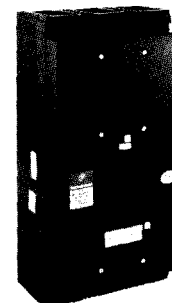
### Type RKL 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(at 40°C) | Catalog Numbers |          |
|---------------------------------------------|-----------------|----------|
|                                             | 2-Pole          | 3-Pole   |
| 125                                         | RKL2125         | RKL3125  |
| 150                                         | RKL2150         | RKL3150  |
| 175                                         | RKL2175         | RKL3175  |
| 200                                         | RKL2200         | RKL3200  |
| 225                                         | RKL2225         | RKL3225  |
| 250                                         | RKL2250         | RKL3250  |
| 300                                         | RKL2300         | RKL3300  |
| 350                                         | RKL2350         | RKL3350  |
| 400                                         | RKL2400         | RKL3400  |
| 400                                         | RKL2400K        | RKL3400K |



### Type RLM 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(at 40°C) | Catalog Numbers |          |
|---------------------------------------------|-----------------|----------|
|                                             | 2-Pole          | 3-Pole   |
| 125                                         | RLM2125         | RLM3125  |
| 150                                         | RLM2150         | RLM3150  |
| 175                                         | RLM2175         | RLM3175  |
| 200                                         | RLM2200         | RLM3200  |
| 225                                         | RLM2225         | RLM3225  |
| 250                                         | RLM2250         | RLM3250  |
| 275                                         | RLM2275         | RLM3275  |
| 300                                         | RLM2300         | RLM3300  |
| 325                                         | RLM2325         | RLM3325  |
| 350                                         | RLM2350         | RLM3350  |
| 400                                         | RLM2400         | RLM3400  |
| 450                                         | RLM2450         | RLM3450  |
| 500                                         | RLM2500         | RLM3500  |
| 550                                         | RLM2550         | RLM3550  |
| 600                                         | RLM2600         | RLM3600  |
| 600                                         | RLM2600K        | RLM3600K |
| 700                                         | RLM2700         | RLM3700  |
| 800                                         | RLM2800         | RLM3800  |





**Type RHK 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |          |
|--------------------------------------------|-----------------|----------|
|                                            | 2-Pole          | 3-Pole   |
| 50                                         | RHK2050         | —        |
| 70                                         | RHK2070         | RHK3070  |
| 90                                         | RHK2090         | RHK3090  |
| 100                                        | RHK2100         | RHK3100  |
| 125                                        | RHK2125         | RHK3125  |
| 150                                        | RHK2150         | RHK3150  |
| 175                                        | RHK2175         | RHK3175  |
| 200                                        | RHK2200         | RHK3200  |
| 225                                        | RHK2225         | RHK3225  |
| 225                                        | RHK2225K        | RHK3225K |

Refer to photograph for Type RK on page 33. Type RHK is the same, except for the molding material.

**Type RHKL 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |           |
|--------------------------------------------|-----------------|-----------|
|                                            | 2-Pole          | 3-Pole    |
| 125                                        | RHKL2125        | RHKL3125  |
| 150                                        | RHKL2150        | RHKL3150  |
| 175                                        | RHKL2175        | RHKL3175  |
| 200                                        | RHKL2200        | RHKL3200  |
| 225                                        | RHKL2225        | RHKL3225  |
| 250                                        | RHKL2250        | RHKL3250  |
| 300                                        | RHKL2300        | RHKL3300  |
| 350                                        | RHKL2350        | RHKL3350  |
| 400                                        | RHKL2400        | RHKL3400  |
| 400                                        | RHKL2400K       | RHKL3400K |

Refer to photograph for Type RKL on page 33. Type RHKL is the same, except for the molding material.

**Type RHLM 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |           |
|--------------------------------------------|-----------------|-----------|
|                                            | 2-Pole          | 3-Pole    |
| 125                                        | RHLM2125        | RHLM3125  |
| 150                                        | RHLM2150        | RHLM3150  |
| 175                                        | RHLM2175        | RHLM3175  |
| 200                                        | RHLM2200        | RHLM3200  |
| 225                                        | RHLM2225        | RHLM3225  |
| 250                                        | RHLM2250        | RHLM3250  |
| 275                                        | RHLM2275        | RHLM3275  |
| 300                                        | RHLM2300        | RHLM3300  |
| 325                                        | RHLM2325        | RHLM3325  |
| 350                                        | RHLM2350        | RHLM3350  |
| 400                                        | RHLM2400        | RHLM3400  |
| 450                                        | RHLM2450        | RHLM3450  |
| 500                                        | RHLM2500        | RHLM3500  |
| 550                                        | RHLM2550        | RHLM3550  |
| 600                                        | RHLM2600        | RHLM3600  |
| 600                                        | RHLM2600K       | RHLM3600K |
| 700                                        | RHLM2700        | RHLM3700  |
| 800                                        | RHLM2800        | RHLM3800  |

Refer to photograph for Type RLM on page 33. Type RHLM is the same, except for the molding material.

**Accessories and Modifications**

All accessories and modifications available for Replacement Breakers Types KA, LA and MA are also available for Panelboard Replacement Breakers Types RJ, RK, RKL, RLM, RHK, RHKL, and RHLM.

**List Prices**

See Price List 29-021, Dis. RCB-2.

**Terminals**

Breakers include load terminals only.

| Panelboard<br>Circuit Breakers | Standard Load Terminals<br>Supplied |
|--------------------------------|-------------------------------------|
| RJ                             | TA225LA1                            |
| RK                             | TA225LA1                            |
| RHK                            | TA225LA1                            |
| RKL                            | TA400LA1                            |
| RHKL                           | TA400LA1                            |
| RLM }                          | { TA700MA1 (for <600A)              |
| RHLM }                         | { TA800MA1 (for 700-800A)           |

**50°C Calibration**

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

**Special Breakers<sup>①</sup>**

Magnetic Only (includes Load Terminals). Available for all ampere ratings for 2- and 3-pole RJ, RK, RKL, RLM, RHK, RHKL, and RHLM.

High magnetic molded case switches (K suffix) are available to replace out-of-production non-automatic breakers (N suffix).

Factory reconditioned K, KL and L Tri-Pac styles also available.①

**Additional Information**

See instruction leaflets for detailed mounting information:

|           |            |
|-----------|------------|
| RJ        | I.L. 15563 |
| RK, RHK   | I.L. 15564 |
| RKL, RHKL | I.L. 15565 |
| RLM, RHLM | I.L. 15566 |

① Not listed with Underwriters' Laboratories, Inc.



March 1991  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

225 to 800 Ampere Frames

## Panelboard Replacement Breakers UL Listed

### Panelboard Replacement Breaker Interrupting Amp Ratings

| Breaker Type | Amps    | 240 Vac Sym | 240 Vac Asym | 480 Vac Sym | 480 Vac Asym | 600 Vac Sym | 600 Vac Asym | 250 Vdc |
|--------------|---------|-------------|--------------|-------------|--------------|-------------|--------------|---------|
| RJ           | 70-225  | 22000       | 25000        | 18000       | 20000        | 14000       | 15000        | 10000   |
| RJK          | 70-225  | 25000       | 30000        | 22000       | 25000        | 22000       | 25000        | 10000   |
| RJKL         | 125-400 | 42000       | 50000        | 30000       | 35000        | 22000       | 25000        | 20000   |
| RK           | 70-225  | 25000       | 30000        | 22000       | 25000        | 22000       | 25000        | 10000   |
| RKL          | 125-400 | 42000       | 50000        | 30000       | 35000        | 22000       | 25000        | 20000   |
| RLM          | 125-800 | 40000       | 50000        | 30000       | 35000        | 22000       | 25000        | 20000   |
| RHK          | 70-225  | 65000       | 75000        | 35000       | 40000        | 25000       | 30000        | 20000   |
| RHKL         | 125-400 | 65000       | 75000        | 35000       | 40000        | 25000       | 30000        | 20000   |
| RHLM         | 125-800 | 65000       | 75000        | 35000       | 40000        | 25000       | 30000        | 20000   |

### Replacement Chart

| Current Panelboard Circuit Breaker Type | Out-of-Production Circuit Breaker Type <sup>①</sup> | Volts Ac (50/60 Hz) |
|-----------------------------------------|-----------------------------------------------------|---------------------|
| RJ                                      | J                                                   | ..                  |
| RK                                      | K                                                   | ..                  |
| RHK                                     | HK                                                  | ..                  |
| RKL                                     | KL                                                  | ..                  |
| RHKL                                    | HKL                                                 | ..                  |
| RLM                                     | LM                                                  | ..                  |
| RHLM                                    | HLM                                                 | ..                  |
| LA                                      | JK                                                  | ..                  |
| LA                                      | JKL                                                 | ..                  |

Panelboard Replacement Breakers can be installed in the following styles of old Westinghouse lighting panelboards:

|         |          |
|---------|----------|
| ABH     | NEB      |
| A2B     | NHDP     |
| NAB     | NHEB     |
| NA1B    | NH1B     |
| NA1B-LX | NLAB-AB  |
| NDP     | NLAB-ABH |

These breakers can be installed as vertical main breakers or as vertically mounted subfeed breakers.

Panelboard Replacement Circuit Breakers have noninterchangeable trip units and the same interrupting capacity as the out-of-production circuit breakers they replace.

### Notes

Some Panelboard Replacement Breakers do not have the same physical dimensions or mounting holes as the breakers they replace. Mounting hardware is provided with each breaker to resolve these differences, and must be installed to ensure a proper fit.

<sup>①</sup> Last manufacture date - 1967



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Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



September 1991  
Supersedes Technical Data 29-121,  
pages 1-2, dated March 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

For Lighting, Distribution and Power Circuits

## Replacement AB DE-ION® Circuit Breakers

All Westinghouse molded case circuit breakers are built to meet requirements of NEMA Standard AB-1-1986

### Ordering Information

AD De-ion® circuit breakers are to be ordered as follows:

#### Fixed Trip Breakers

Order complete breaker or complete breaker less terminals plus required terminals.

#### Interchangeable Trip Breakers

Order frame, trip unit and terminals.

### When Ordering, Specify:

Catalog Number or Style Number, Quantity

### List Prices

To obtain list prices of breakers, modifications and accessories, locate style or catalog number from appropriate page of Technical Data and refer to Price List 29-021.

Where mounting hardware is desired, specify quantity and style number. No charge when ordered with complete breaker.

If breakers are to be modified, order "similar to" a standard catalog number, and describe the special features desired.

Available accessories are listed beginning on page 19. In some cases, accessories are listed for sale in quantity lots. In these instances, order item in quantity lots indicated.

**Minimum Quantities:** For a basic part or common part as shown on individual breaker pages, minimum ordering quantities are listed.

### Molded Case Switches

Molded Case Switches are Underwriters' Laboratories, Inc. listed devices and are available as standard type with no overcurrent protection, and high magnetic trip type with fixed trip setting.

For application information and UL Inc. listed withstand ratings, refer to Application Data 29-160.

### Further Information

#### AB De-ion® Circuit Breakers

Price List 29-021  
Application Data 29-160  
Dimension Sheet 29-170

### Obsolete Breaker Guide®

The breakers in this Technical Data are an obsolete design and are supplied for replacement only. They are replaced by Series C breakers shown in Frame Books 29-101, 29-102, 29-103, 29-104, 29-111 and 29-111A.

### Index Breaker

### Page Numbers

| Selection Guide | Ordering Data |
|-----------------|---------------|
|-----------------|---------------|

#### Standard Breakers 100 and 150 Amperes

|                    |   |       |
|--------------------|---|-------|
| Type EB, EHB, FB   | 2 | 7     |
| <b>225 Amperes</b> |   |       |
| Type JA, KA        | 4 | 11,12 |
| <b>250 Amperes</b> |   |       |
| Type JB, KB        | 2 | 9,10  |
| <b>400 Amperes</b> |   |       |
| Type DA            | 2 | 5     |
| Type LBB, LB       | 3 | 13,14 |

#### MARK 75® Breakers

|                    |   |    |
|--------------------|---|----|
| <b>150 Amperes</b> |   |    |
| Type HFB           | 3 | 7  |
| <b>225 Amperes</b> |   |    |
| Type HKA           | 4 | 12 |
| <b>250 Amperes</b> |   |    |
| Type HKB           | 3 | 10 |
| <b>400 Amperes</b> |   |    |
| Type HLB           | 3 | 14 |

**Molded Case Switches** 17,18

**Modifications, Accessories,  
Motor Operators** 19-26

#### Motor Circuit Protector

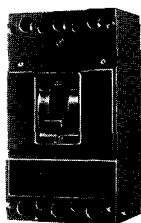
|                 |    |
|-----------------|----|
| MCP             | 27 |
| EL Limiter      | 27 |
| MCP Accessories | 27 |

**Panelboard Replacement  
Breakers** 29-35



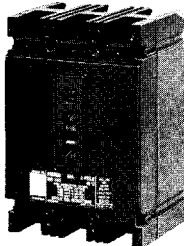
## Standard Breaker Selection Guide

DA



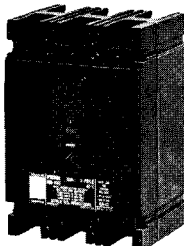
2, 3 Poles<sup>①</sup>  
250-400 Amps  
@40°C

EB



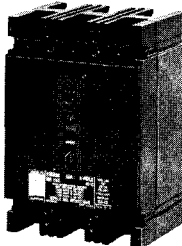
1, 2, 3 Poles  
15-100 Amps  
@40°C

EBH



1, 2, 3 Poles  
15-100 Amps  
@40°C

FB



2, 3 Poles  
15-150 Amps  
@40°C

JB, KB



2, 3 Poles<sup>①</sup>  
70-250 Amps  
@40°C

LB, LBB<sup>②</sup>



2, 3 Pole<sup>①</sup>  
70-400 Amps  
@40°C

### Dimensions, Inches, 3 Pole Breakers

| H                              | W                             | D                              | H | W                             | D                             | H | W                             | D                             | H  | W                             | D                              | H                              | W                             | D                              |
|--------------------------------|-------------------------------|--------------------------------|---|-------------------------------|-------------------------------|---|-------------------------------|-------------------------------|----|-------------------------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|
| 10 <sup>1</sup> / <sub>8</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>16</sub> | 6 | 4 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>8</sub> | 6 | 4 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>8</sub> | 10 | 4 <sup>7</sup> / <sub>8</sub> | 4 <sup>1</sup> / <sub>16</sub> | 10 <sup>1</sup> / <sub>8</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>16</sub> |

### Ac Ratings I. C. Ratings Shown 18,000 are Symmetrical<sup>②</sup>; Ratings Shown 20,000 are Asymmetrical

|                                                          |                                                                                                                       |                                                                                                                                                                 |                                                                                                                                                            |                                                                                                                                                            |                                                                                                                                                            |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 240 Volts Max.<br>Amps I. C.<br>25,000 and <b>22,000</b> | 120, 240 Volts Max.<br>Amps I. C.<br>120 Volts: 10,000<br>and <b>10,000</b><br>240 Volts: 10,000<br>and <b>10,000</b> | 277, 480 Volts Max.<br>Amps I. C.<br>240 Volts: 20,000<br>and <b>18,000</b><br>480 Volts: 15,000<br>and <b>14,000</b><br>277 Volts: 15,000<br>and <b>14,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 20,000<br>and <b>18,000</b><br>480 Volts: 15,000<br>and <b>14,000</b><br>600 Volts: 15,000<br>and <b>14,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 30,000<br>and <b>25,000</b><br>480 Volts: 25,000<br>and <b>22,000</b><br>600 Volts: 15,000<br>and <b>14,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 50,000<br>and <b>42,000</b><br>480 Volts: 35,000<br>and <b>30,000</b><br>600 Volts: 25,000<br>and <b>22,000</b> |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Dc Ratings<sup>②</sup>

|                                |                                        |                                     |                                |                                |                                             |
|--------------------------------|----------------------------------------|-------------------------------------|--------------------------------|--------------------------------|---------------------------------------------|
| 250 Volts<br>10,000 Amps I. C. | 125, 125/250 Volts<br>5,000 Amps I. C. | 125, 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>20,000 Amps I. C. <sup>③</sup> |
|--------------------------------|----------------------------------------|-------------------------------------|--------------------------------|--------------------------------|---------------------------------------------|

### Accessories and Modifications See pages 19-28 for Description and Underwriters' Laboratories, Inc. Status

|                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Auxiliary Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices<br>Undervoltage Trip<br>Alarm Switch | Shunt Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices<br>Undervoltage Trip | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ① 2-pole unit supplied in 3-pole frame.  
② Underwriters' Laboratories, Inc. listed.  
③ Ratings above 10,000 amps not UL listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



September 1991  
Supersedes Technical Data 29-121,  
pages 19-20, dated March 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Accessories

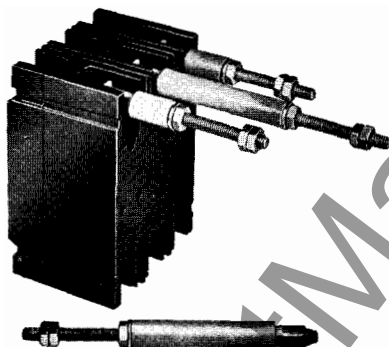
### Accessories

List Prices: See Price List 29-021, Dis. RCB-2

#### Rear Connected Studs<sup>①</sup> ②

For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, and HLB

For complete stud assembly, order a stud  
and appropriate tube based on thickness of  
customer's mounting panel. A short stud  
must be assembled adjacent to a long stud  
to maintain clearances required by Under-  
writers' Laboratories, Inc. Two studs are  
required per pole. Refer to DS 29-170 for  
stud sizes and extensions behind breaker.



For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, AND HLB

| Mounting<br>Panel<br>Thickness,<br>Inches | Stud   |                 | Tube <sup>②</sup> |                 |
|-------------------------------------------|--------|-----------------|-------------------|-----------------|
|                                           | Length | Style<br>Number | Length            | Style<br>Number |
| <b>DA, LB, LBB, HLB Breakers</b>          |        |                 |                   |                 |
| 1/4 - 1                                   | Short  | 656D565G03      | 27/32             | 313C909H17      |
|                                           | Long   | 656D565G04      | 325/32            | 313C909H20      |
| 1/2 - 3/4                                 | Short  | 656D565G03      | 13/32             | 313C909H18      |
|                                           | Long   | 656D565G04      | 41/32             | 313C909H21      |
| 3/4 - 1/2                                 | Short  | 656D565G03      | 111/32            | 313C909H19      |
|                                           | Long   | 656D565G04      | 49/32             | 313C909H22      |
| <b>EB, EHB, FB, HFB, (100 Amp Max.)</b>   |        |                 |                   |                 |
| 1                                         | Short  | 451D874G01      | 11/16             | 32B9446H20      |
|                                           | Long   | 451D874G02      | 37/16             | 32B9446H24      |
| 11/16 - 15/16                             | Short  | 451D874G01      | 13/8              | 32B9446H21      |
|                                           | Long   | 451D874G02      | 33/8              | 32B9446H25      |
| 3/8 - 5/8                                 | Short  | 451D874G01      | 111/16            | 32B9446H22      |
|                                           | Long   | 451D874G02      | 41/16             | 32B9446H26      |
| 1/4 - 5/16                                | Short  | 451D874G01      | 2                 | 32B9446H23      |
|                                           | Long   | 451D874G02      | 43/8              | 32B9446H27      |
| <b>FB, HFB 150 Amp Breakers</b>           |        |                 |                   |                 |
| 1                                         | Short  | 374D883G01      | 11/16             | 374D883H06      |
|                                           | Long   | 374D883G02      | 45/16             | 374D883H10      |
| 11/16 - 15/16                             | Short  | 374D883G01      | 13/8              | 374D883H07      |
|                                           | Long   | 374D883G02      | 45/8              | 374D883H11      |
| 3/8 - 5/8                                 | Short  | 374D883G01      | 111/16            | 374D883H08      |
|                                           | Long   | 374D883G02      | 415/16            | 374D883H12      |
| 1/4 - 5/16                                | Short  | 374D883G01      | 2                 | 374D883H09      |
|                                           | Long   | 374D883G02      | 5/4               | 374D883H13      |
| <b>JA, KA, HKA Breakers</b>               |        |                 |                   |                 |
| 3/4 - 1                                   | Short  | 656D565G01      | 27/32             | 456D983H05      |
|                                           | Long   | 656D565G02      | 325/32            | 456D983H08      |
| 1/2 - 3/4                                 | Short  | 656D565G01      | 13/32             | 456D983H06      |
|                                           | Long   | 656D565G02      | 41/32             | 456D983H09      |
| 1/4 - 1/2                                 | Short  | 656D565G01      | 111/32            | 456D983H07      |
|                                           | Long   | 656D565G02      | 49/32             | 456D983H10      |
| <b>JB, KB, HKB Breakers</b>               |        |                 |                   |                 |
| 3/4 - 1                                   | Short  | 5010D23G01      | 27/32             | 456D983H05      |
|                                           | Long   | 5010D23G02      | 33/8              | 5010D23H05      |
| 1/2 - 3/4                                 | Short  | 5010D23G01      | 13/32             | 456D983H06      |
|                                           | Long   | 5010D23G02      | 43/8              | 5010D23H06      |
| 1/4 - 1/2                                 | Short  | 5010D23G01      | 111/32            | 456D983H07      |
|                                           | Long   | 5010D23G02      | 43/8              | 5010D23H07      |

## Replacement AB DE-ION® Circuit Breakers

### Panelboard Connecting Straps<sup>①</sup>

For connecting line end of breakers to panel-  
board bus.



| Ampere<br>Rating | Connector<br>Type | Style<br>Number |
|------------------|-------------------|-----------------|
|------------------|-------------------|-----------------|

#### EB, EHB, FB, HFB Breakers Narrow Distribution Panelboards

|                                                        |         |            |
|--------------------------------------------------------|---------|------------|
| Bus Spacing 2 3/4" in Box 5 3/4" Deep (600 Volts Max.) |         |            |
| 50                                                     | Center  | 673B142G02 |
| 50                                                     | Outside | 673B142G09 |
| 100                                                    | Center  | 673B142G02 |
| 100                                                    | Outside | 673B142G10 |
| 150                                                    | Center  | 673B142G04 |
| 150                                                    | Outside | 673B142G03 |

#### Power Panelboards (Convertible) Bus Spacing 3 1/2"

|                         |         |            |
|-------------------------|---------|------------|
| 50                      | Center  | 1253C72G01 |
| 50                      | Outside | 1253C72G02 |
| 100                     | Center  | 1253C73G03 |
| 100                     | Outside | 1253C73G04 |
| 150                     | Center  | 1253C73G01 |
| 150                     | Outside | 1253C73G02 |
| 3-Pole Mounting Bracket |         | 624B600H01 |
| 2-Pole Mounting Bracket |         | 624B600H02 |

#### DA, LB, LBB, HLB Breaker Bus Spacing 3 1/2"

|                        |         |            |
|------------------------|---------|------------|
| 400                    | Center  | 314C940G04 |
| 400                    | Outside | 505C680G01 |
| Mtg. Bracket (1 Req'd) |         | 208B264H01 |

#### JA, KA, HKA Breakers Bus Spacing 3 1/2"

|                        |         |            |
|------------------------|---------|------------|
| 225                    | Center  | 314C940G03 |
| 225                    | Outside | 180C074G01 |
| Mtg. Bracket (1 Req'd) |         | 208B264H01 |

#### JB, KB, HKB Breakers Bus Spacing 3 1/2"

|                        |         |            |
|------------------------|---------|------------|
| 250                    | Center  | 2600D26G01 |
| 250                    | Outside | 2600D26G02 |
| Mtg. Bracket (1 Req'd) |         | 1576707    |

① Changed or added since previous issue.  
② Not Underwriters' Laboratories, Inc. listed.  
③ Included at No Charge when ordered with stud.

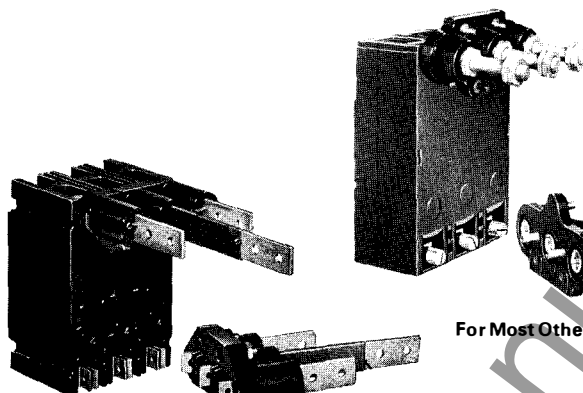


# Accessories, Continued

## Plug-in Adapter Kits

For rear connected applications such as switchboards. Facilitates ease of installation and front removal of breaker. Includes conductor for mounting on breaker, plug-in mounting blocks with matching conductor, rear studs and mounting hardware<sup>①</sup>. Order 2 mounting blocks style number when line and load are required; order 1 mounting block style number when either line or load is required.

List Prices: See Price List 29-021, Dis. RCB-2



For Most Other Breakers Listed<sup>②</sup>

For EB, EHB, FB and HFB

| Description                                                       | Style Number |
|-------------------------------------------------------------------|--------------|
| <b>DA, LB, LBB, HLB Breakers<sup>②</sup></b>                      |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G45   |
| 3-Pole                                                            | 313C644G46   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G03   |
| 3-Pole                                                            | 314C932G04   |
| <b>EB, EHB, FB Thermal Magnetic Breakers<sup>②</sup></b>          |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G01   |
| 2-Pole, 150 Ampere                                                | 507C036G02   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>FB and HFB Magnetic Only, HFB Thermal Magnetic<sup>②</sup></b> |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G05   |
| 2-Pole, 150 Ampere                                                | 507C036G06   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>JA, KA, HKA Breakers<sup>③</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G29   |
| 3-Pole                                                            | 313C644G30   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G01   |
| 3-Pole                                                            | 314C932G02   |
| <b>JB, KB, HKB Breakers<sup>②</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 506C144G17   |
| 3-Pole                                                            | 506C144G18   |
| 1 Mounting Block, Line Only                                       |              |
| 2-Pole                                                            | 1260C86G01   |
| 3-Pole                                                            | 1260C86G02   |
| 1 Mounting Block, Load Only                                       |              |
| 2-Pole                                                            | 1260C86G03   |
| 3-Pole                                                            | 1260C86G04   |

- ① EB, EHB, FB, HFB, KB, JB, HKB, have flat bus rear connectors. Others have threaded studs.
- ② These plug-in adapter kits are UL Listed as recognized components.
- ③ Not Underwriters' Laboratories, Inc. listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220

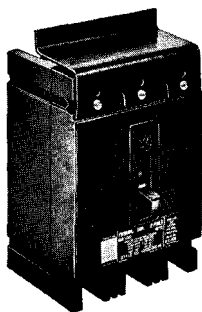


September 1991  
Supersedes Technical Data 29-121,  
pages 21-22, dated March 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Accessories, Modifications

## Replacement AB DE-ION® Circuit Breakers

### Accessories, *Continued* Extended Line Terminal Shields<sup>①</sup>



For shielding line side terminal connections.  
One shield required per breaker. Order sep-  
arately when needed. Sold only in lots of  
10, including hardware.

| Breaker<br>Frame                                | Style<br>Number         |
|-------------------------------------------------|-------------------------|
| DA                                              | 314C420G06              |
| JA, KA, LB, LBB (Saf-T-Vue)                     | 314C420G04              |
| JA, KA, HKA, LB, LBB, HLB<br>(Standard Breaker) | 314C420G06              |
| EB, EHB, FB, HFB                                | 625B229G08 <sup>②</sup> |
| JB, KB, HKB                                     | 1266C07G01              |

### Base Mounting Hardware

No charge when ordered with breaker.  
Order separately when needed.

| Breaker<br>Frame | Style<br>Number |
|------------------|-----------------|
|------------------|-----------------|

#### 1-Pole Breakers

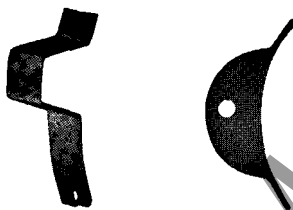
|                           |            |
|---------------------------|------------|
| EB, EHB, HFB <sup>③</sup> | 624B375G01 |
| EB, EHB, HFB <sup>④</sup> | 624B375G02 |

#### 2- and 3-Pole Breakers

|                               |            |
|-------------------------------|------------|
| DA, JA, KA, HKA, LB, LBB, HLB | 21C6782G22 |
| EB, EHB, FB, HFB              | 21C6782G18 |
| JB, KB, HKB                   | 673B125G12 |

List Prices: See Price List 29-021, Dis. RCB-2

### Handle Locks<sup>⑤</sup>



#### Typical Photos

##### Non-Padlockable

For prevention of unintentional operation of  
breaker. Fits over breaker handle and may  
be removed.

##### Padlockable

For prevention of unauthorized operation of  
breaker. Is non-removable once installed on  
breaker. Meets Underwriters' Laboratories,  
Inc. and California Code requirements.

Note: All breakers are trip free and will trip  
with handle locks attached.

| Breaker Frame | Style Number |
|---------------|--------------|
|---------------|--------------|

##### Non-Padlockable

|                               |                      |
|-------------------------------|----------------------|
| EB, EHB, FB, HFB              | 1720360 <sup>⑥</sup> |
| DA, JA, KA, HKA, LB, LBB, HLB | 29B2721H04           |

##### Padlockable

|                               |            |
|-------------------------------|------------|
| EB, EHB, FB, HFB              | 765A754G01 |
| DA, JA, KA, LB, LBB, HKA, HLB | 673B796G02 |
| JB, KB, HKB                   | 673B796G01 |

<sup>⑤</sup> Changed or added since previous issue.

<sup>①</sup> Not Underwriters' Laboratories, Inc. listed.

<sup>②</sup> One of style 625B229G08 is one package of 10.

<sup>③</sup> Individually mounted.

<sup>④</sup> Group mounted.



## Modifications<sup>①</sup>

**List Prices:** See Price List 29-021 Dis. RCB-2

Only two internally mounted modifications – shunt trip, under voltage release, auxiliary switch, alarm switch – may be mounted in DA, JA thru LB, HKA thru HLB and thermal magnetic EB, EHB, FB and HFB breakers.

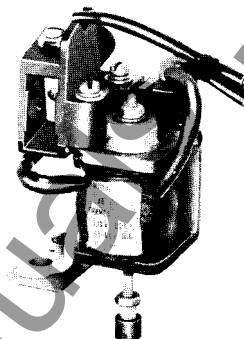
Only one of these modifications may be mounted in FB magnetic only or HFB magnetic only, 2 pole EB, EHB, FB. None are available in 1-pole breakers except alarm switch in EB, EHB and HFB.

## Shunt Trip

For tripping breaker from a remote point. A solenoid device mounts within breaker case. Breaker trips when coil is energized.

Shunt trips should not be used as circuit interlocks using maintained contact pilot devices.

A cut-off switch breaks the circuit to the momentary rated coil when breaker opens. Available for control voltages up to 250 volts Dc or 600 volts Ac. Voltage and frequency must be specified. Standard leads extend 18" outside of breaker.



## Shunt Trip for Field Mounting<sup>② ③ ④</sup>

| Voltage/<br>Hertz          | Breaker Type<br>EB, EHB, FB, HFB <sup>⑤</sup><br>(Thermal Magnetic<br>only) | JB, KB, HKB | JA, KA, HKA,<br>DA, LB, LBB,<br>HLB |
|----------------------------|-----------------------------------------------------------------------------|-------------|-------------------------------------|
| <b>Right Hand Mounting</b> |                                                                             |             |                                     |
| 600/50-60 Hz               | 2609D39G15                                                                  | 2609D42G15  | 2605D15G15                          |
| 480/50-60 Hz               | 2609D39G16                                                                  | 2609D42G16  | 2605D15G16                          |
| 240/50-60 Hz               | 2609D39G17                                                                  | 2609D42G17  | 2605D15G17                          |
| 208/50-60 Hz               | 2609D39G18                                                                  | 2609D42G18  | 2605D15G18                          |
| 120/50-60 Hz               | 2609D39G19                                                                  | 2609D42G19  | 2605D15G19                          |
| 60/50-60 Hz                | 2609D39G20                                                                  | 2609D42G20  | 2605D15G20                          |
| 48/50-60 Hz                | 2609D39G21                                                                  | 2609D42G21  | 2605D15G21                          |
| 24/50-60 Hz                | 2609D39G22                                                                  | 2609D42G22  | 2605D15G22                          |
| 250 Dc                     | 2609D39G23                                                                  | 2609D42G23  | 2605D15G23                          |
| 125 Dc                     | 2609D39G24                                                                  | 2609D42G24  | 2605D15G24                          |
| 60 Dc                      | 2609D39G25                                                                  | 2609D42G25  | 2605D15G25                          |
| 48 Dc                      | 2609D39G26                                                                  | 2609D42G26  | 2605D15G26                          |
| 24 Dc                      | 2609D39G27                                                                  | 2609D42G27  | 2605D15G27                          |
| 12 Dc                      | 2609D39G28                                                                  | 2609D42G28  | 2605D15G28                          |
| <b>Left Hand Mounting</b>  |                                                                             |             |                                     |
| 600/50-60 Hz               | 2609D39G01                                                                  | 2609D42G01  | 2605D15G01                          |
| 480/50-60 Hz               | 2609D39G02                                                                  | 2609D42G02  | 2605D15G02                          |
| 240/50-60 Hz               | 2609D39G03                                                                  | 2609D42G03  | 2605D15G03                          |
| 208/50-60 Hz               | 2609D39G04                                                                  | 2609D42G04  | 2605D15G04                          |
| 120/50-60 Hz               | 2609D39G05                                                                  | 2609D42G05  | 2605D15G05                          |
| 60/50-60 Hz                | 2609D39G06                                                                  | 2609D42G06  | 2605D15G06                          |
| 48/50-60 Hz                | 2609D39G07                                                                  | 2609D42G07  | 2605D15G07                          |
| 24/50-60 Hz                | 2609D39G08                                                                  | 2609D42G08  | 2605D15G08                          |
| 250 Dc                     | 2609D39G09                                                                  | 2609D42G09  | 2605D15G09                          |
| 125 Dc                     | 2609D39G10                                                                  | 2609D42G10  | 2605D15G10                          |
| 60 Dc                      | 2609D39G11                                                                  | 2609D42G11  | 2605D15G11                          |
| 48 Dc                      | 2609D39G12                                                                  | 2609D42G12  | 2605D15G12                          |
| 24 Dc                      | 2609D39G13                                                                  | 2609D42G13  | 2605D15G13                          |
| 12 Dc                      | 2609D39G14                                                                  | 2609D42G14  | 2605D15G14                          |

## Shunt Trip Coil Data

| Shunt Trip<br>Voltage<br>Rating | For All Breakers Listed in Table<br>to Left <sup>⑥</sup><br>Coil Inrush |              |
|---------------------------------|-------------------------------------------------------------------------|--------------|
|                                 | Amperes                                                                 | Volt-Amperes |
| 600 AC                          | 0.105                                                                   | 63.0         |
| 480 AC                          | 0.085                                                                   | 40.8         |
| 240 AC                          | 1.7                                                                     | 408.0        |
| 208 AC                          | 1.4                                                                     | 291.2        |
| 120 AC                          | 0.88                                                                    | 105.6        |
| 60 AC                           | 9.10                                                                    | 546.0        |
| 48 AC                           | 7.50                                                                    | 360.0        |
| 24 AC                           | 3.95                                                                    | 94.8         |
| 250 DC                          | 2.5                                                                     | 625.0        |
| 125 DC                          | 0.975                                                                   | 121.9        |
| 60 DC                           | 0.525                                                                   | 31.5         |
| 48 DC                           | 1.3                                                                     | 62.4         |
| 24 DC (FB)                      | 6.0                                                                     | 144.0        |
| 24 DC (KB)                      | 3.8                                                                     | 91.2         |
| 24 DC (Other)                   | 8.                                                                      | 192.         |
| 12 DC                           | 6.                                                                      | 72.          |

**List Prices:** See Price List 29-021, Dis. RCB-2

## Factory Mounted Shunt Trips<sup>① ② ⑥</sup>

All of the above shunt trips can be specified for factory mounting at the same price as listed for the kit. These shunt trips have the leads out the side and are UL listed when factory mounted, unless other non-UL Listed modifications are used.

Shunt trips are "factory mounted only" on the following breakers:

- FB magnetic only<sup>⑥ ⑦</sup>, HFB magnetic only<sup>⑥ ⑦</sup> and non-auto breakers (MCS)<sup>③</sup>

⑥ Changed or added since previous issue.

① Right hand mounting considered standard unless specified otherwise.

② 120 volt Ac ratings suitable for 55% pickup for ground fault applications.

③ Not field mountable on non-automatic breakers (MCS).

④ Field mounting voids breakers' UL listing except on KB, HKB, KA, HKA, LB, HLB.

⑤ Available similar to this except "Leads out the load end – (not UL listed)". Order by description.

⑥ Right hand mounting only.

⑦ Not UL listed.

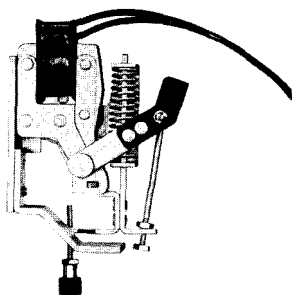


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31-500A

#### Modifications

## Replacement AB DE-ION® Circuit Breakers

### Standard Undervoltage Release<sup>②</sup>



For undervoltage protection. A solenoid device mounts within breaker case. Coil must be energized before closing breaker. Trips breaker when voltage drops below 35 to 70% of coil rating. Picks up and seals in at 85% of coil rating. For line voltages up to 250 volts Dc or 600 volts Ac. Externally mounted resistors are supplied for certain ratings. Standard leads extend 18" outside of breaker. **Note:** U.V.R. attachments are not designed for, and should not be used as, circuit interlocks. For further information, refer to Westinghouse.

**Factory Mounted Undervoltage Releases<sup>② ③</sup>**  
All of the above undervoltage releases can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side and are U L listed when factory mounted unless other non-U L listed modifications are used.

Undervoltage releases are "factory mounted only" on the following breakers:  
EB<sup>③</sup>, EHB<sup>③</sup>, FB<sup>③</sup>, HFB<sup>③</sup>, FB<sup>① ④</sup> and HFB magnetic only<sup>① ④</sup>, JB, KB, HKB

### Undervoltage release Attachment Kits for Field Mounting<sup>⑤ ⑥</sup>

| Attachment Voltage Hertz      | Breaker Type<br>JA, KA, DA, HKA,<br>LB, LBB, HLB |
|-------------------------------|--------------------------------------------------|
| <b>For Left Hand Mounting</b> |                                                  |
| 120 60                        | 458D070G01                                       |
| 208 60                        | 458D070G05                                       |
| 240 60                        | 458D070G02                                       |
| 480 60                        | 458D070G03                                       |
| 600 60                        | 458D070G04                                       |
| 12 DC                         | 458D070G09                                       |
| 24 DC                         | 458D070G10                                       |
| 48 DC                         | 458D070G11                                       |
| 125 DC                        | 458D070G12                                       |
| 250 DC                        | 458D070G13                                       |

### Undervoltage Release Coil Data

| Voltage Rating, Hertz | Breaker Type<br>EB, EHB, FB, HFB,<br>JB, KB and HKB |                          |          | JA, KA, HKA, DA, LB, LBB, HLB |                                   |          |
|-----------------------|-----------------------------------------------------|--------------------------|----------|-------------------------------|-----------------------------------|----------|
|                       | Coil Amperes                                        | Series Resistance (Ohms) | Total VA | Coil Amperes                  | External Series Resistance (Ohms) | Total VA |
| 600 AC                | 0.020                                               | 25,000                   | 12.0     | 0.012                         | 50,000                            | 7.2      |
| 480 AC                | 0.016                                               | 20,000                   | 7.7      | 0.013                         | 30,000                            | 6.3      |
| 240 AC                | 0.021                                               | 6,000                    | 5.1      | 0.013                         | .....                             | 3.2      |
| 208 AC                | 0.019                                               | 6,000                    | 4.0      | 0.018                         | .....                             | 3.8      |
| 120 AC                | 0.023                                               | .....                    | 2.8      | 0.023                         | .....                             | 2.8      |
| 60 AC                 | 0.203                                               | 250                      | 12.2     | .....                         | .....                             | ..       |
| 48 AC                 | 0.245                                               | 150                      | 11.8     | .....                         | .....                             | ..       |
| 24 AC                 | 0.250                                               | 50                       | 6.0      | .....                         | .....                             | ..       |
| 250 DC                | 0.026                                               | 5,000                    | 6.5      | 0.013                         | 16,500                            | 3.3      |
| 125 DC                | 0.026                                               | .....                    | 3.3      | 0.013                         | 6,500                             | 1.7      |
| 60 DC                 | 0.248                                               | 200                      | 14.9     | 0.013                         | 1,500                             | 0.8      |
| 48 DC                 | 0.260                                               | 150                      | 12.5     | 0.012                         | 600                               | 0.6      |
| 24 DC                 | 0.141                                               | .....                    | 3.4      | 0.023                         | .....                             | 0.6      |
| 12 DC                 | 0.286                                               | .....                    | 3.5      | 0.048                         | .....                             | 0.6      |

List Prices: See Price List 29-021 Dis. RCB-2

② Changed or added since previous issue.

① Not UL listed.

② Righthand mounting considered standard unless specified otherwise except JA, KA, DA, HKA, LB, LBB, HLB and seltronic available for lefthand only, and JB, KB, HKB lefthand is standard.

③ Not available on ambient compensating breakers.

④ Righthand mounting only.

⑤ Not field mountable on non automatic breakers. (Molded case switches)

⑥ Field mounting voids UL listing of breaker except on KA, HKA, LB, HLB.



## Alarm Switch

**Availability:** DA thru HLB. For light or alarm indication when breaker trips. Does not function with manual operation. Automatically resets when breaker is relatched. Standard leads extend 18" out side of breaker. Not field mountable.

| Breaker Frame                   | Normal Pole Mtg. | Contact Operation (Specify Type Desired) |
|---------------------------------|------------------|------------------------------------------|
| DA                              | Left             | Make or Break                            |
| EB, EHB, FB, HFB <sup>① ②</sup> | Mechanism        | Make or Break                            |
| JA, KA, LB, LBB, HKA, HLB       | Left             | Make or Break                            |
| JB, KB, HKB                     | Left             | Make or Break                            |

## Alarm Switch Contact Rating (Non Inductive)

EB, EHB, FB, HFB:

5 amp, 120 volt Ac.

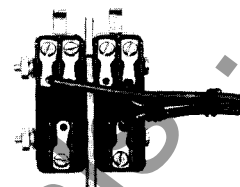
All other breakers:

10 amps, 120-240 volt Ac.

**List Prices:** See Price List 29-021 Dis. RCB-2.

## Auxiliary Switch<sup>③</sup>

For auxiliary control circuits. Miniature switches mount within breaker. Commonly used for remote indication of open or closed breaker and electrically interlocking component control circuits. "A" contacts are closed when breaker is closed. "B" contacts are open when breaker is closed. Standard leads extend 18" out side of breaker.



## Auxiliary Switch Attachment Kits for Field Mounting<sup>④ ⑤ ⑥</sup>

| Breaker Type                  | For Right Hand Mounting |                         | For Left Hand Mounting |                         | Max Ac Voltage Rating <sup>⑦</sup> | Max. Non-Inductive Amps. |
|-------------------------------|-------------------------|-------------------------|------------------------|-------------------------|------------------------------------|--------------------------|
|                               | 1A-1B                   | 2A-2B                   | 1A-1B                  | 2A-2B                   |                                    |                          |
| EB, EHB, FB, HFB <sup>⑧</sup> | 4979D06G03              | 4979D06G08              | 4979D06G03             | 4979D06G09              | 240                                | 5                        |
| JA, KA, DA, HKA, LB, LBB, HLB | 458D067G08              | 656D527G09 <sup>①</sup> | 458D067G03             | 656D527G01 <sup>①</sup> | 480                                | 10                       |
| JB, KB, HKB                   | 2600D97G08              | 2609D45G08 <sup>①</sup> | 2600D97G03             | 2609D45G03 <sup>①</sup> | 240                                | 5                        |

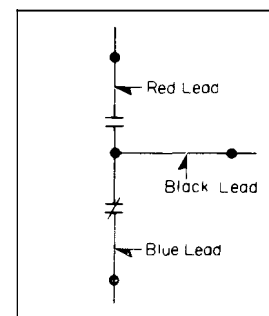
## Factory Mounted Auxiliary Switches<sup>③</sup>

All of the above auxiliary switches can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side of the breaker and are UL listed when factory mounted unless other non UL listed modifications are used (except as noted).

Factory mounted switches only can be supplied for the following breakers:

FB magnetic only<sup>① ⑨</sup> and HFB magnetic only<sup>① ⑨</sup>.

Price same as a similar kit.



- ① Not UL listed.
- ② Not available for Magnetic Only, Ambient Compensating, or breakers with Undervoltage Release.
- ③ Righthand mounting standard for EB, EHB, FB, HFB, JB, KB, HKB. All others are lefthand mounting as standard unless otherwise specified.
- ④ Not for use on non-automatic breakers. (Molded case switches).
- ⑤ All switches are multiples of 1A-1B with a common electrical connection (See diagram below).
- ⑥ Field mounting voids UL listing of breaker except on KB, HKB, KA, HKA, LB, HLB.
- ⑦ For Dc applications refer to factory.
- ⑧ Thermal magnetic only.
- ⑨ Righthand mounting only.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



September 1991  
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31-500A

## Modifications

# Replacement AB DE-ION® Circuit Breakers

### Modifications, Continued

#### Moisture-Fungus Treatment<sup>①</sup>

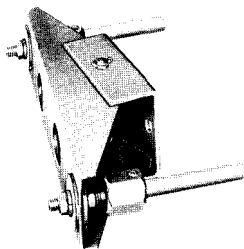
**Availability:** DA thru HLB

Treatment can be provided to meet customer's specific atmospheric conditions. Moisture-fungus treating material used meets JAN-T-152; treatment meets MIL-V-173a. Requests and orders should specify government specifications or conditions to be met.

#### Mechanical Interlocks<sup>①</sup>

For mechanically interlocking a pair of breakers so that only one may be closed at one time, but both may be open simultaneously.

#### Walking Beam Type<sup>①</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) at rear of breaker. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, JB, KB, HFB, HKB: 4 $\frac{3}{8}$ " center to center. Order as a set of two special factory drilled breakers and 1 walking beam interlock. Specify breaker type, panel thickness and center-to-center dimension of breakers.

#### Sliding Bar Type (Field Mountable)<sup>① ②</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) fitting over front of breakers. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, HFB: 4 $\frac{3}{8}$ " center to center; JB, KB, HKB: 4 $\frac{3}{8}$ " center to center.

#### Kirk Key Interlock<sup>②</sup>



**Availability:** 100 Amp Frames (EB) thru 400 Amp Frames (HLB).

Permits interlocking of two breakers or one breaker with other devices. Before breaker can be closed, key must be inserted and turned in breaker interlock. Breaker must be opened before key can be removed. It can then be inserted in interlock or other devices to permit their closure. Requests and orders should completely outline interlocking scheme, ultimate user and his address.

<sup>①</sup> Not UL Listed.

<sup>②</sup> Not available on motor operated breakers.

## Accessories, Continued

### Motor Operators<sup>①</sup>

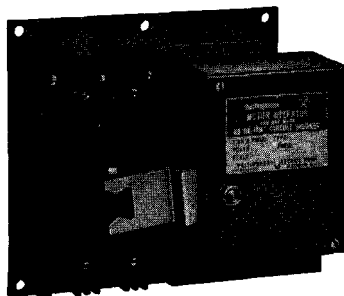
Motor operators provide complete remote control by means of a pushbutton or similar pilot device<sup>②</sup>. Positive switching action is accomplished by use of an operating arm engaging the breaker handle. The unit is energized momentarily to actuate the lever arm moving it to either the "ON" or "OFF" position. The control is broken by an internal cutoff switch. Means for emergency manual operation is provided.

Motor operators are available with motors rated 120 volts Ac, 208 volts Ac, and 240 volts Ac.

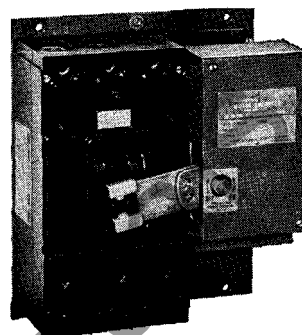
The 480 volt operators utilize a 120 volt Ac motor in conjunction with a 480/240 to 120 volt dual voltage transformer.

**Note:** The motor operator is intended only for infrequent operation in line with Underwriters' Laboratories, Inc. endurance standards for AB molded case breakers.

**List Prices:** See Price List 29-021, Dis. RCB-2



For EB, EHB, FB and HFB



For DA, JA, KA, JB, LB, LBB, HKA, HKB and HLB Breakers

### Motor Operator Selection

| Type Breaker     | Ac Voltage                |              |              |                           |
|------------------|---------------------------|--------------|--------------|---------------------------|
|                  | 120                       | 208          | 240          | 480                       |
|                  | Style Number <sup>③</sup> | Style Number | Style Number | Style Number <sup>③</sup> |
| EB, EHB, FB, HFB | 656D148G11                | 656D148G04   | 656D148G02   | 656D148G13                |
| DA, JA, KA, HKA  | 657D819G23                | 657D819G10   | 657D819G08   | 657D819G24                |
| LB, LBB, HLB     | 657D819G25                | 657D819G16   | 657D819G14   | 657D819G26                |
| JB, KB, HKB      | 2600D28G07                | 2600D28G04   | 2600D28G02   | 2600D28G08                |

### Back Mounting Plates

| Type Breaker     | 120, 208, 240, 480 Volts Ac |
|------------------|-----------------------------|
|                  | Style Number                |
| EB, EHB, FB, HFB | 503C707G01                  |
| DA, JA, KA, LB   | 503C981G01                  |
| JB, KB, HKB      | 1250C26G01                  |

### Motor Data

| Type Breaker                          | Motor Type  | Hp.  | Inrush Current, Ampere (Peak) |           |           | Continuous Current (RMS) |           |           | Operating Time, Open or Close |
|---------------------------------------|-------------|------|-------------------------------|-----------|-----------|--------------------------|-----------|-----------|-------------------------------|
|                                       |             |      | 120 Volts                     | 208 Volts | 240 Volts | 120 Volts                | 208 Volts | 240 Volts |                               |
| EB, EHB, FB, HFB                      | Split Phase | 1/75 | 10                            | 4         | 5         | 2.3                      | 1.17      | 1.65      | 1.5 Seconds                   |
| DA, JA, KA, JB, KB, LB, LBB, HKB, HLB | Split Phase | 1/50 | 14                            | 6         | 7         | 3.5                      | 1.6       | 1.75      | 1.5 Seconds                   |

**Dimensions:** Dimension Sheet 29-170

<sup>③</sup> Changed or added since previous issue.

<sup>①</sup> Ac voltage rated operators are UL listed as recognized components.

<sup>②</sup> The pilot device must be maintained contact type for EB, EHB, FB, HFB, DA, JA, KA, JB, KB, HKB and LB mechanisms.



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31-500A

100 and 150 Ampere Frames

## Panelboard Replacement Breakers UL Listed

### Out-of-Production Circuit Breakers

Several models of Westinghouse molded case circuit breakers are no longer manufactured. These circuit breakers are considered by Westinghouse to be out of production.

However, some firms have been offering Westinghouse out-of-production circuit breakers in a reconditioned state. These circuit breakers are not new units and may have been in service for extended periods of service time.

Westinghouse molded case circuit breakers are not designed to be repaired or calibrated in the field. When these circuit breakers are reconditioned by firms other than Westinghouse, it is extremely difficult to maintain the original factory specifications of the circuit breakers.

### Replacement of Out-of-Production Circuit Breakers

When out-of-production circuit breakers must be replaced, Westinghouse recommends one of these solutions:

- Upgrade or retrofit the equipment to use the most current molded case circuit breaker technology. This includes the Series C® family of molded case circuit breakers that have higher interrupting capacities in each frame size while being smaller and lighter.
- Use currently manufactured Westinghouse replacement industrial circuit breakers. They're available from stock and can be used to replace many out-of-production circuit breakers.
- Use Westinghouse Panelboard Replacement Circuit Breakers in panelboards and small switchboards with group mounted circuit breaker distribution sections. These UL listed replacement circuit breakers are newly manufactured and are physically interchangeable with the circuit breakers they are designed to replace. (These circuit breakers may be suitable for other replacement applications as well.)
- Westinghouse strongly recommends that out-of-production circuit breakers be replaced with one of the newly manufactured circuit breakers described in the preceding paragraphs.

As a last resort, another alternative is to utilize out-of-production circuit breakers that have been reconditioned by Westinghouse at the original factory. Factory reconditioned breakers are available for all styles of out-of-production breakers (E, F, G, J, K, L, . . .). These breakers are not UL-listed, but have been reconditioned and tested at the factory according to the manufacturing and engineering standards to which the original breakers were built.

Westinghouse Panelboard Replacement Circuit Breakers are newly manufactured and tested to the latest applicable standards at the Westinghouse molded case circuit breaker plant in Beaver, Pennsylvania. This plant has a long and well-recognized tradition of product safety, integrity, and quality.

The Panelboard Replacement Circuit Breaker solution eliminates the need to consider alternative approaches. Westinghouse customers are assured that the high standards of product quality and reliability do not have to be sacrificed when replacing Westinghouse out-of-production circuit breakers.

All Panelboard Replacement Circuit Breakers are easily identified by the prefix "R" added to the out-of-production type circuit breaker catalog number they replace.

Here is an example of the new Panelboard Replacement Circuit Breaker catalog numbering system.

1. An RF3100 is a newly manufactured, three-pole, 100 ampere trip Panelboard Replacement Circuit Breaker. It replaces an out-of-production F circuit breaker.

**R F 3 100**

**R** Designates New Panelboard Replacement Circuit Breaker

**F** Identifies the Out-of-Production Circuit Breaker Frame

**3** Number of Poles

**100** Trip Unit Ampere Rating

### Replacement Chart

| Current Panelboard<br>Circuit Breaker Type | Out-of-Production<br>Circuit Breaker Type<br>① | Volts AC<br>(50/60 Hz) |     |     |
|--------------------------------------------|------------------------------------------------|------------------------|-----|-----|
|                                            |                                                | 240                    | 480 | 600 |
| REA                                        | EA                                             | •                      |     |     |
| RE                                         | E                                              | •                      |     |     |
| REH                                        | EH                                             |                        | •   |     |
| RFA                                        | FA                                             |                        |     | •   |
| RHFA                                       | HFA                                            |                        |     | •   |
| RF                                         | F                                              |                        |     | •   |
| RHF                                        | HF                                             |                        |     | •   |

Panelboard Replacement Circuit Breakers have noninterchangeable trip units and the same interrupting capacity as the out-of-production circuit breakers they replace.

① Last manufacture date - 1974.

### Panelboard Replacement Breaker Interrupting Amp Ratings

| Breaker Type | Amps   | @ 120<br>Volts Ac | @ 240<br>Volts Ac | @ 277<br>Volts Ac | @ 480<br>Volts Ac | @ 600<br>Volts Ac | @ 125<br>Volts Dc | @ 250<br>Volts Dc |
|--------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| RE           | 15-100 | 7500              | 7500              |                   |                   |                   | (1P) 5000         | 5000              |
| REA          | 15-100 | 7500              | 7500              | 10000             |                   |                   | (1P) 5000         | 5000              |
| REH          | 15-100 |                   | 18000             | 10000             | 10000             |                   |                   | 10000             |
| RF           | 15-100 |                   | 18000             |                   | 14000             | 14000             |                   | 10000             |
| RFA          | 15-150 |                   | 18000             |                   | 14000             | 14000             |                   | 10000             |
| RHF          | 15-100 |                   | 65000             |                   | 25000             | 18000             |                   | 20000             |
| RHFA         | 15-150 |                   | 65000             |                   | 25000             | 18000             |                   | 20000             |



Panelboard Replacement Breakers can be installed in the following styles of old Westinghouse panelboards:

| Installed Panelboard Type | Installed Branch Circuit Breakers | Replacement Circuit Breakers |
|---------------------------|-----------------------------------|------------------------------|
| ABH                       | E①                                | RE                           |
| A2B                       | E①                                | RE                           |
| CDP                       | E①                                | RE                           |
|                           | EA                                | REA                          |
|                           | EH                                | REH                          |
|                           | FA                                | RFA                          |
|                           | F                                 | RF                           |
| NAB                       | E①                                | RE                           |
| NAIB                      | E①, EA                            | RE, REA                      |
| NAIB-LX                   | E①                                | RE                           |
| NDP                       | E①, EA, EAH                       | RE, REA, REH                 |
| NEB                       | EA                                | REA                          |
| NHDP                      | EH                                | REH                          |
| NHEB                      | EH/FA                             | REH, RFA                     |
| NHIB                      | E-277①                            | RE                           |
| NLAB-AB                   | E①                                | RE                           |
| NLAB-ABH                  | E①                                | RE                           |

**Note:** This information covers most panelboards built by Westinghouse since 1937.

#### Notes:

1. The RE breaker has off-center terminals just like the E breaker it is replacing.
2. For out-of-production breakers, the "B" suffix denoted a long handle, however the "B" suffix denotes 277 voltage rating for the Panelboard Replacement Breakers.
3. Some Panelboard Replacement Breakers do not have the same physical dimensions or mounting holes as the breakers they replace. For example, the types REH, RFA and RHFA are 6 inches in length and the breakers they replace, EH, FA and HFA are 6½ inches in length. Mounting hardware is provided with each breaker to resolve these differences, and must be installed to ensure a proper fit.

#### Additional Information

See instruction leaflets for detailed mounting information:

|                |            |
|----------------|------------|
| RE, REA        | I.L. 15558 |
| RF, RHF        | I.L. 15559 |
| REH, RFA, RHFA | I.L. 15562 |

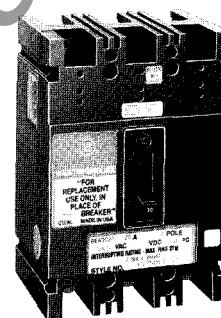


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31-500A

## Panelboard Replacement Breakers UL Listed

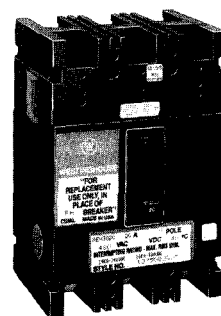
### Type REA 1, 2, 3-Poles; 240 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | REA1015         | REA2015 | REA3015 |
| 20                                       | REA1020         | REA2020 | REA3020 |
| 25                                       | REA1025         | REA2025 | REA3025 |
| 30                                       | REA1030         | REA2030 | REA3030 |
| 40                                       | REA1040         | REA2040 | REA3040 |
| 50                                       | REA1050         | REA2050 | REA3050 |
| 60                                       | REA1060         | REA2060 | REA3060 |
| 70                                       | REA1070         | REA2070 | REA3070 |
| 80                                       | REA1080         | REA2080 | REA3080 |
| 90                                       | REA1090         | REA2090 | REA3090 |
| 100                                      | REA1100         | REA2100 | REA3100 |



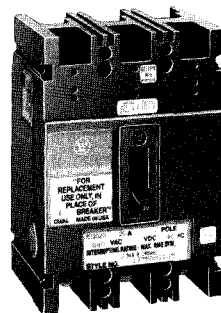
### Type REH 1, 2, 3-Poles; 480 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | REH1015         | REH2015 | REH3015 |
| 20                                       | REH1020         | REH2020 | REH3020 |
| 25                                       | REH1025         | REH2025 | REH3025 |
| 30                                       | REH1030         | REH2030 | REH3030 |
| 40                                       | REH1040         | REH2040 | REH3040 |
| 50                                       | REH1050         | REH2050 | REH3050 |
| 60                                       | REH1060         | REH2060 | REH3060 |
| 70                                       | REH1070         | REH2070 | REH3070 |
| 80                                       | REH1080         | REH2080 | REH3080 |
| 90                                       | REH1090         | REH2090 | REH3090 |
| 100                                      | REH1100         | REH2100 | REH3100 |



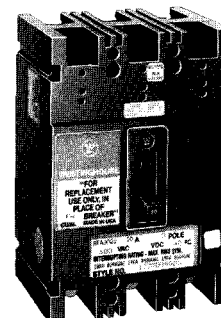
### Type RE 1, 2, 3-Poles; 240 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |        |        |
|------------------------------------------|-----------------|--------|--------|
|                                          | 1-Pole          | 2-Pole | 3-Pole |
| 20                                       | RE1020          | RE2020 | RE3020 |
| 25                                       | RE1025          | RE2025 | RE3025 |
| 30                                       | RE1030          | RE2030 | RE3030 |
| 40                                       | RE1040          | RE2040 | RE3040 |
| 50                                       | RE1050          | RE2050 | RE3050 |
| 60                                       | RE1060          | RE2060 | RE3060 |
| 70                                       | RE1070          | RE2070 | RE3070 |
| 80                                       | RE1080          | RE2080 | RE3080 |
| 90                                       | RE1090          | RE2090 | RE3090 |
| 100                                      | RE1100          | RE2100 | RE3100 |



### Type RFA 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | .....           | RFA2015 | RFA3015 |
| 20                                       | .....           | RFA2020 | RFA3020 |
| 25                                       | .....           | RFA2025 | RFA3025 |
| 30                                       | .....           | RFA2030 | RFA3030 |
| 35                                       | .....           | RFA2035 | RFA3035 |
| 40                                       | .....           | RFA2040 | RFA3040 |
| 50                                       | .....           | RFA2050 | RFA3050 |
| 60                                       | .....           | RFA2060 | RFA3060 |
| 70                                       | .....           | RFA2070 | RFA3070 |
| 80                                       | .....           | RFA2080 | RFA3080 |
| 90                                       | .....           | RFA2090 | RFA3090 |
| 100                                      | .....           | RFA2100 | RFA3100 |
| 125                                      | .....           | RFA2125 | RFA3125 |
| 150                                      | .....           | RFA2150 | RFA3150 |





**Type RF 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |        |        |
|------------------------------------------|-----------------|--------|--------|
|                                          | 1-Pole          | 2-Pole | 3-Pole |
| 15                                       | .....           | RF2015 | RF3015 |
| 20                                       | .....           | RF2020 | RF3020 |
| 25                                       | .....           | RF2025 | RF3025 |
| 30                                       | .....           | RF2030 | RF3030 |
| 35                                       | .....           | RF2035 | RF3035 |
| 40                                       | .....           | RF2040 | RF3040 |
| 50                                       | .....           | RF2050 | RF3050 |
| 60                                       | .....           | RF2060 | RF3060 |
| 70                                       | .....           | RF2070 | RF3070 |
| 80                                       | .....           | RF2080 | RF3080 |
| 90                                       | .....           | RF2090 | RF3090 |
| 100                                      | .....           | RF2100 | RF3100 |

**Type RHFA 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |          |          |
|------------------------------------------|-----------------|----------|----------|
|                                          | 1-Pole          | 2-Pole   | 3-Pole   |
| 15                                       | .....           | RHFA2015 | RHFA3015 |
| 20                                       | .....           | RHFA2020 | RHFA3020 |
| 25                                       | .....           | RHFA2025 | RHFA3025 |
| 30                                       | .....           | RHFA2030 | RHFA3030 |
| 35                                       | .....           | RHFA2035 | RHFA3035 |
| 40                                       | .....           | RHFA2040 | RHFA3040 |
| 50                                       | .....           | RHFA2050 | RHFA3050 |
| 60                                       | .....           | RHFA2060 | RHFA3060 |
| 70                                       | .....           | RHFA2070 | RHFA3070 |
| 80                                       | .....           | RHFA2080 | RHFA3080 |
| 90                                       | .....           | RHFA2090 | RHFA3090 |
| 100                                      | .....           | RHFA2100 | RHFA3100 |
| 125                                      | .....           | RHFA2015 | RHFA3125 |
| 150                                      | .....           | RHFA2150 | RHFA3150 |

Refer to photograph for Type RFA on page 31. Type RHFA is the same, except for the molding material.

**Type RHF 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | .....           | RHF2015 | RHF3015 |
| 20                                       | .....           | RHF2020 | REA3020 |
| 25                                       | .....           | RHF2025 | RHF3025 |
| 30                                       | .....           | RHF2030 | RHF3030 |
| 40                                       | .....           | RHF2040 | RHF3040 |
| 50                                       | .....           | RHF2050 | RHF3050 |
| 60                                       | .....           | RHF2060 | RHF3060 |
| 70                                       | .....           | RHF2070 | RHF3070 |
| 80                                       | .....           | RHF2080 | RHF3080 |
| 90                                       | .....           | RHF2090 | RHF3090 |
| 100                                      | .....           | RHF2100 | RHF3100 |

Refer to photograph for Type RF above. Type RHF is the same, except for the molding material.



**Accessories and Modifications**

Description: Pages 19-28

All accessories and modifications available for Replacement Breakers Types EB, EHB and FB are also available for Panelboard Replacement Breakers Types RE, REH, RFA, RF, RHF, REA and RHFA.

**List Prices**

See Price List 29-021, Dis. RCB-2.

**Terminals**

Breakers include load terminals only. See Terminal data for Replacement Breakers Types EB, EHB and FB.

**50°C Calibration**

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

**Special Breakers<sup>①</sup>**

Magnetic only, Front Adjustable (includes Line and Load Terminals). Available for 15-150 ampere ratings for 2- and 3-pole RF, RHF and RHFA.

Factory reconditioned F and FA Tri Pac styles also available.<sup>①</sup>

<sup>①</sup> Not listed with Underwriters' Laboratories, Inc.



January 1993  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

100 and 150 Ampere Frames

## Motor Control Center Replacement Breakers UL Listed

### Out-of-Production Circuit Breakers

Several models of Westinghouse molded case circuit breakers are no longer manufactured. These circuit breakers are considered by Westinghouse to be out of production.

However, some firms have been offering Westinghouse out-of-production circuit breakers in a reconditioned state. These circuit breakers are not new units and may have been in service for extended periods of service time.

Westinghouse molded case circuit breakers are not designed to be repaired or calibrated in the field. When these circuit breakers are reconditioned by firms other than Westinghouse, it is extremely difficult to maintain the original factory specifications of the circuit breakers.

### Replacement of Out-of-Production Circuit Breakers

When out-of-production circuit breakers must be replaced, Westinghouse recommends one of these solutions:

- Upgrade or retrofit the equipment to use the most current molded case circuit breaker technology. This includes the Series C® family of molded case circuit breakers that have higher interrupting capacities in each frame size while being smaller and lighter.
- Use currently manufactured Westinghouse replacement industrial circuit breakers. They're available from stock and can be used to replace many out-of-production circuit breakers.
- Use Westinghouse Motor Control Center Replacement Circuit Breakers in motor control centers. These UL listed replacement circuit breakers are newly manufactured and are physically interchangeable with the circuit breakers they are designed to replace. (These circuit breakers may be suitable for other replacement applications as well.)
- Westinghouse strongly recommends that out-of-production circuit breakers be replaced with one of the newly manufactured circuit breakers described in the preceding paragraphs.

Westinghouse Motor Control Center Replacement Circuit Breakers are newly manufactured and tested to the latest applicable standards at the Westinghouse molded case circuit breaker plant in Beaver, Pennsylvania. This plant has a long and well-recognized tradition of product safety, integrity, and quality.

The Motor Control Center Replacement Circuit Breaker solution eliminates the need to consider alternative approaches. Westinghouse customers are assured that the high standards of product quality and reliability do not have to be sacrificed when replacing Westinghouse out-of-production circuit breakers.

All Motor Control Center Replacement Circuit Breakers are easily identified by the prefix "RMC" added to the out-of-production type circuit breaker catalog number they replace.

As a last resort, another alternative is to utilize out-of-production circuit breakers that have been reconditioned by Westinghouse at the original factory. Factory reconditioned breakers are available for all styles of out-of-production breakers (E, F, G, J, K, L, . . .). These breakers are not UL-listed, but have been reconditioned and tested at the factory according to the manufacturing and engineering standards to which the original breakers were built.

Here is an example of the new Motor Control Center Replacement Circuit Breaker catalog numbering system.

1. An RMC F 3 100 is a newly manufactured, three-pole, 100 ampere trip Motor Control Center Replacement Circuit Breaker. It replaces an out-of-production F circuit breaker.

**RMC F 3 100**

**RMC** Designates New Motor Control Center Replacement Circuit Breaker

**F** Identifies the Out-of-Production Circuit Breaker Frame

**3** Number of Poles

**100** Trip Unit Ampere Rating

### Replacement Chart

| Current MCC<br>Circuit Breaker Type | Out-of-Production<br>Circuit Breaker Type<br>① | Volts AC<br>(50/60 Hz)<br>600 |
|-------------------------------------|------------------------------------------------|-------------------------------|
| RMCFA                               | FA                                             | •                             |
| RMCHFA                              | HFA                                            | •                             |
| RMCF                                | F                                              | •                             |
| RMCHF                               | HF                                             | •                             |

Motor Control Center Replacement Circuit Breakers have noninterchangeable trip units and the same interrupting capacity as the out-of-production circuit breakers they replace.

① Last manufacture date – 1974.

### Motor Control Center Replacement Breaker Interrupting Amp Ratings

| Breaker<br>Type | Amps   | ② 240<br>Volts Ac | ② 480<br>Volts Ac | ② 600<br>Volts Ac | ② 250<br>Volts Dc |
|-----------------|--------|-------------------|-------------------|-------------------|-------------------|
| RMCF            | 15-100 | 18000             | 14000             | 14000             | 10000             |
| RMCFA           | 15-150 | 18000             | 14000             | 14000             | 10000             |
| RMCHF           | 15-100 | 65000             | 25000             | 18000             | 20000             |
| RMCHFA          | 15-150 | 65000             | 25000             | 18000             | 20000             |



**Notes:**

Motor Control Center Replacement Breakers do not have the same physical dimensions or mounting holes as the breakers they replace. Types RMCFA and RMCHFA are 6 inches in length and the breakers they replace, FA and HFA are 6½ inches in length. Types RMCF and RMCHF are 6 inches in length and the breakers they replace, F and HF are 9¾ inches in length. A mounting plate is provided with each breaker to resolve these differences, and must be installed to ensure a proper fit.

RMCF and RMCHF 2 pole breakers are supplied in a 3 pole frame with current carrying parts omitted from the center pole.

**Additional Information**

See instruction leaflets for detailed mounting information:

|               |            |
|---------------|------------|
| RMCF, RMCHF   | I.L. 15582 |
| RMCFA, RMCHFA | I.L. 15583 |



January 1993  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Motor Control Center Replacement Breakers UL Listed

### Type RMCFA 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Line and Load Terminals; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |          |          |
|--------------------------------------------|-----------------|----------|----------|
|                                            | 1-Pole          | 2-Pole   | 3-Pole   |
| 15                                         | .....           | RMCF2015 | RMCF3015 |
| 20                                         | .....           | RMCF2020 | RMCF3020 |
| 25                                         | .....           | RMCF2025 | RMCF3025 |
| 30                                         | .....           | RMCF2030 | RMCF3030 |
| 35                                         | .....           | RMCF2035 | RMCF3035 |
| 40                                         | .....           | RMCF2040 | RMCF3040 |
| 50                                         | .....           | RMCF2050 | RMCF3050 |
| 60                                         | .....           | RMCF2060 | RMCF3060 |
| 70                                         | .....           | RMCF2070 | RMCF3070 |
| 80                                         | .....           | RMCF2080 | RMCF3080 |
| 90                                         | .....           | RMCF2090 | RMCF3090 |
| 100                                        | .....           | RMCF2100 | RMCF3100 |
| 125                                        | .....           | RMCF2125 | RMCF3125 |
| 150                                        | .....           | RMCF2150 | RMCF3150 |

### Type RMCFA 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Line and Load Terminals; see Terminals page 8)

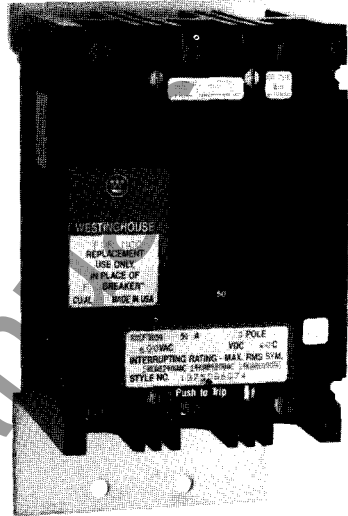
| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |          |          |
|--------------------------------------------|-----------------|----------|----------|
|                                            | 1-Pole          | 2-Pole   | 3-Pole   |
| 15                                         | .....           | RMCF2015 | RMCF3015 |
| 20                                         | .....           | RMCF2020 | RMCF3020 |
| 25                                         | .....           | RMCF2025 | RMCF3025 |
| 30                                         | .....           | RMCF2030 | RMCF3030 |
| 35                                         | .....           | RMCF2035 | RMCF3035 |
| 40                                         | .....           | RMCF2040 | RMCF3040 |
| 50                                         | .....           | RMCF2050 | RMCF3050 |
| 60                                         | .....           | RMCF2060 | RMCF3060 |
| 70                                         | .....           | RMCF2070 | RMCF3070 |
| 80                                         | .....           | RMCF2080 | RMCF3080 |
| 90                                         | .....           | RMCF2090 | RMCF3090 |
| 100                                        | .....           | RMCF2100 | RMCF3100 |

### Type RMCHFA 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Line and Load Terminals; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers |            |            |
|--------------------------------------------|-----------------|------------|------------|
|                                            | 1-Pole          | 2-Pole     | 3-Pole     |
| 15                                         | .....           | RMCHFA2015 | RMCHFA3015 |
| 20                                         | .....           | RMCHFA2020 | RMCHFA3020 |
| 25                                         | .....           | RMCHFA2025 | RMCHFA3025 |
| 30                                         | .....           | RMCHFA2030 | RMCHFA3030 |
| 35                                         | .....           | RMCHFA2035 | RMCHFA3035 |
| 40                                         | .....           | RMCHFA2040 | RMCHFA3040 |
| 50                                         | .....           | RMCHFA2050 | RMCHFA3050 |
| 60                                         | .....           | RMCHFA2060 | RMCHFA3060 |
| 70                                         | .....           | RMCHFA2070 | RMCHFA3070 |
| 80                                         | .....           | RMCHFA2080 | RMCHFA3080 |
| 90                                         | .....           | RMCHFA2090 | RMCHFA3090 |
| 100                                        | .....           | RMCHFA2100 | RMCHFA3100 |
| 125                                        | .....           | RMCHFA2125 | RMCHFA3125 |
| 150                                        | .....           | RMCHFA2150 | RMCHFA3150 |

**Type RMCHF 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Line and Load Terminals; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |           |           |
|------------------------------------------|-----------------|-----------|-----------|
|                                          | 1-Pole          | 2-Pole    | 3-Pole    |
| 15                                       | .....           | RMCHF2015 | RMCHF3015 |
| 20                                       | .....           | RMCHF2020 | RMCEA3020 |
| 25                                       | .....           | RMCHF2025 | RMCHF3025 |
| 30                                       | .....           | RMCHF2030 | RMCHF3030 |
| 40                                       | .....           | RMCHF2040 | RMCHF3040 |
| 50                                       | .....           | RMCHF2050 | RMCHF3050 |
| 60                                       | .....           | RMCHF2060 | RMCHF3060 |
| 70                                       | .....           | RMCHF2070 | RMCHF3070 |
| 80                                       | .....           | RMCHF2080 | RMCHF3080 |
| 90                                       | .....           | RMCHF2090 | RMCHF3090 |
| 100                                      | .....           | RMCHF2100 | RMCHF3100 |



**Accessories and Modifications**  
Description: Pages 19-28

All accessories and modifications available for Replacement Breakers Type FB and HFB are also available for Motor Control Centers Replacement Breakers Types RMCFA, RMCHFA, RMCF, and RMCHF.

**List Prices**  
See Price List 29-021, Dis. RCB-2.

**Terminals**  
Breakers include both line and load terminals. See Terminal data for Replacement Breaker Type FB.

**50°C Calibration**  
Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

**Special Breakers<sup>①</sup>**  
Magnetic only, Front Adjustable (includes Line and Load Terminals). Available for 15-150 ampere ratings for 2- and 3-pole RMCF, RMCHF, RMCFA and RMCHFA.

Factory reconditioned F and FA Tri Pac styles also available.<sup>①</sup>

<sup>①</sup> Not listed with Underwriters' Laboratories, Inc.



March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

For Lighting, Distribution and Power Circuits

## Replacement AB DE-ION® Circuit Breakers

All Westinghouse molded case circuit breakers are built to meet requirements of NEMA Standard AB-1-1986

### Ordering Information

AD De-ion® circuit breakers are to be ordered as follows:

#### Fixed Trip Breakers

Order complete breaker or complete breaker less terminals plus required terminals.

#### Interchangeable Trip Breakers

Order frame, trip unit and terminals.

### When Ordering, Specify:

Catalog Number or Style Number, Quantity

### List Prices

To obtain list prices of breakers, modifications and accessories, locate style or catalog number from appropriate page of Technical Data and refer to Price List 29-021.

Where mounting hardware is desired, specify quantity and style number. No charge when ordered with complete breaker.

If breakers are to be modified, order "similar to" a standard catalog number, and describe the special features desired.

Available accessories are listed beginning on page 19. In some cases, accessories are listed for sale in quantity lots. In these instances, order item in quantity lots indicated.

**Minimum Quantities:** For a basic part or common part as shown on individual breaker pages, minimum ordering quantities are listed.

### Molded Case Switches

Molded Case Switches are Underwriters' Laboratories, Inc. listed devices and are available as standard type with no overcurrent protection, and high magnetic trip type with fixed trip setting.

For application information and UL Inc. listed withstand ratings, refer to Application Data 29-160.

### Further Information

#### AB De-ion® Circuit Breakers

Price List 29-021  
Application Data 29-160  
Dimension Sheet 29-170

### Obsolete Breaker Guide

The breakers in this Technical Data are an obsolete design and are supplied for replacement only. They are replaced by Series C breakers shown in Frame Books 29-101, 29-102, 29-103, 29-111 and 29-111A.

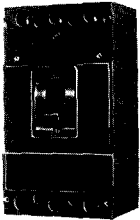
### Index

| Breaker                                           | Page Numbers    |               |
|---------------------------------------------------|-----------------|---------------|
|                                                   | Selection Guide | Ordering Data |
| <b>Standard Breakers</b>                          |                 |               |
| <b>100 and 150 Amperes</b>                        |                 |               |
| Type EB, EHB, FB                                  | 2               | 7             |
| <b>225 Amperes</b>                                |                 |               |
| Type JA, KA                                       | 4               | 11,12         |
| <b>250 Amperes</b>                                |                 |               |
| Type JB, KB                                       | 2               | 9,10          |
| <b>400 Amperes</b>                                |                 |               |
| Type DA                                           | 2               | 5             |
| Type LBB, LB                                      | 3               | 13,14         |
| <b>MARK 75 ® Breakers</b>                         |                 |               |
| <b>150 Amperes</b>                                |                 |               |
| Type HFB                                          | 3               | 7             |
| <b>225 Amperes</b>                                |                 |               |
| Type HKA                                          | 4               | 12            |
| <b>250 Amperes</b>                                |                 |               |
| Type HKB                                          | 3               | 10            |
| <b>400 Amperes</b>                                |                 |               |
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| MCP Accessories                                   |                 | 27            |



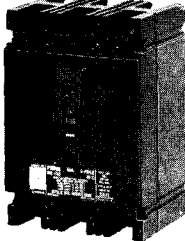
## Standard Breaker Selection Guide

DA



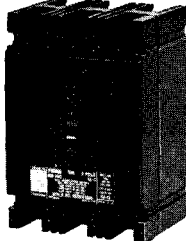
**2, 3 Poles<sup>①</sup>**  
**250-400 Amps**  
**@ 40°C**

EB



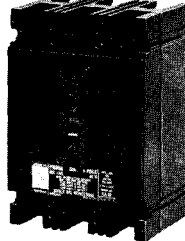
**1, 2, 3 Poles**  
**15-100 Amps**  
**@40°C**

EHB



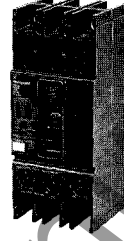
**1, 2, 3 Poles**  
**15-100 Amps**  
**@40°C**

FB



**2, 3 Poles**  
**15-150 Amps**  
**@40°C**

JB, KB



**2, 3 Poles<sup>①</sup>**  
**70-250 Amps**  
**@ 40°C**

LB, LBB



**2, 3 Pole<sup>①</sup>**  
**70-400 Amps**  
**@ 40°C**

### Dimensions, Inches, 3 Pole Breakers

| H                               | W                             | D                              | H | W                             | D                             | H | W                             | D                             | H | W                             | D                             | H  | W                             | D                              |
|---------------------------------|-------------------------------|--------------------------------|---|-------------------------------|-------------------------------|---|-------------------------------|-------------------------------|---|-------------------------------|-------------------------------|----|-------------------------------|--------------------------------|
| 10 <sup>5</sup> / <sub>16</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>16</sub> | 6 | 4 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>8</sub> | 6 | 4 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>8</sub> | 6 | 4 <sup>7</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>8</sub> | 10 | 4 <sup>7</sup> / <sub>8</sub> | 4 <sup>1</sup> / <sub>16</sub> |

**Ac Ratings** I. C. Ratings Shown **18,000** are **Symmetrical<sup>②</sup>**; Ratings Shown 20,000 are Asymmetrical

240 Volts Max.  
Amps I. C.  
25,000 and **22,000**

120, 240 Volts Max.  
Amps I. C.  
120 Volts: 10,000  
and **10,000**  
240 Volts: 10,000  
and **10,000**

277, 480 Volts Max.  
Amps I. C.  
240 Volts: 20,000  
and **18,000**  
480 Volts: 15,000  
and **14,000**  
277 Volts: 15,000  
and **14,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 20,000  
and **18,000**  
480 Volts: 15,000  
and **14,000**  
600 Volts: 15,000  
and **14,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 30,000  
and **25,000**  
480 Volts: 25,000  
and **22,000**  
600 Volts: 15,000  
and **14,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and **42,000**  
480 Volts: 35,000  
and **30,000**  
600 Volts: 25,000  
and **22,000**

### Dc Ratings<sup>③</sup>

250 Volts  
10,000 Amps I. C.

125, 125/250 Volts  
5,000 Amps I. C.

125, 250 Volts  
10,000 Amps I. C.

250 Volts  
10,000 Amps I. C.

250 Volts  
10,000 Amps I. C.

250 Volts  
20,000 Amps I. C. <sup>③</sup>

### Accessories and Modifications See pages 19-28 for Description and Underwriters' Laboratories, Inc. Status

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Auxiliary Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices  
Undervoltage Trip  
Alarm Switch

Shunt Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices  
Undervoltage Trip

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

<sup>①</sup> 2-pole unit supplied in 3-pole frame.  
<sup>②</sup> Underwriters' Laboratories, Inc. listed.  
<sup>③</sup> Ratings above 10,000 amps not UL listed.

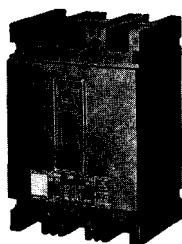


March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Replacement AB DE-ION® Circuit Breakers

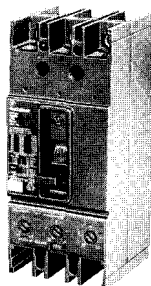
### High Interrupting Capacity Breaker Selection Guide

MARK 75® HFB



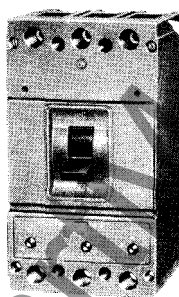
1, 2, 3 Poles<sup>②</sup>  
15-150 Amps  
@40°C

MARK 75® HKB



2, 3 Poles<sup>②</sup>  
70-250 Amps  
@40°C

MARK 75® HLB



2, 3 Poles<sup>②</sup>  
125-400 Amps  
@40°C

#### Dimensions, Inches, 3 Pole Breakers

H W D  
6 4<sup>1</sup>/<sub>8</sub> 3<sup>3</sup>/<sub>8</sub>

H W D  
10 4<sup>1</sup>/<sub>8</sub> 4<sup>1</sup>/<sub>16</sub>

H W D  
10<sup>1</sup>/<sub>8</sub> 5<sup>1</sup>/<sub>2</sub> 4<sup>1</sup>/<sub>16</sub>

**Ac Rating** I. C. Ratings Shown **65,000** are **Symmetrical** <sup>①</sup>; Ratings Shown 75,000 are Asymmetrical

600 Volts Max.  
Amps I. C.  
240 Volts:  
75,000 and **65,000**  
480 Volts:  
30,000 and **25,000**  
600 Volts:  
20,000 and **18,000**

600 Volts Max.  
Amps I. C.  
240 Volts:  
75,000 and **65,000**  
480 Volts:  
30,000 and **25,000**  
600 Volts:  
20,000 and **18,000**

600 Volts Max.  
Amps I. C.  
240 Volts:  
75,000 and **65,000**  
480 Volts:  
40,000 and **35,000**  
600 Volts:  
30,000 and **25,000**

#### Dc Ratings<sup>①</sup>

250 Volts  
20,000 Amps I. C. <sup>③</sup>

250 Volts  
20,000 Amps I. C. <sup>③</sup>

250 Volts  
20,000 Amps I. C. <sup>③</sup>

**Accessories and Modifications**, See Pages 19-28 for Description and Underwriters' Laboratories, Inc. Status.)

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

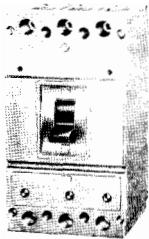
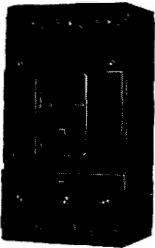
Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

<sup>①</sup> Underwriters' Laboratories, Inc. listed.  
<sup>②</sup> 2-pole unit supplied in 3-pole frame.  
<sup>③</sup> Ratings above 10,000 amps not UL Listed.



JA, KA

MARK 75® HKA



2, 3 Poles<sup>②</sup>  
70-225 Amps  
@40°C

2, 3 Poles<sup>②</sup>  
70-225 Amps  
@40°C

Dimensions, Inches, 3 Pole Breakers

|                                |                               |                                |                                |                               |                                |
|--------------------------------|-------------------------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|
| H                              | W                             | D                              | H                              | W                             | D                              |
| 10 <sup>1</sup> / <sub>8</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>16</sub> | 10 <sup>1</sup> / <sub>8</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>16</sub> |

AC Rating I. C. Ratings Shown 25,000 are Symmetrical<sup>●</sup>; Ratings Shown 30,000 are Symmetrical.

|                                                                                                                              |                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 600 Volts Max.<br>Amps I. C.<br>240 Volts: 30,000 and 25,000<br>480 Volts: 25,000 and 22,000<br>600 Volts: 25,000 and 22,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|

Dc Rating<sup>①</sup>

|                                |                                             |
|--------------------------------|---------------------------------------------|
| 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>20,000 Amps I. C. <sup>③</sup> |
|--------------------------------|---------------------------------------------|

Accessories and Modifications, See Pages 19-28 for Description and Underwriters' Laboratories, Inc. Status

|                                                                                                                                                                                                                      |                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

● Underwriters' Laboratories, Inc. listed.  
② 2-pole unit supplied in 3-pole frame.  
③ Ratings above 10,000 amps not UL Listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220

Printed in U.S.A.



March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Type DA 400 Amperes

## Replacement AB DE-ION® Circuit Breakers

### Type DA Breakers

250-400 Amperes, 240 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip Thermal Magnetic Breakers

| Continuous<br>Ampere<br>Rating @ 40°C | Breakers With Line Terminals Only |                              | Breakers With Line and Load Terminals |                              |
|---------------------------------------|-----------------------------------|------------------------------|---------------------------------------|------------------------------|
|                                       | Catalog Numbers                   |                              | Catalog Numbers                       |                              |
|                                       | 2 Pole <sup>①</sup>               | 3 Pole                       | 2 Pole <sup>①</sup>                   | 3 Pole                       |
| 250                                   | DA2250Y                           | DA3250Y                      | DA2250                                | DA3250                       |
| 300                                   | DA2300Y                           | DA3300Y                      | DA2300                                | DA3300                       |
| 350                                   | DA2350Y                           | DA3350Y                      | DA2350                                | DA3350                       |
| 400                                   | DA2400Y                           | DA3400Y                      | DA2400                                | DA3400                       |
|                                       | Approx. Ship. Wt.<br>13 Lbs.      | Approx. Ship. Wt.<br>15 Lbs. | Approx. Ship. Wt.<br>13 Lbs.          | Approx. Ship. Wt.<br>15 Lbs. |

Type DA breakers meet requirements of Federal Specification W-C-375b: Class 14b.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

### Terminals

Terminals are Underwriters' Laboratories, Inc. listed for the wire type and size listed below. When used with aluminum conductors, use joint compound.

| Max. Amps.                                   | Catalog Number | Wire Range, Type<br>No. of Cables |
|----------------------------------------------|----------------|-----------------------------------|
| <b>Standard Pressure Terminals</b>           |                |                                   |
| 350                                          | TA350DA        | 1 250-500 MCM Al/Cu               |
| 400                                          | T400DA2        | 2 3/0-250 MCM Cu only             |
| <b>Optional Terminals (for Copper cable)</b> |                |                                   |
| 350                                          | T350DA         | 1 250-500 MCM Cu                  |

Listed with Underwriters' Laboratories, Inc. except as noted.

List Prices: See Price List 29-021, Dis. RCB-2  
Accessories and Modifications  
Description: Pages 19-28

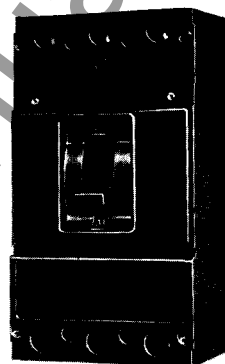
### Special Calibrations<sup>②</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See Application Data 29-160 for information regarding special conditions.  
Maximum 400 Hz calibration: Type DA, 300 amps.

| Type Of<br>Calibration | 1-24<br>Identical Units                           | 25 or More<br>Identical Units |
|------------------------|---------------------------------------------------|-------------------------------|
| Thermal                | { Add 10% of<br>List Price of<br>Complete Breaker | None                          |
| Magnetic               |                                                   | None                          |
| Frequency              |                                                   | None                          |

### 50°C Calibration<sup>②</sup>

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



Type DA 3 Pole

<sup>①</sup> 2-pole breakers are supplied in 3-pole frames.  
<sup>②</sup> Not UL Listed.





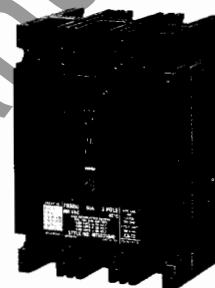
February, 1990  
Supersedes Technical Data 29-121,  
pages 7-8, dated March, 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Replacement AB DE-ION® Circuit Breakers

### Type EB 1, 2, 3 Poles; 240 Volts Ac Max.; Thermal Magnetic and Saf-T-Vue® (Includes Load Terminals Only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers                        |                                            | Catalog Numbers                            |            |
|--------------------------------------------|----------------------------------------|--------------------------------------------|--------------------------------------------|------------|
|                                            | 1-Pole, 120 Volts Ac,<br>125 Volts Dc① | 2-Pole, 240 Volts Ac,<br>125/250 Volts Dc① | 3-Pole, 240 Volts Ac,<br>125/250 Volts Dc① |            |
|                                            | Standard                               | Standard                                   | Standard                                   | Saf-T-Vue② |
| 15                                         | EB1015③                                | EB2015                                     | EB3015                                     | EB3015S    |
| 20                                         | EB1020③                                | EB2020                                     | EB3020                                     | EB3020S    |
| 25                                         | EB1025                                 | EB2025                                     | EB3025                                     | EB3025S    |
| 30                                         | EB1030                                 | EB2030                                     | EB3030                                     | EB3030S    |
| 35                                         | EB1035                                 | EB2035                                     | EB3035                                     | EB3035S    |
| 40                                         | EB1040                                 | EB2040                                     | EB3040                                     | EB3040S    |
| 45                                         | EB1045                                 | EB2045                                     | EB3045                                     | EB3045S    |
| 50                                         | EB1050                                 | EB2050                                     | EB3050                                     | EB3050S    |
| 60                                         | EB1060                                 | EB2060                                     | EB3060                                     | EB3060S    |
| 70                                         | EB1070                                 | EB2070                                     | EB3070                                     | EB3070S    |
| 80                                         | EB1080                                 | EB2080                                     | EB3080                                     | EB3080S    |
| 90                                         | EB1090                                 | EB2090                                     | EB3090                                     | EB3090S    |
| 100                                        | EB1100                                 | EB2100                                     | EB3100                                     | EB3100S    |
|                                            | Approx. Ship. Wt.: 2 lbs.              |                                            | Approx. Ship. Wt.: 3 lbs.                  |            |
|                                            |                                        |                                            | Approx. Ship. Wt.: 4½ lbs.                 |            |

EB: 120, 240 Volts Ac; 125/250 Volts Dc  
EHB: 277, 480 Volts Ac; 250 Volts Dc  
FB, HFB: 600 Volts Ac, 250 Volts Dc



Listed with Underwriters' Laboratories, Inc.  
except as noted.

### Type EHB 1, 2, 3 Poles; 480 Volts Ac Max.; Thermal Magnetic and Saf-T-Vue (Includes Load Terminals Only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers                        |                                        | Catalog Numbers            |            |
|--------------------------------------------|----------------------------------------|----------------------------------------|----------------------------|------------|
|                                            | 1-Pole, 277 Volts Ac,<br>125 Volts Dc① | 2-Pole, 480 Volts Ac,<br>250 Volts Dc① | 3-Pole,<br>480 Volts Ac    |            |
|                                            | Standard                               | Standard                               | Standard                   | Saf-T-Vue② |
| 15                                         | EHB1015④                               | EHB2015                                | EHB3015                    | EHB3015S   |
| 20                                         | EHB1020④                               | EHB2020                                | EHB3020                    | EHB3020S   |
| 25                                         | EHB1025                                | EHB2025                                | EHB3025                    | EHB3025S   |
| 30                                         | EHB1030                                | EHB2030                                | EHB3030                    | EHB3030S   |
| 35                                         | EHB1035                                | EHB2035                                | EHB3035                    | EHB3035S   |
| 40                                         | EHB1040                                | EHB2040                                | EHB3040                    | EHB3040S   |
| 45                                         | EHB1045                                | EHB2045                                | EHB3045                    | EHB3045S   |
| 50                                         | EHB1050                                | EHB2050                                | EHB3050                    | EHB3050S   |
| 60                                         | EHB1060                                | EHB2060                                | EHB3060                    | EHB3060S   |
| 70                                         | EHB1070                                | EHB2070                                | EHB3070                    | EHB3070S   |
| 80                                         | EHB1080                                | EHB2080                                | EHB3080                    | EHB3080S   |
| 90                                         | EHB1090                                | EHB2090                                | EHB3090                    | EHB3090S   |
| 100                                        | EHB1100                                | EHB2100                                | EHB3100                    | EHB3100S   |
|                                            | Approx. Ship. Wt.: 2 lbs.              |                                        | Approx. Ship. Wt.: 3 lbs.  |            |
|                                            |                                        |                                        | Approx. Ship. Wt.: 4½ lbs. |            |

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings⑤

| Max Volts | Amperes |
|-----------|---------|
|-----------|---------|

| EB Breakers    |                    |
|----------------|--------------------|
| 120 and 240 Ac | 10,000 Asym., Sym. |
| 125/250 Dc     | 5,000●             |

| EHB, FB Breakers |                           |
|------------------|---------------------------|
| 240 Ac           | 20,000 Asym., 18,000 Sym. |
| 277 Ac (EHB)     | 15,000 Asym., 14,000 Sym. |
| 480 Ac           | 15,000 Asym., 14,000 Sym. |
| 600 Ac (FB)      | 15,000 Asym., 14,000 Sym. |
| 250 Dc           | 10,000①                   |

| MARK 75 Type HFB |                           |
|------------------|---------------------------|
| 240 Ac           | 75,000 Asym., 65,000 Sym. |
| 277 Ac⑥          | 75,000 Asym., 65,000 Sym. |
| 480 Ac           | 30,000 Asym., 25,000 Sym. |
| 600 Ac           | 20,000 Asym., 18,000 Sym. |
| 250 Dc (2 Pole)  | 20,000①⑨                  |

See page 8 for Federal Specification  
W-C-375b) Classifications.

List Prices: See Price List 29-021, Dis. RCB-2

### Accessories and Modifications

Description: Pages 19-28

- ⑤ All 4 poles have thermal magnetic trip elements.  
Can be supplied with 3 poles protected plus 1 pole non-automatic if required. Order by description. No price or dimensional differences.
- ⑥ 15 thru 30 amp ratings only have 75,000 amp I.C. 40 thru 100 amp ratings have 30,000 amp Asym., 25,000 Sym. I.C.
- Two pole breakers are supplied in three pole frames with current carrying parts omitted from center pole.
- ⑨ Interrupting capacities shown do not apply to molded case switches.
- Ratings above 10,000 amps not UL Listed.

### Type FB, HFB 1, 2, 3, 4 Poles; 600 Volts Ac Max.; Thermal Magnetic MARK 75® Saf-T-Vue (Includes Load Terminals Only; see Terminals, page 8)

| Continuous<br>Ampere<br>Rating<br>(@ 40°C) | Catalog Numbers                         |                                         | Catalog Numbers        |                          |
|--------------------------------------------|-----------------------------------------|-----------------------------------------|------------------------|--------------------------|
|                                            | 1-Pole<br>277 Volts Ac<br>125 Volts Dc① | 2-Pole<br>600 Volts Ac<br>250 Volts Dc① | 3-Pole<br>600 Volts Ac | 4-Pole②⑤<br>600 Volts Ac |
|                                            | MARK 75⑥                                | Standard                                | Standard               | Standard                 |
| 15                                         | HFB1015④                                | HFB2015                                 | FB3015                 | HFB3015                  |
| 20                                         | HFB1020④                                | HFB2020                                 | FB3020                 | HFB3020                  |
| 25                                         | HFB1025                                 | HFB2025                                 | FB3025                 | HFB3025                  |
| 30                                         | HFB1030                                 | HFB2030                                 | FB3030                 | HFB3030                  |
| 35                                         | HFB1035                                 | HFB2035                                 | FB3035                 | HFB3035                  |
| 40                                         | HFB1040                                 | HFB2040                                 | FB3040                 | HFB3040                  |
| 45                                         | HFB1045                                 | HFB2045                                 | FB3045                 | HFB3045                  |
| 50                                         | HFB1050                                 | HFB2050                                 | FB3050                 | HFB3050                  |
| 60                                         | HFB1060                                 | HFB2060                                 | FB3060                 | HFB3060                  |
| 70                                         | HFB1070                                 | HFB2070                                 | FB3070                 | HFB3070                  |
| 80                                         | HFB1080                                 | HFB2080                                 | FB3080                 | HFB3080                  |
| 90                                         | HFB1090                                 | HFB2090                                 | FB3090                 | HFB3090                  |
| 100                                        | HFB1100                                 | HFB2100                                 | FB3100                 | HFB3100                  |
| 110                                        | .....                                   | .....                                   | FB3110                 | HFB3110                  |
| 125                                        | .....                                   | .....                                   | FB3125                 | HFB3125                  |
| 150                                        | .....                                   | .....                                   | FB3150                 | HFB3150                  |

① Dc ratings apply to substantially non-inductive circuits.

● Not listed with Underwriters' Laboratories, Inc.

③ Switching duty rated for 120 volts Ac fluorescent light applications only.

④ Switching duty rated for 277 volts Ac fluorescent light applications only.

### Special Breakers<sup>①</sup>

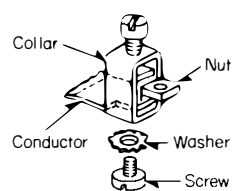
#### Type FB, Magnetic Only, Front Adjustable (Includes Line and Load Terminals)

| Continuous<br>Amperes<br>Rating | Magnetic<br>Trip Range<br>Amperes | Catalog/Style Numbers |            | 2-Pole <sup>②</sup> , 600 Volts Ac |             |            | 3-Pole, 600 Volts Ac |         |
|---------------------------------|-----------------------------------|-----------------------|------------|------------------------------------|-------------|------------|----------------------|---------|
|                                 |                                   | Standard              | MARK 75    | Standard                           | MARK 75     | Standard   | Saf-T-Vue            | MARK 75 |
| 3                               | 7- 22                             | FB2022MRL             | HFB2022ML  | FB3022MRL                          | FB3022SMRL  | HFB3022ML  |                      |         |
| 5                               | 15- 45                            | FB2045MRL             | HFB2045ML  | FB3045MRL                          | FB3045SMRL  | HFB3045ML  |                      |         |
| 10                              | 35- 110                           | FB2110MRL             | HFB2110ML  | FB3110MRL                          | FB3110SMRL  | HFB3110ML  |                      |         |
| 25                              | 32- 80                            | 2610D53G12            |            | 2610D53G30                         |             |            |                      |         |
| 25                              | 66- 190                           | FB2190MRL             | HFB2190ML  | FB3190MRL                          | FB3190SMRL  | HFB3190ML  |                      |         |
| 30                              | 50- 150                           | 1268C14G05            |            | 1268C14G06                         |             |            |                      |         |
| 30                              | 90- 270                           | FB2270MRL             | HFB2270ML  | FB3270MRL                          | FB3270SMRL  | HFB3270ML  |                      |         |
| 50                              | 66- 190                           | 1268C14G01            |            | 1268C14G02                         |             |            |                      |         |
| 50                              | 160- 480                          | FB2480MRL             | HFB2480ML  | FB3480MRL                          | FB3480SMRL  | HFB3480ML  |                      |         |
| 70                              | 100- 270                          | 2610D53G13            |            | 2610D53G31                         |             |            |                      |         |
| 100                             | 150- 480                          | 1268C14G03            |            | 1268C14G04                         |             |            |                      |         |
| 100                             | 450-1550                          | FB21550MRL            | HFB21550ML | FB31550MRL                         | FB31550SMRL | HFB31550ML |                      |         |
| 150                             | 575-1800                          | FB21800MRL            | HFB21800ML | FB31800MRL                         | FB31800SMRL | HFB31800ML |                      |         |

### Terminals

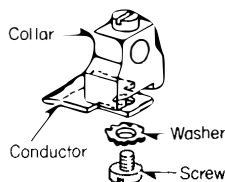
Breakers include load terminals only<sup>⑤⑥</sup>. Terminals are Underwriters' Laboratories, Inc. listed as suitable for wire type and size as listed below. When used with aluminum conductors, use joint compound. When line terminals are required, order by style number from table at no charge with the breaker.

| Max.<br>Breaker<br>Amps                  | Wire<br>Type | Wire<br>Range | Package of 3<br>Line Terminals<br>④ | Style Number |
|------------------------------------------|--------------|---------------|-------------------------------------|--------------|
| <b>Standard Pressure Type Terminals</b>  |              |               |                                     |              |
| 20 (EB, EHB)                             | Al/Cu        | #14-#10       | 624B100G14                          |              |
| 100                                      | Al/Cu        | #14-1/0       | 624B100G02                          |              |
| 150                                      | Al/Cu        | # 4-4/0       | 624B100G17                          |              |
| <b>Optional Al/Cu Pressure Terminals</b> |              |               |                                     |              |
| 50                                       | Al/Cu        | #14-#4        | 624B100G10                          |              |
| 100                                      | Al/Cu        | # 4-4/0       | 624B100G17                          |              |



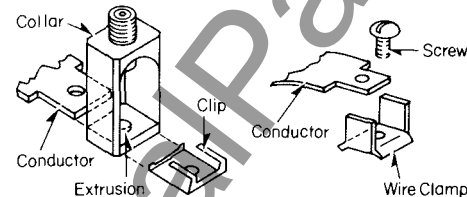
Style 624B100G02

Insert collar enclosing conductor as shown. Locate nut on top of conductor and tighten securely with screw and washer. **Caution:** Collar must surround conductor



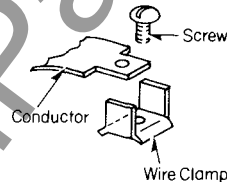
Style 624B100G10

Assemble collar on top of conductor as shown. Tighten securely with screw and washer.



Style 624B100G17

Insert collar enclosing conductor and center on extrusion on collar. Install clip with legs on top of conductor and snap end around bottom of collar



Style 624B100G14

Assemble wire clamp to bottom of conductor as shown

### LFB Current Limiter Attachment

The LFB Current Limiter is an attachment that bolts to the load end of a standard FB thermal magnetic or magnetic only breaker, providing 200,000 amps interrupting capacity at up to 600 volts Ac. Limiters for thermal magnetic breakers are listed with Underwriters' Laboratories, Inc. for the above. Current limiters must be applied as indicated in the table.

Standard LFB terminals are suitable for Cu/Al cable. Ratings thru 70 amps accept (1) #14-#2, and 100 and 150 amp accept (1) #1-4/0.<sup>⑦</sup>

| Breaker Rating,<br>Amperes                       | Limiter<br>Catalog Number |
|--------------------------------------------------|---------------------------|
| <b>For Thermal Magnetic Breakers<sup>⑧</sup></b> |                           |
| 15-70                                            | LFB3070R                  |
| 80-150 <sup>⑨</sup>                              | LFB3150R                  |
| <b>For Magnetic Only Breakers<sup>⑦</sup></b>    |                           |
| 3                                                | LFB3003MR                 |
| 5                                                | LFB3005MR                 |
| 10                                               | LFB3010MR                 |
| 25                                               | LFB3025MR                 |
| 30                                               | LFB3030MR                 |
| 50                                               | LFB3050MR                 |
| 70                                               | LFB3070MR                 |
| 100                                              | LFB3100MR                 |
| 150                                              | LFB3150MR                 |

### Special Calibrations<sup>①</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See Application Data 29-160 for information regarding special conditions. Maximum calibration for 400 Hz. is 135 amps.

| Type of<br>Calibration           | 1-24<br>Identical Units                         | 25 or More<br>Identical<br>Units |
|----------------------------------|-------------------------------------------------|----------------------------------|
| Thermal<br>Magnetic<br>Frequency | Add 10% to<br>List Price of<br>Complete Breaker | None<br>None<br>None             |

### 50°C Calibration<sup>①</sup>

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

### Ambient Compensating Breakers<sup>①</sup>

To order, add suffix letter "A" to standard thermal magnetic breaker catalog number.

Available in all standard ratings of EB, EHB, FB and HFB breakers up to ratings of 100<sup>⑥</sup> amps. Add 10% to price of standard breaker.

### Federal Specification Classifications

EB, EHB, FB and HFB breakers meet requirements of Federal Specification W-C-375b as follows:

EB: 1 Pole, Class 11a; 2, 3 poles, Classes 10b, 11b, 12b  
EHB: 1 Pole, Class 13a; 2, 3 poles, Class 13b;  
FB: 2, 3 poles, Class 18a;  
HFB: 1 Pole, Class 13a; 2, 3 poles, Class 22a

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

### Further Information

**List Prices:** See Price List 29-021, Dis. RCB-2 Application, Operating Characteristics: AD 29-160

**Dimensions:** DS 29-170

- ① Changed or added since previous issue.
- ② Not listed with Underwriters' Laboratories, Inc.
- ③ 2-Pole magnetic-only breakers supplied in 3-Pole frame with current carrying parts omitted from center pole.
- ④ Magnetic only breakers for Dc applications require special calibration. Order by description.
- ⑤ Style listed is for package of 3 terminals. Order quantity equal to 1/3 total terminals required.
- ⑥ Magnetic-only breakers include both line and load terminals.
- ⑦ Suffix "L" on catalog number indicates line and load terminals included. If factory installation is required, specify on order.
- ⑧ Ratings thru 70 amps can be supplied with terminals for Cu cable only (#14-#2). Order by description.



March, 1988  
New Information and supersedes Technical  
Data 29-120, pages 21-22, dated October, 1981  
Mailed to: E, D, C/29-100A, 31-400A,  
31-400B

Type JB 250 Amperes  
Type KB 250 Amperes  
MARK 75® Type HKB 250 Amperes

## Replacement AB DE-ION® Circuit Breakers

### Type JB Breakers<sup>Ⓢ</sup>

90-250 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip Thermal Magnetic,  
Saf-T-Vue Breakers

| Continuous<br>Ampere<br>Rating<br>@ 40°C               | Magnetic Trip Setting,<br>Amperes (Set on High<br>Side, Adjustable to<br>Lower Limits) |      | Complete Breaker<br>Includes Pressure Type Aluminum<br>Terminals <sup>ⓐ</sup> |                           | Breaker Without Terminals  |                        |
|--------------------------------------------------------|----------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------|---------------------------|----------------------------|------------------------|
|                                                        | Low                                                                                    | High | Catalog Number<br>Standard                                                    | Saf-T-Vue <sup>ⓑ</sup>    | Catalog Number<br>Standard | Saf-T-Vue <sup>ⓑ</sup> |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>Ⓢ</sup></b> |                                                                                        |      |                                                                               |                           |                            |                        |
| 90                                                     | 450                                                                                    | 900  | JB2090                                                                        | JB2090S                   | JB2090W                    | JB2090SW               |
| 100                                                    | 500                                                                                    | 1000 | JB2100                                                                        | JB2100S                   | JB2100W                    | JB2100SW               |
| 125                                                    | 625                                                                                    | 1250 | JB2125                                                                        | JB2125S                   | JB2125W                    | JB2125SW               |
| 150                                                    | 750                                                                                    | 1500 | JB2150                                                                        | JB2150S                   | JB2150W                    | JB2150SW               |
| 175                                                    | 875                                                                                    | 1750 | JB2175                                                                        | JB2175S                   | JB2175W                    | JB2175SW               |
| 200                                                    | 1000                                                                                   | 2000 | JB2200                                                                        | JB2200S                   | JB2200W                    | JB2200SW               |
| 225                                                    | 1125                                                                                   | 2250 | JB2225                                                                        | JB2225S                   | JB2225W                    | JB2225SW               |
| 250                                                    | 1250                                                                                   | 2500 | JB2250                                                                        | JB2250S                   | JB2250W                    | JB2250SW               |
|                                                        |                                                                                        |      |                                                                               | Approx. Ship. Wt. 12 Lbs. | Approx. Ship. Wt. 12 Lbs.  |                        |
| <b>3-Poles, 600 Volts Ac Only</b>                      |                                                                                        |      |                                                                               |                           |                            |                        |
| 90                                                     | 450                                                                                    | 900  | JB3090                                                                        | JB3090S                   | JB3090W                    | JB3090SW               |
| 100                                                    | 500                                                                                    | 1000 | JB3100                                                                        | JB3100S                   | JB3100W                    | JB3100SW               |
| 125                                                    | 625                                                                                    | 1250 | JB3125                                                                        | JB3125S                   | JB3125W                    | JB3125SW               |
| 150                                                    | 750                                                                                    | 1500 | JB3150                                                                        | JB3150S                   | JB3150W                    | JB3150SW               |
| 175                                                    | 875                                                                                    | 1750 | JB3175                                                                        | JB3175S                   | JB3175W                    | JB3175SW               |
| 200                                                    | 1000                                                                                   | 2000 | JB3200                                                                        | JB3200S                   | JB3200W                    | JB3200SW               |
| 225                                                    | 1125                                                                                   | 2250 | JB3225                                                                        | JB3225S                   | JB3225W                    | JB3225SW               |
| 250                                                    | 1250                                                                                   | 2500 | JB3250                                                                        | JB3250S                   | JB3250W                    | JB3250SW               |
|                                                        |                                                                                        |      |                                                                               | Approx. Ship. Wt. 14 Lbs. | Approx. Ship. Wt. 12 Lbs.  |                        |

For Panelboard and Switchboard applications where only line side or load side terminals are  
required, add suffix "X" to complete breaker catalog number.

### Magnetic Only Breakers, Front Adjustable<sup>Ⓢ</sup>

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip Setting,<br>Amperes (Set on High<br>Side, Adjustable to<br>Lower Limits) |      | Breaker Only, No Terminals <sup>ⓐ</sup> |                           |           |            |
|------------------------------------------|----------------------------------------------------------------------------------------|------|-----------------------------------------|---------------------------|-----------|------------|
|                                          | Low                                                                                    | High | 2-Poles <sup>Ⓢ</sup><br>Catalog Number  | 3-Poles<br>Catalog Number | Standard  | Saf-T-Vue  |
| 250                                      | 625                                                                                    | 1250 | JB21250MW                               | JB21250SMW                | JB31250MW | JB31250SMW |
| 250                                      | 750                                                                                    | 1500 | JB21500MW                               | JB21500SMW                | JB31500MW | JB31500SMW |
| 250                                      | 875                                                                                    | 1750 | JB21750MW                               | JB21750SMW                | JB31750MW | JB31750SMW |
| 250                                      | 1125                                                                                   | 2250 | JB22250MW                               | JB22250SMW                | JB32250MW | JB32250SMW |
| 250                                      | 1250                                                                                   | 2500 | JB22500MW                               | JB22500SMW                | JB32500MW | JB32500SMW |

### Special Calibrations<sup>Ⓢ</sup>

Special calibration price additions apply to  
ampere ratings not listed as standard, or for  
ambients other than 40°C or 50°. For frequen-  
cies other than 0-60 Hertz Ac, refer to West-  
inghouse.

| Type of<br>Calibration | 1-24<br>Identical Units                         | 25 or More<br>Identical Units |
|------------------------|-------------------------------------------------|-------------------------------|
| Thermal                | Add 10% to<br>List Price of<br>Complete Breaker | None                          |
| Magnetic               |                                                 | None                          |

### 50°C Calibration<sup>Ⓢ</sup>

Add suffix "V" to catalog number for com-  
plete breaker when ordering listed ampere  
ratings to be used in 50°C ambients. Same  
price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc.  
except as noted.

Type JB breakers meet requirements of Class  
19a circuit breakers as defined by Federal  
Specification W-C-375b.

Underwriters' Laboratories, Inc. Listed Inter-  
rupting Ratings<sup>Ⓢ</sup>

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 30,000 Asym., 25,000 Sym. |
| 480 Ac     | 25,000 Asym., 22,000 Sym. |
| 600 Ac     | 15,000 Asym., 14,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Ground B phase applica-  
tions, refer to Westinghouse.

### Terminals<sup>Ⓢ</sup> ⓐ

Two terminals are required per pole. Termi-  
nals are Underwriters' Laboratories, Inc.  
listed for wire type and range listed below.  
When used with aluminum conductors, use  
joint compound. To order optional copper  
only terminals, add suffix "C" to complete  
breaker catalog number.

| Max.<br>Breaker,<br>Amps                 | Terminal<br>Catalog<br>Number | Wire Range, Type<br>No. of Cables |
|------------------------------------------|-------------------------------|-----------------------------------|
| <b>Standard Al/Cu Pressure Terminals</b> |                               |                                   |
| 250                                      | TA250KB                       | 1 #4-350 MCM Al/Cu                |

| <b>Optional Pressure Terminals</b> |        |                 |
|------------------------------------|--------|-----------------|
| 250                                | T250KB | 1 #4-350 MCM Cu |

### Magnetic Only Breakers

For description, refer to AD 29-160. To  
order these breakers, select catalog number  
from table at left, plus terminals above.

List Prices: See Price List 29-021, Dis. RCB-2<sup>Ⓢ</sup>

Accessories and Modifications  
Description: Pages 19-28

Ⓢ Changed or added since previous issue.  
ⓐ Not listed with Underwriters' Laboratories, Inc.  
Ⓢ 2-pole breakers are supplied in 3-pole frames with current  
carrying parts omitted from center pole.  
ⓐ Terminals are shipped separately from breaker frame.  
ⓐ Select desired terminal from table and order as separate  
item.



# **Type KB and MARK 75® Type HKB®**

90-250 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Interchangeable Trip Thermal Magnetic, Saf-T-Vue® Breakers

| Contin-<br>uous<br>Am-<br>pere<br>Rat-<br>ing<br>@<br>40°C | Magnetic<br>Trip<br>Setting<br>Amperes <sup>(1)</sup> |      | Complete Breaker                                            |                             |         | Shipped as Frame, Trip Unit and Terminals <sup>(2)</sup> |                             |                                               |
|------------------------------------------------------------|-------------------------------------------------------|------|-------------------------------------------------------------|-----------------------------|---------|----------------------------------------------------------|-----------------------------|-----------------------------------------------|
|                                                            |                                                       |      | Includes Pressure Type<br>Aluminum Terminals <sup>(2)</sup> |                             |         | Frame Only                                               |                             |                                               |
|                                                            |                                                       |      | Catalog Number                                              |                             |         | Catalog Number                                           |                             |                                               |
|                                                            | Low                                                   | High | Standard                                                    | Saf-T-Vue<br><sup>(3)</sup> | MARK 75 | Standard                                                 | Saf-T-Vue<br><sup>(3)</sup> | MARK 75                                       |
|                                                            |                                                       |      |                                                             |                             |         |                                                          |                             | Cat. No.<br>Standard<br>Saf-T-Vue,<br>MARK 75 |

## **2-Poles, 600 Volts Ac, 250 Volts Dc<sup>(4)</sup>**

|     |      |      |                           |         |         |                          |          |          |                             |
|-----|------|------|---------------------------|---------|---------|--------------------------|----------|----------|-----------------------------|
| 90  | 450  | 900  | KB2090                    | KB2090S | HKB2090 | KB2250F                  | KB2250FS | HKB2250F | HKB2090T                    |
| 100 | 500  | 1000 | KB2100                    | KB2100S | HKB2100 | KB2250F                  | KB2250FS | HKB2250F | HKB2100T                    |
| 125 | 625  | 1250 | KB2125                    | KB2125S | HKB2125 | KB2250F                  | KB2250FS | HKB2250F | HKB2125T                    |
| 150 | 750  | 1500 | KB2150                    | KB2150S | HKB2150 | KB2250F                  | KB2250FS | HKB2250F | HKB2150T                    |
| 175 | 875  | 1750 | KB2175                    | KB2175S | HKB2175 | KB2250F                  | KB2250FS | HKB2250F | HKB2175T                    |
| 200 | 1000 | 2000 | KB2200                    | KB2200S | HKB2200 | KB2250F                  | KB2250FS | HKB2250F | HKB2200T                    |
| 225 | 1125 | 2250 | KB2225                    | KB2225S | HKB2225 | KB2250F                  | KB2250FS | HKB2250F | HKB2225T                    |
| 250 | 1250 | 2500 | KB2250                    | KB2250S | HKB2250 | KB2250F                  | KB2250FS | HKB2250F | HKB2250T                    |
|     |      |      | Approx. Ship. Wt. 12 Lbs. |         |         | Approx. Ship. Wt. 9 Lbs. |          |          | Approx. Ship.<br>Wt. 2 Lbs. |

## **3-Poles, 600 Volts Ac Only**

|     |      |      |                           |         |         |                           |          |          |                             |
|-----|------|------|---------------------------|---------|---------|---------------------------|----------|----------|-----------------------------|
| 90  | 450  | 900  | KB3090                    | KB3090S | HKB3090 | KB3250F                   | KB3250FS | HKB3250F | HKB3090T                    |
| 100 | 500  | 1000 | KB3100                    | KB3100S | HKB3100 | KB3250F                   | KB3250FS | HKB3250F | HKB3100T                    |
| 125 | 625  | 1250 | KB3125                    | KB3125S | HKB3125 | KB3250F                   | KB3250FS | HKB3250F | HKB3125T                    |
| 150 | 750  | 1500 | KB3150                    | KB3150S | HKB3150 | KB3250F                   | KB3250FS | HKB3250F | HKB3150T                    |
| 175 | 875  | 1750 | KB3175                    | KB3175S | HKB3175 | KB3250F                   | KB3250FS | HKB3250F | HKB3175T                    |
| 200 | 1000 | 2000 | KB3200                    | KB3200S | HKB3200 | KB3250F                   | KB3250FS | HKB3250F | HKB3200T                    |
| 225 | 1125 | 2250 | KB3225                    | KB3225S | HKB3225 | KB3250F                   | KB3250FS | HKB3250F | HKB3225T                    |
| 250 | 1250 | 2500 | KB3250                    | KB3250S | HKB3250 | KB3250F                   | KB3250FS | HKB3250F | HKB3250T                    |
|     |      |      | Approx. Ship. Wt. 14 Lbs. |         |         | Approx. Ship. Wt. 11 Lbs. |          |          | Approx. Ship.<br>Wt. 2 Lbs. |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

## **Magnetic Only, Front Adjustable Breakers<sup>(3)</sup> • Special Calibrations<sup>(5)</sup>**

| Contin-<br>uous<br>Amper-<br>e<br>Rating | Magnetic<br>Trip Setting<br>Amperes <sup>(1)</sup> |      | Trip Units Only        |            |
|------------------------------------------|----------------------------------------------------|------|------------------------|------------|
|                                          |                                                    |      | Catalog Numbers        |            |
|                                          | Low                                                | High | 2 Poles <sup>(4)</sup> | 3 Poles    |
| 250                                      | 625                                                | 1250 | HKB21250TM             | HKB31250TM |
| 250                                      | 750                                                | 1500 | HKB21500TM             | HKB31500TM |
| 250                                      | 875                                                | 1750 | HKB21750TM             | HKB31750TM |
| 250                                      | 1125                                               | 2250 | HKB22250TM             | HKB32250TM |
| 250                                      | 1250                                               | 2500 | HKB22500TM             | HKB32500TM |

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. For frequencies other than 0-60 Hertz Ac, refer to Westinghouse.

| Type<br>Calibration | 1-24<br>Identical Units                           | 25 or More<br>Identical Units |
|---------------------|---------------------------------------------------|-------------------------------|
| Thermal             | <b>Add 30% to<br/>List Price of<br/>Trip Unit</b> | None                          |
| Magnetic            |                                                   | None                          |

## **50°C Calibration<sup>(5)</sup>**

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.

• Changed or added since previous issue.

<sup>(1)</sup> Set on high side, adjustable to lower limit.

<sup>(2)</sup> Terminals shipped separately from breaker frame.

<sup>(3)</sup> Not listed with Underwriters' Laboratories, Inc.

<sup>(4)</sup> 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

<sup>(5)</sup> Ratings above 10,000 amps not UL Listed.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type KB breakers meet requirements for class 19a, as defined by Federal Specification W-C-375b. Type HKB breakers not defined in W-C-375b.

## **Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

| Max. Volts               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 30,000 Asym., 25,000 Sym. |
| 480 Ac                   | 25,000 Asym., 22,000 Sym. |
| 600 Ac                   | 15,000 Asym., 14,000 Sym. |
| 250 Dc                   | 10,000                    |

## **Mark 75 Breakers**

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 30,000 Asym., 25,000 Sym. |
| 600 Ac | 20,000 Asym., 18,000 Sym. |
| 250 Dc | 20,000 <sup>(3)</sup>     |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

## **Terminals<sup>(2)</sup>**

Two required per pole. Select from table on page 9.

## **Magnetic Only Breakers**

For description, refer to AD 29-160. To order these breakers, select frame, trip unit and terminals.

**List Prices:** See Price List 29-021, Dis. RCB-2•

## **Accessories and Modifications**

Description: Pages 19-28

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



March, 1988

New Information and supersedes Technical  
Data 29-120, pages 39-40, dated April, 1980  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Replacement Breakers  
Type JA 225 Amperes  
Type KA 225 Amperes  
MARK 75® Type HKA 225 Amperes

## Replacement AB DE-ION® Circuit Breakers

### Type JA Thermal Magnetic, Saf-T-Vue® Breakers®

70-225 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip

| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40°C          | Magnetic Trip<br>Setting, Amperes<br>(Set on High<br>Side, Adjustable<br>to Lower Limits) |      | Complete Breaker<br>Includes Pressure Type<br>Aluminum Terminals <sup>①</sup> |           | Breaker Without Terminals  |           |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------|-----------|----------------------------|-----------|
|                                                        | Low                                                                                       | High | Catalog Number<br>Standard                                                    | Saf-T-Vue | Catalog Number<br>Standard | Saf-T-Vue |
|                                                        |                                                                                           |      |                                                                               |           |                            |           |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>②</sup></b> |                                                                                           |      |                                                                               |           |                            |           |
| 70                                                     | 350                                                                                       | 700  | JA2070                                                                        | JA2070S   | JA2070W                    | JA2070SW  |
| 90                                                     | 450                                                                                       | 900  | JA2090                                                                        | JA2090S   | JA2090W                    | JA2090SW  |
| 100                                                    | 500                                                                                       | 1000 | JA2100                                                                        | JA2100S   | JA2100W                    | JA2100SW  |
| 125                                                    | 625                                                                                       | 1250 | JA2125                                                                        | JA2125S   | JA2125W                    | JA2125SW  |
| 150                                                    | 750                                                                                       | 1500 | JA2150                                                                        | JA2150S   | JA2150W                    | JA2150SW  |
| 175                                                    | 875                                                                                       | 1750 | JA2175                                                                        | JA2175S   | JA2175W                    | JA2175SW  |
| 200                                                    | 1000                                                                                      | 2000 | JA2200                                                                        | JA2200S   | JA2200W                    | JA2200SW  |
| 225                                                    | 1125                                                                                      | 2250 | JA2225                                                                        | JA2225S   | JA2225W                    | JA2225SW  |
|                                                        |                                                                                           |      | Approx. Ship. Wt. 12 Lbs.                                                     |           | Approx. Ship. Wt. 12 Lbs.  |           |
| <b>3-Poles, 600 Volts Ac Only</b>                      |                                                                                           |      |                                                                               |           |                            |           |
| 70                                                     | 350                                                                                       | 700  | JA3070                                                                        | JA3070S   | JA3070W                    | JA3070SW  |
| 90                                                     | 450                                                                                       | 900  | JA3090                                                                        | JA3090S   | JA3090W                    | JA3090SW  |
| 100                                                    | 500                                                                                       | 1000 | JA3100                                                                        | JA3100S   | JA3100W                    | JA3100SW  |
| 125                                                    | 625                                                                                       | 1250 | JA3125                                                                        | JA3125S   | JA3125W                    | JA3125SW  |
| 150                                                    | 750                                                                                       | 1500 | JA3150                                                                        | JA3150S   | JA3150W                    | JA3150SW  |
| 175                                                    | 875                                                                                       | 1750 | JA3175                                                                        | JA3175S   | JA3175W                    | JA3175SW  |
| 200                                                    | 1000                                                                                      | 2000 | JA3200                                                                        | JA3200S   | JA3200W                    | JA3200SW  |
| 225                                                    | 1125                                                                                      | 2250 | JA3225                                                                        | JA3225S   | JA3225W                    | JA3225SW  |
|                                                        |                                                                                           |      | Approx. Ship. Wt. 14 Lbs.                                                     |           | Approx. Ship. Wt. 12 Lbs.  |           |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Special Breakers<sup>③</sup>

| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip<br>Setting, Amperes<br>(Set on High<br>Side, Adjustable<br>to Lower Limits)<br>Low      High |      | Breaker Catalog Number |            | 3-Poles   |            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------|------|------------------------|------------|-----------|------------|
|                                               |                                                                                                            |      | 2-Poles②               |            |           |            |
|                                               |                                                                                                            |      | Standard               | Saf-T-Vue  | Standard  | Saf-T-Vue  |
|                                               | Magnetic Only Breakers, Front Adjustable-Without Terminals ④                                               |      |                        |            |           |            |
| 225                                           | 350                                                                                                        | 700  | JA2700MW               | JA2700SMW  | JA3700MW  | JA3700SMW  |
| 225                                           | 625                                                                                                        | 1250 | JA21250MW              | JA21250SMW | JA31250MW | JA31250SMW |
| 225                                           | 750                                                                                                        | 1500 | JA21500MW              | JA21500SMW | JA31500MW | JA31500SMW |
| 225                                           | 875                                                                                                        | 1750 | JA21750MW              | JA21750SMW | JA31750MW | JA31750SMW |
| 225                                           | 1125                                                                                                       | 2250 | JA22250MW              | JA22250SMW | JA32250MW | JA32250SMW |

### Ambient Compensating Breakers

|     |      |      |         |       |         |       |
|-----|------|------|---------|-------|---------|-------|
| 70  | 350  | 700  | JA2070A | ..... | JA3070A | ..... |
| 100 | 500  | 1000 | JA2100A | ..... | JA3100A | ..... |
| 125 | 625  | 1250 | JA2125A | ..... | JA3125A | ..... |
| 150 | 750  | 1500 | JA2150A | ..... | JA3150A | ..... |
| 175 | 875  | 1750 | JA2175A | ..... | JA3175A | ..... |
| 200 | 1000 | 2000 | JA2200A | ..... | JA3200A | ..... |
| 225 | 1125 | 2250 | JA2225A | ..... | JA3225A | ..... |

### Special Calibrations<sup>⑤</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also Price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions.

| Breaker<br>Rating,<br>Amps. | Catalog<br>Number | Wire Range, Type<br>No. of Cables      |
|-----------------------------|-------------------|----------------------------------------|
| 70-225                      | TA225LA1          | 1 #6-350 MCM Cu, or<br>1 #4-350 MCM Al |

### 50°C Calibration<sup>⑤</sup>

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc.  
except as noted.

Type JA breakers meet requirements of Class  
19a and 20a circuit breakers as defined by  
Federal Specification W-C-375b.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 30,000 Asym., 25,000 Sym. |
| 480 Ac     | 25,000 Asym., 22,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

### Terminals<sup>⑥</sup>

Two terminals are required per pole.

Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional copper only terminals, add suffix "C" to complete breaker catalog number.

| Breaker<br>Rating,<br>Amps.              | Catalog<br>Number | Wire Range, Type<br>No. of Cables      |
|------------------------------------------|-------------------|----------------------------------------|
| <b>Standard Al/Cu Pressure Terminals</b> |                   |                                        |
| 70-225                                   | TA225LA1          | 1 #6-350 MCM Cu, or<br>1 #4-350 MCM Al |

### Optional Pressure Terminals (Copper Only)

|                     |         |              |
|---------------------|---------|--------------|
| 70-225              | T225LA  | 1 #6-350 MCM |
| 70-225 <sup>⑤</sup> | T225LBF | 1 #6-250 MCM |

### Magnetic Only and Ambient Compensating Breakers

For description, refer to AD 29-160. To order, select catalog number from table at left.

### Accessories and Modifications

Description: Pages 19-28

List Prices: See Price List 29-021, Dis. RCB-2<sup>⑥</sup>

⑥ Changed or added since previous issue.

① Terminals are shipped separately from breaker frame.

② 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

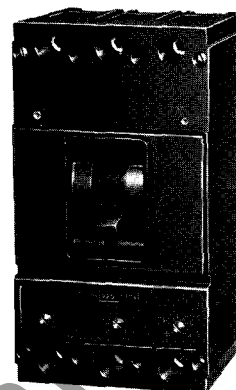
③ Not listed with Underwriters' Laboratories, Inc.

④ Select desired terminal from table and order as separate item.

⑤ Optional terminal.

70-225 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Interchangeable Trip

| Continuous Ampere Rating @ 40°C                  | Magnetic Trip Setting Amperes |      | Complete Breaker                                       |           |         | Shipped as Frame, Trip Unit and Terminals |           |          |                          |                |
|--------------------------------------------------|-------------------------------|------|--------------------------------------------------------|-----------|---------|-------------------------------------------|-----------|----------|--------------------------|----------------|
|                                                  | Low                           | High | Includes Pressure Type Aluminum Terminals <sup>②</sup> |           |         | Frame Only                                |           |          | Trip Unit Only           |                |
|                                                  |                               |      | Catalog Number                                         |           |         | Catalog Number                            |           |          |                          |                |
|                                                  |                               |      | Standard                                               | Saf-T-Vue | MARK 75 | Standard                                  | Saf-T-Vue | MARK 75  |                          | Catalog Number |
| Standard, MARK 75 or Saf-T-Vue                   |                               |      |                                                        |           |         |                                           |           |          |                          |                |
| 2-Poles, 600 Volts Ac, 250 Volts Dc <sup>③</sup> |                               |      |                                                        |           |         |                                           |           |          |                          |                |
| 70                                               | 350                           | 700  | KA2070                                                 | KA2070S   | HKA2070 | KA2225F                                   | KA2225FS  | HKA2225F | KA2070T                  |                |
| 90                                               | 450                           | 900  | KA2090                                                 | KA2090S   | HKA2090 | KA2225F                                   | KA2225FS  | HKA2225F | KA2090T                  |                |
| 100                                              | 500                           | 1000 | KA2100                                                 | KA2100S   | HKA2100 | KA2225F                                   | KA2225FS  | HKA2225F | KA2100T                  |                |
| 125                                              | 625                           | 1250 | KA2125                                                 | KA2125S   | HKA2125 | KA2225F                                   | KA2225FS  | HKA2225F | KA2125T                  |                |
| 150                                              | 750                           | 1500 | KA2150                                                 | KA2150S   | HKA2150 | KA2225F                                   | KA2225FS  | HKA2225F | KA2150T                  |                |
| 175                                              | 875                           | 1750 | KA2175                                                 | KA2175S   | HKA2175 | KA2225F                                   | KA2225FS  | HKA2225F | KA2175T                  |                |
| 200                                              | 1000                          | 2000 | KA2200                                                 | KA2200S   | HKA2200 | KA2225F                                   | KA2225FS  | HKA2225F | KA2200T                  |                |
| 225                                              | 1125                          | 2250 | KA2225                                                 | KA2225S   | HKA2225 | KA2225F                                   | KA2225FS  | HKA2225F | KA2225T                  |                |
| Approx. Ship. Wt. 12 Lbs.                        |                               |      |                                                        |           |         | Approx. Ship. Wt. 9¼ Lbs.                 |           |          | Approx. Ship. Wt. 2 Lbs. |                |



**Listed with Underwriters' Laboratories, Inc.  
except as noted.**

Type KA breakers meet the requirements for class 19a and 20a circuit breakers, and Type HKA meet requirements for class 23a as defined by Federal Specification W-C-375b.

**3-Poles, 600 Volts Ac Only**

|                           |      |      |        |         |         |                           |          |          |                              |
|---------------------------|------|------|--------|---------|---------|---------------------------|----------|----------|------------------------------|
| 70                        | 350  | 700  | KA3070 | KA3070S | HKA3070 | KA3225F                   | KA3225FS | HKA3225F | HKA3070T                     |
| 90                        | 450  | 900  | KA3090 | KA3090S | HKA3090 | KA3225F                   | KA3225FS | HKA3225F | HKA3090T                     |
| 100                       | 500  | 1000 | KA3100 | KA3100S | HKA3100 | KA3225F                   | KA3225FS | HKA3225F | HKA3100T                     |
| 125                       | 625  | 1250 | KA3125 | KA3125S | HKA3125 | KA3225F                   | KA3225FS | HKA3225F | HKA3125T                     |
| 150                       | 750  | 1500 | KA3150 | KA3150S | HKA3150 | KA3225F                   | KA3225FS | HKA3225F | HKA3150T                     |
| 175                       | 875  | 1750 | KA3175 | KA3175S | HKA3175 | KA3225F                   | KA3225FS | HKA3225F | HKA3175T                     |
| 200                       | 1000 | 2000 | KA3200 | KA3200S | HKA3200 | KA3225F                   | KA3225FS | HKA3225F | HKA3200T                     |
| 225                       | 1125 | 2250 | KA3225 | KA3225S | HKA3225 | KA3225F                   | KA3225FS | HKA3225F | HKA3225T                     |
| Approx. Ship. Wt. 14 Lbs. |      |      |        |         |         | Approx. Ship. Wt. 11 Lbs. |          |          | Approx. Ship. Wt. 2 1/2 Lbs. |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Trip Units Only For Magnetic Only and Ambient Compensating Breakers<sup>④</sup>

| Continuous<br>Ampere<br>Rating | Magnetic<br>Trip Setting |       | Catalog Numbers      |         |
|--------------------------------|--------------------------|-------|----------------------|---------|
|                                | Low                      | High  | 2 Poles <sup>③</sup> | 3 Poles |
| 15                             | 15                       | 15    | 15                   | 15      |
| 20                             | 20                       | 20    | 20                   | 20      |
| 25                             | 25                       | 25    | 25                   | 25      |
| 30                             | 30                       | 30    | 30                   | 30      |
| 40                             | 40                       | 40    | 40                   | 40      |
| 50                             | 50                       | 50    | 50                   | 50      |
| 60                             | 60                       | 60    | 60                   | 60      |
| 75                             | 75                       | 75    | 75                   | 75      |
| 100                            | 100                      | 100   | 100                  | 100     |
| 125                            | 125                      | 125   | 125                  | 125     |
| 150                            | 150                      | 150   | 150                  | 150     |
| 200                            | 200                      | 200   | 200                  | 200     |
| 250                            | 250                      | 250   | 250                  | 250     |
| 300                            | 300                      | 300   | 300                  | 300     |
| 400                            | 400                      | 400   | 400                  | 400     |
| 500                            | 500                      | 500   | 500                  | 500     |
| 600                            | 600                      | 600   | 600                  | 600     |
| 800                            | 800                      | 800   | 800                  | 800     |
| 1000                           | 1000                     | 1000  | 1000                 | 1000    |
| 1250                           | 1250                     | 1250  | 1250                 | 1250    |
| 1500                           | 1500                     | 1500  | 1500                 | 1500    |
| 2000                           | 2000                     | 2000  | 2000                 | 2000    |
| 2500                           | 2500                     | 2500  | 2500                 | 2500    |
| 3000                           | 3000                     | 3000  | 3000                 | 3000    |
| 4000                           | 4000                     | 4000  | 4000                 | 4000    |
| 5000                           | 5000                     | 5000  | 5000                 | 5000    |
| 6000                           | 6000                     | 6000  | 6000                 | 6000    |
| 8000                           | 8000                     | 8000  | 8000                 | 8000    |
| 10000                          | 10000                    | 10000 | 10000                | 10000   |

### Magnetic Only, Front Adjustable Breakers

|     | Magnetic Chip |      | From Adjustable Breakers |            |
|-----|---------------|------|--------------------------|------------|
| 225 | 350           | 700  | HKA2700TM                | HKA3700TM  |
| 225 | 625           | 1250 | HKA21250TM               | HKA31250TM |
| 225 | 750           | 1500 | HKA21500TM               | HKA31500TM |
| 225 | 875           | 1750 | HKA21750TM               | HKA31750TM |
| 225 | 1125          | 2250 | HKA22250TM               | HKA32250TM |

### Ambient Compensating Breakers

|     |      |      |           |           |
|-----|------|------|-----------|-----------|
| 70  | 350  | 700  | HKA2070TA | HKA3070TA |
| 100 | 500  | 1000 | HKA2100TA | HKA3100TA |
| 125 | 625  | 1250 | HKA2125TA | HKA3125TA |
| 150 | 750  | 1500 | HKA2150TA | HKA3150TA |
| 175 | 875  | 1750 | HKA2175TA | HKA3175TA |
| 200 | 1000 | 2000 | HKA2200TA | HKA3200TA |
| 225 | 1125 | 2250 | HKA2225TA | HKA3225TA |

### Special Calibration<sup>④</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C, also price additions apply to specific calibrations for frequencies other than 0-60 Hertz ac circuits. See AD 29-160 for information regarding special conditions.

| Type        | 1-24<br>Identical Units | 25 or More<br>Identical Units |
|-------------|-------------------------|-------------------------------|
| Calibration | Identical Units         | Identical Units               |
| Thermal     | <b>Add 30% to</b>       | None                          |
| Magnetic    | <b>List Price of</b>    | None                          |
| Frequency   | <b>Trip Unit</b>        | None                          |

### 50°C Calibration<sup>④</sup>

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.

## Terminals ② ㉓

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional copper only terminals, add suffix "C" to complete breaker catalog number.

| Max.<br>Amps                             | Catalog<br>Number | Wire Range, Type<br>No. of Cables     |
|------------------------------------------|-------------------|---------------------------------------|
| <b>Standard Al/Cu Pressure Terminals</b> |                   |                                       |
| 225                                      | TA225LA1          | 1 #6-350 MCM Cu or<br>1 #4-350 MCM Al |

### Optional Copper Pressure Terminals

|      |         |                 |
|------|---------|-----------------|
| 225  | T225LA  | 1 #6-350 MCM Cu |
| 225⑤ | T225LBF | 1 #6-250 MCM Cu |

- ⑥ Changed or added since previous issue.
- ① Set on high side, adjustable to lower limit.
- ② Terminals shipped separately from breaker frame.
- ③ 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ④ Not listed with Underwriters' Laboratories, Inc.
- ⑤ Optional terminal.
- ⑥ Ratings above 10,000 amps not UL Listed.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts               | Amperes                  |
|--------------------------|--------------------------|
| <b>Standard Breakers</b> |                          |
| 240 Ac                   | 30,000 Asym., 25,000 Sym |
| 480 Ac                   | 25,000 Asym., 22,000 Sym |
| 600 Ac                   | 25,000 Asym., 22,000 Sym |
| 250 Dc                   | 10,000                   |

## MARK 75 Breakers

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |
| 250 Dc | 20,000 <sup>⑥</sup>       |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

## Magnetic Only and Ambient Compensating Breakers

For description, refer to AD 29-160. To order these breakers, select frame, trip unit and terminals.

## Accessories and Modifications

Description: Pages 19-28

**List Prices:** See Price List 29-021. Dis. RCB-2 ©



March, 1988

New Information and supersedes Technical  
Data 29-120, pages 23-24, dated April, 1980  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Type LBB 400 Amperes  
Type LB 400 Amperes  
MARK 75 Type HLB 400 Amperes

## Replacement AB DE-ION® Circuit Breakers

### Type LBB Breakers®

125-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Fixed Trip Thermal Magnetic,  
Saf-T-Vue® Breakers

| Continuous<br>Ampere<br>Rating<br>@<br>40°C            | Magnetic Trip Setting<br>Amperes <sup>①</sup> |      | Complete Breaker                                          |           | Breaker Without Terminals |           |
|--------------------------------------------------------|-----------------------------------------------|------|-----------------------------------------------------------|-----------|---------------------------|-----------|
|                                                        | Low                                           | High | Includes Pressure Type<br>Aluminum Terminals <sup>②</sup> |           |                           |           |
|                                                        |                                               |      | Catalog Number                                            |           | Catalog Number            |           |
|                                                        |                                               |      | Standard                                                  | Saf-T-Vue | Standard                  | Saf-T-Vue |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>③</sup></b> |                                               |      |                                                           |           |                           |           |
| 125                                                    | 625                                           | 1250 | LBB2125                                                   | LBB2125S  | LBB2125W                  | LBB2125SW |
| 150                                                    | 750                                           | 1500 | LBB2150                                                   | LBB2150S  | LBB2150W                  | LBB2150SW |
| 175                                                    | 875                                           | 1750 | LBB2175                                                   | LBB2175S  | LBB2175W                  | LBB2175SW |
| 200                                                    | 1000                                          | 2000 | LBB2200                                                   | LBB2200S  | LBB2200W                  | LBB2200SW |
| 225                                                    | 1125                                          | 2250 | LBB2225                                                   | LBB2225S  | LBB2225W                  | LBB2225SW |
| 250                                                    | 1250                                          | 2500 | LBB2250                                                   | LBB2250S  | LBB2250W                  | LBB2250SW |
| 300                                                    | 1500                                          | 3000 | LBB2300                                                   | LBB2300S  | LBB2300W                  | LBB2300SW |
| 350                                                    | 1750                                          | 3500 | LBB2350                                                   | LBB2350S  | LBB2350W                  | LBB2350SW |
| 400                                                    | 2000                                          | 4000 | LBB2400                                                   | LBB2400S  | LBB2400W                  | LBB2400SW |
|                                                        |                                               |      | Approx. Ship. Wt. 13 Lbs.                                 |           | Approx. Ship. Wt. 13 Lbs. |           |

|                                   |      |      |                           |          |                           |           |
|-----------------------------------|------|------|---------------------------|----------|---------------------------|-----------|
| <b>3-Poles, 600 Volts Ac Only</b> |      |      |                           |          |                           |           |
| 125                               | 625  | 1250 | LBB3125                   | LBB3125S | LBB3125W                  | LBB3125SW |
| 150                               | 750  | 1500 | LBB3150                   | LBB3150S | LBB3150W                  | LBB3150SW |
| 175                               | 875  | 1750 | LBB3175                   | LBB3175S | LBB3175W                  | LBB3175SW |
| 200                               | 1000 | 2000 | LBB3200                   | LBB3200S | LBB3200W                  | LBB3200SW |
| 225                               | 1125 | 2250 | LBB3225                   | LBB3225S | LBB3225W                  | LBB3225SW |
| 250                               | 1250 | 2500 | LBB3250                   | LBB3250S | LBB3250W                  | LBB3250SW |
| 300                               | 1500 | 3000 | LBB3300                   | LBB3300S | LBB3300W                  | LBB3300SW |
| 350                               | 1750 | 3500 | LBB3350                   | LBB3350S | LBB3350W                  | LBB3350SW |
| 400                               | 2000 | 4000 | LBB3400                   | LBB3400S | LBB3400W                  | LBB3400SW |
|                                   |      |      | Approx. Ship. Wt. 15 Lbs. |          | Approx. Ship. Wt. 15 Lbs. |           |

For panelboard or switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Magnetic Only, Ambient Compensating Breakers<sup>④</sup>

| Continuous<br>Ampere<br>Rating                                                  | Magnetic Trip<br>Setting, Amperes <sup>①</sup> |      | 2-Pole Breakers <sup>③</sup> |             | 3-Pole Breakers |             |
|---------------------------------------------------------------------------------|------------------------------------------------|------|------------------------------|-------------|-----------------|-------------|
|                                                                                 | Low                                            | High | Catalog Number               |             | Catalog Number  |             |
|                                                                                 |                                                |      | Standard                     | Saf-T-Vue   | Standard        | Saf-T-Vue   |
| <b>Magnetic Only Breakers, Front Adjustable – Without Terminals<sup>⑤</sup></b> |                                                |      |                              |             |                 |             |
| 400                                                                             | 350                                            | 700  | LBB2700MW                    | LBB2700SMW  | LBB3700MW       | LBB3700SMW  |
| 400                                                                             | 625                                            | 1250 | LBB21250MW                   | LBB21250SMW | LBB31250MW      | LBB31250SMW |
| 400                                                                             | 750                                            | 1500 | LBB21500MW                   | LBB21500SMW | LBB31500MW      | LBB31500SMW |
| 400                                                                             | 875                                            | 1750 | LBB21750MW                   | LBB21750SMW | LBB31750MW      | LBB31750SMW |
| 400                                                                             | 1125                                           | 2250 | LBB22250MW                   | LBB22250SMW | LBB32250MW      | LBB32250SMW |
| 400                                                                             | 1500                                           | 3000 | LBB23000MW                   | LBB23000SMW | LBB33000MW      | LBB33000SMW |
| 400                                                                             | 2000                                           | 4000 | LBB24000MW                   | LBB24000SMW | LBB34000MW      | LBB34000SMW |

### Ambient Compensating Breakers - Includes Terminals

|     |      |      |           |           |           |
|-----|------|------|-----------|-----------|-----------|
| 125 | 625  | 1250 | LBB2125SA | LBB3125SA | LBB3125SA |
| 150 | 750  | 1500 | LBB2150SA | LBB3150SA | LBB3150SA |
| 175 | 875  | 1750 | LBB2175SA | LBB3175SA | LBB3175SA |
| 200 | 1000 | 2000 | LBB2200SA | LBB3200SA | LBB3200SA |
| 225 | 1125 | 2250 | LBB2225SA | LBB3225SA | LBB3225SA |
| 250 | 1250 | 2500 | LBB2250SA | LBB3250SA | LBB3250SA |
| 300 | 1500 | 3000 | LBB2300SA | LBB3300SA | LBB3300SA |
| 350 | 1750 | 3500 | LBB2350SA | LBB3350SA | LBB3350SA |
| 400 | 2000 | 4000 | LBB2400SA | LBB3400SA | LBB3400SA |

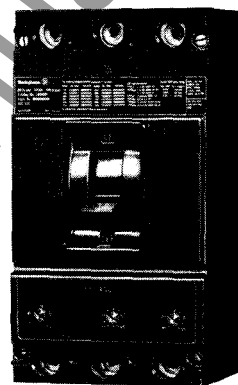
### Terminals<sup>⑥</sup>

Two required per pole. Select from page 14.

### Magnetic Only and Ambient Compensating Breakers

For description, refer to AD 29-160. To order select catalog number from table above.

- ① Changed or added since previous issue.
- ② Set on high side, adjustable to lower limits.
- ③ Terminals shipped separately from breaker.
- ④ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ⑤ Not listed with Underwriters' Laboratories, Inc.
- ⑥ Select desired terminals from page 14, and order as separate item.
- ⑦ Ratings above 10,000 amps not UL Listed.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LBB breakers meet requirements for class 21a circuit breakers, as defined by Federal Specification W-C-375b.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 50,000 Asym., 42,000 Sym. |
| 480 Ac     | 35,000 Asym., 30,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 20,000 <sup>⑧</sup>       |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Special Calibrations<sup>④</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions. Maximum calibration for 400 Hz is 300 amps.

| Type of Calibration | 1-24 Identical Units                      | 25 or More Identical Units |
|---------------------|-------------------------------------------|----------------------------|
| Thermal             | Add 10% to List Price of Complete Breaker | None                       |
| Magnetic            |                                           | None                       |
| Frequency           |                                           | None                       |

### 50°C Calibration<sup>④</sup>:

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

### Accessories and Modifications

Description: Pages 19-28

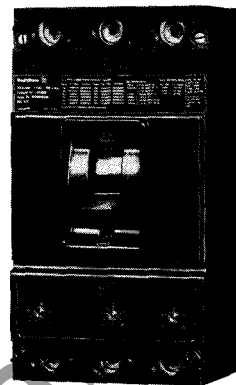
List Prices: See Price List 29-021, Dis. RCB-2<sup>⑦</sup>



**Type LB and MARK 75® Type HLB®**

70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip Thermal Magnetic, Saf-T-Vue and MARK 75 Breakers

| Con-<br>tin-<br>uous<br>Setting<br>Am-<br>pere<br>Rat-<br>ing<br>@<br>40°C | Magnetic<br>Trip<br>Setting<br>Amperes <sup>①</sup> |      | Complete Breaker                                          |           |         | Shipped as Frame, Trip Unit and Terminals <sup>②</sup> |           |          |                                    |
|----------------------------------------------------------------------------|-----------------------------------------------------|------|-----------------------------------------------------------|-----------|---------|--------------------------------------------------------|-----------|----------|------------------------------------|
|                                                                            |                                                     |      | Includes Pressure Type<br>Aluminum Terminals <sup>②</sup> |           |         | Frame Only                                             |           |          | Trip Unit<br>Only                  |
|                                                                            | Low      High                                       |      | Catalog Number                                            |           |         | Catalog Number                                         |           |          | Catalog<br>Number                  |
|                                                                            |                                                     |      | Standard                                                  | Saf-T-Vue | MARK 75 | Standard                                               | Saf-T-Vue | MARK 75  | Standard,<br>Saf-T-Vue,<br>MARK 75 |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>③</sup></b>                     |                                                     |      |                                                           |           |         |                                                        |           |          |                                    |
| 70                                                                         | 350                                                 | 700  | LB2070                                                    | LB2070S   | .....   | LB2400F                                                | LB2400FS  | .....    | HLB2070T                           |
| 90                                                                         | 450                                                 | 900  | LB2090                                                    | LB2090S   | .....   | LB2400F                                                | LB2400FS  | .....    | HLB2090T                           |
| 100                                                                        | 500                                                 | 1000 | LB2100                                                    | LB2100S   | .....   | LB2400F                                                | LB2400FS  | .....    | HLB2100T                           |
| 125                                                                        | 625                                                 | 1250 | LB2125                                                    | LB2125S   | HLB2125 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2125T                           |
| 150                                                                        | 750                                                 | 1500 | LB2150                                                    | LB2150S   | HLB2150 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2150T                           |
| 175                                                                        | 875                                                 | 1750 | LB2175                                                    | LB2175S   | HLB2175 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2175T                           |
| 200                                                                        | 1000                                                | 2000 | LB2200                                                    | LB2200S   | HLB2200 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2200T                           |
| 225                                                                        | 1125                                                | 2250 | LB2225                                                    | LB2225S   | HLB2225 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2225T                           |
| 250                                                                        | 1250                                                | 2500 | LB2250                                                    | LB2250S   | HLB2250 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2250T                           |
| 300                                                                        | 1500                                                | 3000 | LB2300                                                    | LB2300S   | HLB2300 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2300T                           |
| 350                                                                        | 1750                                                | 3500 | LB2350                                                    | LB2350S   | HLB2350 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2350T                           |
| 400                                                                        | 2000                                                | 4000 | LB2400                                                    | LB2400S   | HLB2400 | LB2400F                                                | LB2400FS  | HLB2400F | HLB2400T                           |
|                                                                            |                                                     |      | Approx. Ship. Wt. 13 Lbs.                                 |           |         | Approx. Ship. Wt. 10 Lbs.                              |           |          | Approx. Ship.                      |



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LB breakers meet requirements for class 21a circuit breakers, and Type HLB meet requirements for class 23a, as defined by Federal Specification W-C-375b.

**Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

| Volt Max.                | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 50,000 Asym., 42,000 Sym. |
| 480 Ac                   | 35,000 Asym., 30,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc                   | 20,000 <sup>⑤</sup>       |

**MARK 75 Breakers**

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |
| 250 Dc | 20,000 <sup>⑤</sup>       |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

List Prices: See Price List 29-021, Dis. RCB-2<sup>⑥</sup>

**Accessories and Modifications**  
Description: Pages 19-28

For Panelboard and switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

**Terminals<sup>②</sup> ②**

Two terminals are required per pole.

Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum cable, use joint compound. To order optional copper only terminals, add suffix "C" to complete breaker catalog number.

| Max. Amps.                                | Terminal Cat. No. | Wire Range, Type, No. of Cables     |
|-------------------------------------------|-------------------|-------------------------------------|
| <b>Standard Pressure Terminals</b>        |                   |                                     |
| 225                                       | TA225LA1          | 1 #6-350 MCM Cu, or 1 #4-350 MCM Al |
| 350                                       | TA350DA           | 1 250-500 MCM Al/Cu                 |
| 400                                       | T400DA2           | 2 3/0-250 MCM Cu only               |
| <b>Optional Copper Pressure Terminals</b> |                   |                                     |
| 225                                       | T225LA            | 1 #6-350 MCM Cu                     |
| 225 <sup>④</sup>                          | T225LBF           | 1 #6-250 MCM Cu                     |
| 350                                       | T350DA            | 1 250-500 MCM Cu                    |

- ② Changed or added since previous issue.  
① Set on high side, adjustable to lower limits.  
② Terminals shipped separately from breaker.  
③ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.  
④ Optional terminal.  
⑤ Ratings above 10,000 amps not UL Listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



March, 1988  
New Information and supersedes Technical  
Data 29-120, page 25, dated April, 1980  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Type LB 400 Amperes  
MARK 75® Type HLB 400 Amperes

## Replacement AB DE-ION® Circuit Breakers

**Type LB and Mark 75® Type HLB Breakers, Continued**  
70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip

### Special Breakers<sup>①</sup> Trip Units Only

| Continuous<br>Ampere<br>Rating | Magnetic Trip<br>Setting, Amperes <sup>②</sup> |      | Trip Unit Only                         |                           |
|--------------------------------|------------------------------------------------|------|----------------------------------------|---------------------------|
|                                | Low                                            | High | 2-Poles <sup>③</sup><br>Catalog Number | 3-Poles<br>Catalog Number |

#### Magnetic Only Breakers, Front Adjustable

|     |      |      |            |            |
|-----|------|------|------------|------------|
| 400 | 350  | 700  | HLB2700TM  | HLB3700TM  |
| 400 | 625  | 1250 | HLB21250TM | HLB31250TM |
| 400 | 750  | 1500 | HLB21500TM | HLB31500TM |
| 400 | 875  | 1750 | HLB21750TM | HLB31750TM |
| 400 | 1125 | 2250 | HLB22250TM | HLB32250TM |
| 400 | 1500 | 3000 | HLB23000TM | HLB33000TM |
| 400 | 2000 | 4000 | HLB24000TM | HLB34000TM |

#### Ambient Compensating Breakers

|     |      |      |           |           |
|-----|------|------|-----------|-----------|
| 70  | 350  | 700  | HLB2070TA | HLB3070TA |
| 90  | 450  | 900  | HLB2090TA | HLB3090TA |
| 100 | 500  | 1000 | HLB2100TA | HLB3100TA |
| 125 | 625  | 1250 | HLB2125TA | HLB3125TA |
| 150 | 750  | 1500 | HLB2150TA | HLB3150TA |
| 175 | 875  | 1750 | HLB2175TA | HLB3175TA |
| 200 | 1000 | 2000 | HLB2200TA | HLB3200TA |
| 225 | 1125 | 2250 | HLB2225TA | HLB3225TA |
| 250 | 1250 | 2500 | HLB2250TA | HLB3250TA |
| 300 | 1500 | 3000 | HLB2300TA | HLB3300TA |
| 350 | 1750 | 3500 | HLB2350TA | HLB3350TA |
| 400 | 2000 | 4000 | HLB2400TA | HLB3400TA |

**List Prices:** See Price List 29-021, Dis. RCB-2<sup>④</sup>

### Magnetic Only and Ambient Compensating Breakers<sup>①</sup>

For description, refer to AD 29-160. To order, select trip unit from table at left, frame and terminals from page 14.

### Special Calibrations<sup>①</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz ac circuits. See application data 29-160 for information regarding special conditions. Maximum calibration for 400 HZ is 300 amps.

| Type of<br>Calibration | 1-24<br>Identical Units                           | 25 or More<br>Identical Units |
|------------------------|---------------------------------------------------|-------------------------------|
| Thermal                | <b>Add 30% to<br/>List Price of<br/>Trip Unit</b> | None                          |
| Magnetic               |                                                   | None                          |
| Frequency              |                                                   | None                          |

### 50°C Calibration<sup>①</sup>

Add suffix "V" to catalog number for complete breaker or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

<sup>④</sup> Changed or added since previous issue.

<sup>①</sup> Not listed with Underwriters' Laboratories, Inc.

<sup>②</sup> Set on high side, adjustable to lower limits.

<sup>③</sup> Two-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.



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Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220

March, 1988



October, 1988  
Supersedes Technical Data 29-121,  
pages 17-18, dated March, 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Molded Case Switches  
High Magnetic Trip Type (Fixed Trip Setting)

## Replacement AB DE-ION® Circuit Breakers

### Molded Case Switches

Molded Case Switches are Underwriters' Laboratories, Inc. listed devices and are available only as high magnetic trip type with fixed trip setting.

For application information and UL Inc. listed withstand ratings, refer to Application Data 29-160, pages 75-76.

### Further Information

List Prices: Price List 29-021 Disc. Symbol RCB-2

### Molded Case Switches With High Magnetic Trip (Fixed Trip Setting)

| Switch Catalog Number ●● | No. of Poles | Max. Volts | Max. Amps. | Switch Catalog Number ●● | No. of Poles | Max. Volts | Max. Amps. |
|--------------------------|--------------|------------|------------|--------------------------|--------------|------------|------------|
| DA2400WK                 | 2            | 240        | 400        | JB2250WK                 | 2            | 600        | 250        |
| DA3400WK                 | 3            | 240        | 400        | JB2250WSK                | 2            | 600        | 250        |
| EB1100LK                 | 1            | 120        | 100        | JB3250WK                 | 3            | 600        | 250        |
| EB2100LK                 | 2            | 240        | 100        | JB3250WSK                | 3            | 600        | 250        |
| EB3100LK                 | 3            | 240        | 100        | KA2225WK                 | 2            | 600        | 225        |
| EB3100SLK                | 3            | 240        | 100        | KA2225WSK                | 2            | 600        | 225        |
| EHB1100LK                | 1            | 277        | 100        | KA3225WK                 | 3            | 600        | 225        |
| EHB2100LK                | 2            | 480        | 100        | KA3225WSK                | 3            | 600        | 225        |
| EHB3100LK                | 3            | 480        | 100        | KB2250WK                 | 2            | 600        | 250        |
| EHB3100SLK               | 3            | 480        | 100        | KB2250WSK                | 2            | 600        | 250        |
| FB2100LK                 | 2            | 600        | 100        | KB3250WK                 | 3            | 600        | 250        |
| FB2150LK                 | 2            | 600        | 150        | KB3250WSK                | 3            | 600        | 250        |
| FB3100LK                 | 3            | 600        | 100        | LB2400WK                 | 2            | 600        | 400        |
| FB3150LK                 | 3            | 600        | 150        | LB2400WSK                | 2            | 600        | 400        |
| FB3150SLK                | 3            | 600        | 150        | LB3400WK                 | 3            | 600        | 400        |
| FB4100LK                 | 4            | 277/480    | 100        | LB3400WSK                | 3            | 600        | 400        |
| FB4150LK                 | 4            | 277/480    | 150        | LBB2400WK                | 2            | 600        | 400        |
| JA2225WK                 | 2            | 600        | 225        | LBB2400WSK               | 2            | 600        | 400        |
| JA2225WSK                | 2            | 600        | 225        | LBB3400WK                | 3            | 600        | 400        |
| JA3225WK                 | 3            | 600        | 225        | LBB3400WSK               | 3            | 600        | 400        |
| JA3225WSK                | 3            | 600        | 225        |                          |              |            |            |

### Molded Case Switch Terminal Data

| MCS Type         | Max. Switch Amps. | Standard Terminals        |                |              |                          | Optional Terminals        |               |              |                          |
|------------------|-------------------|---------------------------|----------------|--------------|--------------------------|---------------------------|---------------|--------------|--------------------------|
|                  |                   | Terminal Type or Cat. No. | Wire Type      | No. of Wires | Wire Range               | Terminal Type or Cat. No. | Wire Type     | No. of Wires | Wire Range               |
| DA, LB, LBB      | 400               | T400DA2                   | Cu only        | 2            | 3/0-250 MCM              | .....                     | ....          | ..           | .....                    |
| EB, EHB, FB      | 100<br>150        | Pressure<br>Pressure      | Cu<br>Cu/Al    | 1<br>1       | #14-1/0<br>#4-4/0        | Pressure<br>.....         | Cu/Al<br>.... | 1<br>..      | #4-4/0<br>.....          |
| JA, KA<br>JB, KB | 225<br>250        | T A225LA1<br>T A250KB     | Cu/Al<br>Cu/Al | 1<br>1       | #4-350 MCM<br>#4-350 MCM | T225LA<br>T250KB          | Cu<br>Cu      | 1<br>1       | #6-350 MCM<br>#4-350 MCM |

### Molded Case Switches With High Magnetic Trip — Trip Setting and Tolerance

| Frame     | Rating | Trip Setting (Amp.) | Tolerance (%) |
|-----------|--------|---------------------|---------------|
| EB        | 100    | 1000                | ± 20          |
| EHB/FB    | 100    | 1200                | ± 20          |
| FB        | 150    | 1500                | ± 20          |
| DA/LB/LBB | 400    | 4000                | + 10<br>- 0   |
| JA/KA     | 225    | 2250                | + 10<br>- 0   |
| JB/KB     | 250    | 2500                | + 10<br>- 0   |

- Changed or added since previous issue.  
① Catalog number suffix identification:  
K = Molded Case Switch with High Magnetic Trip (Fixed Trip Setting)  
S = Saf-T-Vue cover  
L = With Line and Load Terminals  
W = No terminals  
② Molded case switch dimensions are the same as the equivalent thermal magnetic breaker. Refer to Dimension Sheet 29-170.



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Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220

October, 1988



March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Accessories

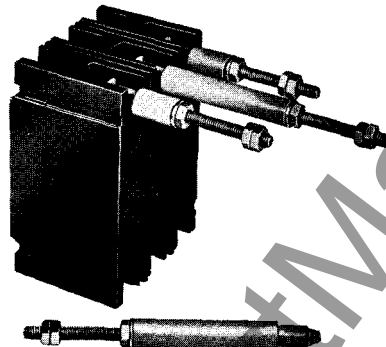
### Accessories

**List Prices:** See Price List 29-021, Dis. RCB-2

#### Reader Connected Studs<sup>①</sup>

For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, and HLB

For complete stud assembly, order a stud and appropriate tube based on thickness of customer's mounting panel. A short stud must be assembled adjacent to a long stud to maintain clearances required by Underwriters' Laboratories, Inc. Two studs are required per pole. Refer to DS 29-170 for stud sizes and extensions behind breaker.



For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, AND HLB

| Mounting<br>Panel<br>Thickness,<br>Inches | Stud   |                 | Tube <sup>②</sup> |                 |
|-------------------------------------------|--------|-----------------|-------------------|-----------------|
|                                           | Length | Style<br>Number | Length            | Style<br>Number |
| <b>DA, LB, LBB, HLB Breakers</b>          |        |                 |                   |                 |
| 1/4                                       | -1     | Short           | 656D565G03        | 27/32           |
|                                           |        | Long            | 656D565G04        | 329/32          |
| 1/2 - 3/4                                 |        | Short           | 656D565G03        | 13/32           |
|                                           |        | Long            | 656D565G04        | 41/32           |
| 3/4 - 1 1/2                               |        | Short           | 656D565G03        | 111/32          |
|                                           |        | Long            | 656D565G04        | 49/32           |
| <b>EB, EHB, FB, HFB, (100 Amp Max.)</b>   |        |                 |                   |                 |
| 1                                         |        | Short           | 451D874G01        | 11/16           |
|                                           |        | Long            | 451D874G02        | 37/16           |
| 1 1/16 - 1 5/16                           |        | Short           | 451D874G01        | 1 3/8           |
|                                           |        | Long            | 451D874G02        | 3 3/4           |
| 3/8 - 5/8                                 |        | Short           | 451D874G01        | 1 11/16         |
|                                           |        | Long            | 451D874G02        | 4 1/16          |
| 1/4 - 5/16                                |        | Short           | 451D874G01        | 2               |
|                                           |        | Long            | 451D874G02        | 4 3/8           |
| <b>FB, HFB 150 Amp Breakers</b>           |        |                 |                   |                 |
| 1                                         |        | Short           | 374D883G01        | 1 1/16          |
|                                           |        | Long            | 374D883G02        | 4 5/16          |
| 1 1/16 - 1 5/16                           |        | Short           | 374D883G01        | 1 3/8           |
|                                           |        | Long            | 374D883G02        | 4 5/8           |
| 3/8 - 5/8                                 |        | Short           | 374D883G01        | 1 11/16         |
|                                           |        | Long            | 374D883G02        | 4 15/16         |
| 1/4 - 5/16                                |        | Short           | 374D883G01        | 2               |
|                                           |        | Long            | 374D883G02        | 5 1/4           |
| <b>JA, KA, HKA Breakers</b>               |        |                 |                   |                 |
| 3/4 -1                                    |        | Short           | 656D565G01        | 27/32           |
|                                           |        | Long            | 656D565G02        | 329/32          |
| 1/2 - 3/4                                 |        | Short           | 656D565G01        | 13/32           |
|                                           |        | Long            | 656D565G02        | 41/32           |
| 1/4 - 1/2                                 |        | Short           | 656D565G01        | 111/32          |
|                                           |        | Long            | 656D565G02        | 49/32           |
| <b>JB, KB, HKB Breakers</b>               |        |                 |                   |                 |
| 3/4 -1                                    |        | Short           | 5010D23G01        | 27/32           |
|                                           |        | Long            | 5010D23G02        | 3 3/8           |
| 1/2 - 3/4                                 |        | Short           | 5010D23G01        | 13/32           |
|                                           |        | Long            | 5010D23G02        | 4 1/4           |
| 1/4 - 1/2                                 |        | Short           | 5010D23G01        | 111/32          |
|                                           |        | Long            | 5010D23G02        | 4 3/8           |

## Replacement AB DE-ION<sup>®</sup> Circuit Breakers

### Panelboard Connecting Straps<sup>①</sup>

For connecting line end of breakers to panelboard bus.



| Ampere<br>Rating | Connector<br>Type | Style<br>Number |
|------------------|-------------------|-----------------|
|------------------|-------------------|-----------------|

#### EB, EHB, FB, HFB Breakers Narrow Distribution Panelboards

|                                                        |         |            |
|--------------------------------------------------------|---------|------------|
| Bus Spacing 2 3/4" in Box 5 3/4" Deep (600 Volts Max.) |         |            |
| 50                                                     | Center  | 673B142G02 |
| 50                                                     | Outside | 673B142G09 |
| 100                                                    | Center  | 673B142G02 |
| 100                                                    | Outside | 673B142G10 |
| 150                                                    | Center  | 673B142G04 |
| 150                                                    | Outside | 673B142G03 |

|                                                           |         |            |
|-----------------------------------------------------------|---------|------------|
| <b>Power Panelboards (Convertible) Bus Spacing 3 1/2"</b> |         |            |
| 50                                                        | Center  | 1253C72G01 |
| 50                                                        | Outside | 1253C72G02 |
| 100                                                       | Center  | 1253C73G03 |
| 100                                                       | Outside | 1253C73G04 |
| 150                                                       | Center  | 1253C73G01 |
| 150                                                       | Outside | 1253C73G02 |
| 3-Pole Mounting Bracket                                   |         | 624B600H01 |
| 2-Pole Mounting Bracket                                   |         | 624B600H02 |

|                                                    |         |            |
|----------------------------------------------------|---------|------------|
| <b>DA, LB, LBB, HLB Breaker Bus Spacing 3 1/2"</b> |         |            |
| 400                                                | Center  | 314C940G04 |
| 400                                                | Outside | 505C680G01 |
| Mtg. Bracket (1 Req'd)                             |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JA, KA, HKA Breakers Bus Spacing 3 1/2"</b> |         |            |
| 225                                            | Center  | 314C940G03 |
| 225                                            | Outside | 180C074G01 |
| Mtg. Bracket (1 Req'd)                         |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JB, KB, HKB Breakers Bus Spacing 3 1/2"</b> |         |            |
| 250                                            | Center  | 2600D26G01 |
| 250                                            | Outside | 2600D26G02 |
| Mtg. Bracket (1 Req'd)                         |         | 1576 707   |

① Not Underwriters' Laboratories, Inc. listed.  
② Included at No Charge when ordered with stud.

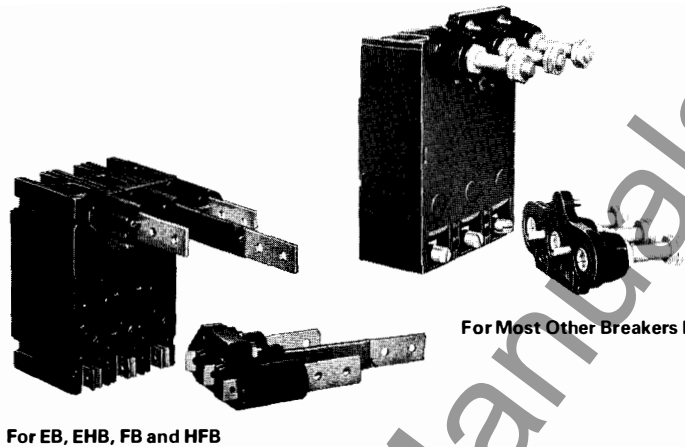


Accessories, Continued

Plug-in Adapter Kits

For rear connected applications such as switchboards. Facilitates ease of installation and front removal of breaker. Includes conductor for mounting on breaker, plug-in mounting blocks with matching conductor, rear studs and mounting hardware<sup>①</sup>. Order 2 mounting blocks style number when line and load are required; order 1 mounting block style number when either line or load is required.

List Prices: See Price List 29-021, Dis. RCB-2



For EB, EHB, FB and HFB

For Most Other Breakers Listed<sup>⑤</sup>

| Description                                                       | Style Number |
|-------------------------------------------------------------------|--------------|
| <b>DA, LB, LBB, HLB Breakers<sup>②</sup></b>                      |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G45   |
| 3-Pole                                                            | 313C644G46   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G03   |
| 3-Pole                                                            | 314C932G04   |
| <b>EB, EHB, FB Thermal Magnetic Breakers<sup>②</sup></b>          |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G01   |
| 2-Pole, 150 Ampere                                                | 507C036G02   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>FB and HFB Magnetic Only, HFB Thermal Magnetic<sup>②</sup></b> |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G05   |
| 2-Pole, 150 Ampere                                                | 507C036G06   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>JA, KA, HKA Breakers<sup>③</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G29   |
| 3-Pole                                                            | 313C644G30   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G01   |
| 3-Pole                                                            | 314C932G02   |
| <b>JB, KB, HKB Breakers<sup>②</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 506C144G17   |
| 3-Pole                                                            | 506C144G18   |
| 1 Mounting Block, Line Only                                       |              |
| 2-Pole                                                            | 1260C86G01   |
| 3-Pole                                                            | 1260C86G02   |
| 1 Mounting Block, Load Only                                       |              |
| 2-Pole                                                            | 1260C86G03   |
| 3-Pole                                                            | 1260C86G04   |

- ① EB, EHB, FB, HFB, KB, JB, HKB, have flat bus rear connectors. Others have threaded studs.  
② These plug-in adapter kits are UL Listed as recognized components.  
③ Not Underwriters' Laboratories, Inc. listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



April, 1980

Supersedes Technical Data 29-120 T WE A  
pages 45-46, dated October, 1975  
Mailed to: E,D,C/1901, 1903, 1928/PL

### Accessories

### Accessories

List Prices: See Price List 29-020, Dis. CB-2

#### Reader Connected Studs®

For DA, EB, EHB, FB, JA, KA, JB, KB, LAB, LA, LB, LBB, MA, HFB, HKA, HKB, HLA, HLB, HMA, HNB, TRI-PAC® FB, TRI-PAC LA and TRI-PAC NB Breakers

For complete stud assembly, order a stud and appropriate tube based on thickness of customer's mounting panel. A short stud must be assembled adjacent to a long stud to maintain clearances required by Underwriters' Laboratories, Inc.®. Two studs are required per pole. Refer to DS 29-170 for stud sizes and extensions behind breaker.

#### For DA, EB, EHB, FB, FCL, JA, KA, JB, KB, LB, LBB, HFB, HKA, HKB, HLB, TRI-PAC FB Breakers

| Mounting Panel Thickness, Inches | Stud Length | Style Number | Tube Length | Style Number |
|----------------------------------|-------------|--------------|-------------|--------------|
| <b>DA, LB, LBB, HLB Breakers</b> |             |              |             |              |
| 1/4" - 1"                        | Short       | 656D565G03   | 27/32       | 313C909H17   |
| 1/4" - 1"                        | Long        | 656D565G04   | 329/32      | 313C909H20   |
| 1/2" - 3/4"                      | Short       | 656D565G03   | 13/32       | 313C909H18   |
| 1/2" - 3/4"                      | Long        | 656D565G04   | 41/32       | 313C909H21   |
| 3/4" - 1"                        | Short       | 656D565G03   | 111/32      | 313C909H19   |
| 3/4" - 1"                        | Long        | 656D565G04   | 49/32       | 313C909H22   |

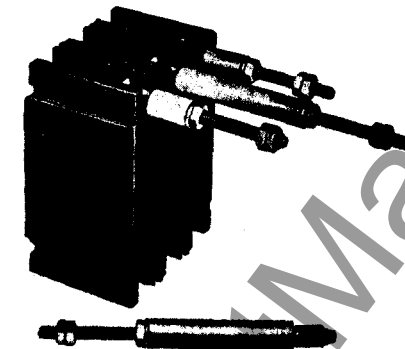
|                                                         |       |            |         |            |
|---------------------------------------------------------|-------|------------|---------|------------|
| <b>EB, EHB, FB, HFB, FCL, TRI-PAC FB (100 Amp Max.)</b> |       |            |         |            |
| 1"                                                      | Short | 451D874G01 | 11/16   | 32B9446H20 |
| 1"                                                      | Long  | 451D874G02 | 37/16   | 32B9446H24 |
| 1 1/16" - 1 5/16"                                       | Short | 451D874G01 | 1 1/16  | 32B9446H21 |
| 1 1/16" - 1 5/16"                                       | Long  | 451D874G02 | 3 1/16  | 32B9446H25 |
| 3/4" - 5/8"                                             | Short | 451D874G01 | 1 11/16 | 32B9446H22 |
| 3/4" - 5/8"                                             | Long  | 451D874G02 | 4 1/16  | 32B9446H26 |
| 1/2" - 5/16"                                            | Short | 451D874G01 | 2       | 32B9446H23 |
| 1/2" - 5/16"                                            | Long  | 451D874G02 | 4 3/4   | 32B9446H27 |

|                                 |       |            |         |            |
|---------------------------------|-------|------------|---------|------------|
| <b>FB, HFB 150 Amp Breakers</b> |       |            |         |            |
| 1"                              | Short | 374D883G01 | 1 1/16  | 374D883H06 |
| 1"                              | Long  | 374D883G02 | 4 3/16  | 374D883H10 |
| 1 1/16" - 1 5/16"               | Short | 374D883G01 | 1 3/4   | 374D883H07 |
| 1 1/16" - 1 5/16"               | Long  | 374D883G02 | 4 5/8   | 374D883H11 |
| 3/4" - 5/8"                     | Short | 374D883G01 | 1 11/16 | 374D883H08 |
| 3/4" - 5/8"                     | Long  | 374D883G02 | 4 15/16 | 374D883H12 |
| 1/2" - 5/16"                    | Short | 374D883G01 | 2       | 374D883H09 |
| 1/2" - 5/16"                    | Long  | 374D883G02 | 5 1/4   | 374D883H13 |

|                             |       |            |        |            |
|-----------------------------|-------|------------|--------|------------|
| <b>JA, KA, HKA Breakers</b> |       |            |        |            |
| 3/4" - 1"                   | Short | 656D565G01 | 27/32  | 456D983H05 |
| 3/4" - 1"                   | Long  | 656D565G02 | 329/32 | 456D983H08 |
| 1/2" - 3/4"                 | Short | 656D565G01 | 13/32  | 456D983H06 |
| 1/2" - 3/4"                 | Long  | 656D565G02 | 41/32  | 456D983H09 |
| 3/4" - 1"                   | Short | 656D565G01 | 111/32 | 456D983H07 |
| 3/4" - 1"                   | Long  | 656D565G02 | 49/32  | 456D983H10 |

|                             |       |            |        |            |
|-----------------------------|-------|------------|--------|------------|
| <b>JB, KB, HKB Breakers</b> |       |            |        |            |
| 3/4" - 1"                   | Short | 5010D23G01 | 27/32  | 456D983H05 |
| 3/4" - 1"                   | Long  | 5010D23G02 | 3 3/4  | 5010D23H05 |
| 1/2" - 3/4"                 | Short | 5010D23G01 | 13/32  | 456D983H08 |
| 1/2" - 3/4"                 | Long  | 5010D23G02 | 4 1/4  | 5010D23H08 |
| 3/4" - 1"                   | Short | 5010D23G01 | 111/32 | 456D983H07 |
| 3/4" - 1"                   | Long  | 5010D23G02 | 4 3/4  | 5010D23H07 |

● Changed or added since previous issue.



#### For LAB, LA, MA, HLA, HMA, HNB, TRI-PAC LA and TRI-PAC NB Breakers

For insulated panels only; 2 required per pole.

| Stud Ampere Rating                                     | Diameter, Inches and Thread | Extension Back of Breaker, Inches | Stud Style Number |
|--------------------------------------------------------|-----------------------------|-----------------------------------|-------------------|
| <b>LAB, LA, HLA, LC, HLC, LCL, TRI-PAC LA Breakers</b> |                             |                                   |                   |
| 225                                                    | 1/2" - 13                   | 37/32                             | 1241 345          |
| 225                                                    | 1/2" - 13                   | 69/32                             | 1241 346          |
| 225                                                    | 1/2" - 13                   | 431/32                            | 1241 392          |
| 400                                                    | 5/8" - 16                   | 515/32                            | 05B7383G15        |
| 400                                                    | 5/8" - 16                   | 731/32                            | 05B7383G16        |
| 400                                                    | 5/8" - 16                   | 1015/32                           | 05B7383G17        |
| 600                                                    | 1" - 12                     | 529/32                            | 314C960G07        |
| 600                                                    | 1" - 12                     | 813/32                            | 314C960G08        |
| 600                                                    | 1" - 12                     | 1029/32                           | 314C960G09        |

|                                  |             |         |            |
|----------------------------------|-------------|---------|------------|
| <b>MA, HMA, MC, HMC Breakers</b> |             |         |            |
| 225                              | 1/2" - 13   | 321/32  | 314C960G01 |
| 400                              | 5/8" - 16   | 529/32  | 314C960G04 |
| 400                              | 5/8" - 16   | 813/32  | 314C960G05 |
| 400                              | 5/8" - 16   | 1029/32 | 314C960G06 |
| 600                              | 1" - 12     | 529/32  | 314C960G07 |
| 600                              | 1" - 12     | 813/32  | 314C960G08 |
| 600                              | 1" - 12     | 1029/32 | 314C960G09 |
| 800                              | 1 1/4" - 12 | 529/32  | 314C960G10 |
| 800                              | 1 1/4" - 12 | 813/32  | 314C960G11 |
| 800                              | 1 1/4" - 12 | 1029/32 | 314C960G12 |

|                                  |             |        |            |
|----------------------------------|-------------|--------|------------|
| <b>NB, HNB, NC, HNC Breakers</b> |             |        |            |
| 800                              | 1 1/4" - 12 | 5 1/2  | 623B222G01 |
| 800                              | 1 1/4" - 12 | 8      | 623B222G02 |
| 800                              | 1 1/4" - 12 | 10 1/2 | 623B222G03 |
| 1200                             | 1 1/4" - 12 | 5 1/2  | 373B375G04 |
| 1200                             | 1 1/4" - 12 | 10 1/2 | 373B375G03 |

|                            |             |        |            |
|----------------------------|-------------|--------|------------|
| <b>TRI-PAC NB Breakers</b> |             |        |            |
| 450                        | 1 1/4" - 12 | 5 1/2  | 623B222G01 |
| 450                        | 1 1/4" - 12 | 8      | 623B222G02 |
| 450                        | 1 1/4" - 12 | 10 1/2 | 623B222G03 |
| 800                        | 1 1/4" - 12 | 5 1/2  | 373B375G04 |
| 800                        | 1 1/4" - 12 | 10 1/2 | 373B375G03 |

① This is a special stud which includes six contact nuts for use where bus contact nuts must be used.  
② 150, 250, 300 and 400 amp frames only.  
③ 400 ampere LA studs of the same length have sufficient clearance; however, customer connections may make it necessary to use a short stud adjacent to a long stud.  
④ Not Underwriters' Laboratories, Inc. listed.  
⑤ Included at No Charge when ordered with stud.  
⑥ 600 ampere frames only.

## AB DE-ION® Circuit Breakers

### Panelboard Connecting Straps®

For connecting line end of breakers to panelboard bus.

| Ampere Rating                                     | Connector Type | Style Number |
|---------------------------------------------------|----------------|--------------|
| <b>CA Breaker Power Panelboards (Convertible)</b> |                |              |
| Bus Spacing 3 1/2"                                |                |              |
| 225                                               | Center         | 1253C74G01   |
| 225                                               | Outside        | 1253C74G02   |
| 3-Pole Mounting Bracket                           |                | 624B624H01   |
| 2-Pole Mounting Bracket                           |                | 624B624H02   |

|                                                        |         |            |
|--------------------------------------------------------|---------|------------|
| <b>EB, EHB, FB, HFB, TRI-PAC FB, FCL Breakers</b>      |         |            |
| <b>Narrow Distribution Panelboards</b>                 |         |            |
| Bus Spacing 2 1/4" in Box 5 3/4" Deep (240 Volts Max.) |         |            |
| 50                                                     | Center  | 673B142G01 |
| 50                                                     | Outside | 673B142G02 |

|                                                        |         |            |
|--------------------------------------------------------|---------|------------|
| Bus Spacing 2 3/4" in Box 5 3/4" Deep (600 Volts Max.) |         |            |
| 50                                                     | Center  | 673B142G02 |
| 50                                                     | Outside | 673B142G09 |
| 100                                                    | Center  | 673B142G02 |
| 100                                                    | Outside | 673B142G10 |
| 150                                                    | Center  | 673B142G04 |
| 150                                                    | Outside | 673B142G03 |

|                                                           |         |            |
|-----------------------------------------------------------|---------|------------|
| <b>Power Panelboards (Convertible) Bus Spacing 3 1/2"</b> |         |            |
| 50                                                        | Center  | 1253C72G01 |
| 50                                                        | Outside | 1253C72G02 |
| 100                                                       | Center  | 1253C73G03 |
| 100                                                       | Outside | 1253C73G04 |
| 150                                                       | Center  | 1253C73G01 |
| 150                                                       | Outside | 1253C73G02 |
| 3-Pole Mounting Bracket                                   |         | 624B600H01 |
| 2-Pole Mounting Bracket                                   |         | 624B600H02 |

|                                                    |         |            |
|----------------------------------------------------|---------|------------|
| <b>DA, LB, LBB, HLB Breaker Bus Spacing 3 1/2"</b> |         |            |
| 400                                                | Center  | 314C940G04 |
| 400                                                | Outside | 505C680G01 |
| Mtg. Bracket (1 Req'd)                             |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JA, KA, HKA Breakers Bus Spacing 3 1/2"</b> |         |            |
| 225                                            | Center  | 314C940G03 |
| 225                                            | Outside | 180C074G01 |
| Mtg. Bracket (1 Req'd)                         |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JB, KB, HKB Breakers Bus Spacing 3 1/2"</b> |         |            |
| 250                                            | Center  | 2600D26G01 |
| 250                                            | Outside | 2600D26G02 |
| Mtg. Bracket (1 Req'd)                         |         | 1576 707   |

|                                                       |         |            |
|-------------------------------------------------------|---------|------------|
| <b>LAB, LA, HLA, LC, HLC 150, 300, 400 Amp Frames</b> |         |            |
| Bus Spacing 3 1/2"                                    |         |            |
| 400                                                   | Center  | 32B4570G02 |
| 400                                                   | Outside | 314C541G01 |
| Mtg. Bracket (2 Req'd)                                |         | 208B297H01 |

|                                        |         |            |
|----------------------------------------|---------|------------|
| <b>LA, HLA, LC, HLC 600 Amp Frames</b> |         |            |
| Bus Spacing 3 1/2"                     |         |            |
| 600                                    | Center  | 624B609G01 |
| 600                                    | Outside | 506C052G01 |
| Mtg. Bracket (2 Req'd)                 |         | 208B297H01 |

|                                                     |        |            |
|-----------------------------------------------------|--------|------------|
| <b>MA, HMA, MC, HMC Breakers Bus Spacing 3 1/2"</b> |        |            |
| 800                                                 | Short  | 314C9 901  |
| 800                                                 | Medium | 314C996G02 |
| 800                                                 | Long   | 314C996G03 |
| Mtg. Bracket (4 Req'd)                              |        | 315C270H01 |

|                                                     |        |            |
|-----------------------------------------------------|--------|------------|
| <b>NB, HNB, NC, HNC Breakers Bus Spacing 3 1/2"</b> |        |            |
| 1200                                                | Short  | 505C606G04 |
| 1200                                                | Medium | 505C606G05 |
| 1200                                                | Long   | 505C606G06 |
| Mtg. Bracket (4 Req'd)                              |        | 315C270H01 |

|                                        |        |            |
|----------------------------------------|--------|------------|
| <b>LCL Breakers Bus Spacing 3 1/2"</b> |        |            |
| 400                                    | Short  | 1275C85G01 |
| 400                                    | Medium | 1275C85G02 |
| 400                                    | Long   | 1275C85G03 |
| Mtg. Bracket Kit (1 Req'd)             |        | 751B044G01 |

① #176C214G03  
② " #176C214G04

[www.ElectricalPartManuals.com](http://www.ElectricalPartManuals.com)

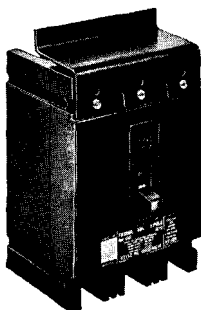


March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Accessories, Modifications

## Replacement AB DE-ION® Circuit Breakers

### Accessories, Continued Extended Line Terminal Shields<sup>①</sup>



For shielding line side terminal connections. One shield required per breaker. Order separately when needed. Sold only in lots of 10, including hardware.

| Breaker Frame                                   | Style Number |
|-------------------------------------------------|--------------|
| DA                                              | 314C420G06   |
| JA, KA, LB, LBB (Saf-T-Vue)                     | 314C420G04   |
| JA, KA, HKA, LB, LBB, HLB<br>(Standard Breaker) | 314C420G06   |
| EB, EHB, FB, HFB                                | 625B229G08●  |
| JB, KB, HKB                                     | 1266C07G01   |

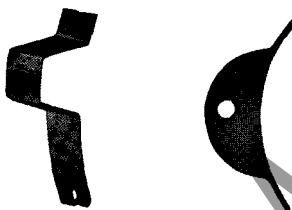
### Base Mounting Hardware

No charge when ordered with breaker. Order separately when needed.

| Breaker Frame                 | Style Number |
|-------------------------------|--------------|
| <b>1-Pole Breakers</b>        |              |
| EB, EHB, HFB <sup>③</sup>     | 624B375G01   |
| EB, EHB, HFB <sup>④</sup>     | 624B375G02   |
| <b>2- and 3-Pole Breakers</b> |              |
| DA, JA, KA, HKA, LB, LBB, HLB | 21C6782G22   |
| EB, EHB, FB, HFB              | 21C6782G18   |
| JB, KB, HKB                   | 673B125G12   |

List Prices: See Price List 29-021, Dis. RCB-2

### Handle Locks<sup>②</sup>



#### Typical Photos

#### Non-Padlockable

For prevention of unintentional operation of breaker. Fits over breaker handle and may be removed.

#### Padlockable

For prevention of unauthorized operation of breaker. Is non-removable once installed on breaker. Meets Underwriters' Laboratories, Inc. and California Code requirements.

Note: All breakers are trip free and will trip with handle locks attached.

| Breaker Frame                 | Style Number |
|-------------------------------|--------------|
| <b>Non-Padlockable</b>        |              |
| EB, EHB, FB, HFB              | 1720 360     |
| DA, JA, KA, HKA, LB, LBB, HLB | 29B2721H04   |
| <b>Padlockable</b>            |              |
| EB, EHB, FB, HFB              | 765A754G01   |
| DA, JA, KA, LB, LBB, HKA, HLB | 673B796G02   |
| JB, KB, HKB                   | 673B796G01   |

① Not Underwriters' Laboratories, Inc. listed.  
② One of style 625B229G08 is one package of 10.  
③ Individually mounted.  
④ Group mounted.



## Modifications<sup>①</sup>

**List Prices:** See Price List 29-021 Dis. RCB-2

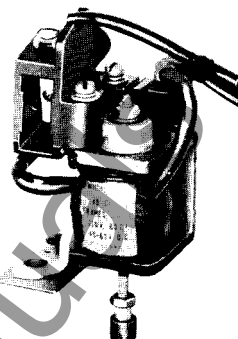
Only two internally mounted modifications – shunt trip, under voltage release, auxiliary switch, alarm switch – may be mounted in DA, JA thru LB, HKA thru HLB and thermal magnetic EB, EHB, FB and HFB breakers. Only one of these modifications may be mounted in FB magnetic only or HFB magnetic only, 2 pole EB, EHB, FB. None are available in 1-pole breakers except alarm switch in EB, EHB and HFB.

## Shunt Trip

For tripping breaker from a remote point. A solenoid device mounts within breaker case. Breaker trips when coil is energized.

Shunt trips should not be used as circuit interlocks using maintained contact pilot devices.

A cut-off switch breaks the circuit to the momentary rated coil when breaker opens. Available for control voltages up to 250 volts Dc or 600 volts Ac. Voltage and frequency must be specified. Standard leads extend 18" outside of breaker.



## Shunt Trip for Field Mounting<sup>②③④</sup>

| Voltage/<br>Hertz          | Breaker Type                                    | JB, KB, HKB | JA, KA, HKA,<br>DA, LB, LBB,<br>HLB | Shunt Trip<br>Voltage<br>Rating | For All Breakers Listed<br>On Previous Page |              |
|----------------------------|-------------------------------------------------|-------------|-------------------------------------|---------------------------------|---------------------------------------------|--------------|
|                            | EB, EHB, FB, HFB®<br>(Thermal Magnetic<br>only) |             |                                     |                                 | Coil Inrush<br>Amperes                      | Volt-Amperes |
| <b>Right Hand Mounting</b> |                                                 |             |                                     |                                 |                                             |              |
| 600/50-60 Hz               | 2609D39G15                                      | 2609D42G15  | 2605D15G15                          | 600 AC                          | 0.105                                       | 63.0         |
| 480/50-60 Hz               | 2609D39G16                                      | 2609D42G16  | 2605D15G16                          | 480 AC                          | 0.085                                       | 40.8         |
| 240/50-60 Hz               | 2609D39G17                                      | 2609D42G17  | 2605D15G17                          | 240 AC                          | 1.7                                         | 408.0        |
| 208/50-60 Hz               | 2609D39G18                                      | 2609D42G18  | 2605D15G18                          | 208 AC                          | 1.4                                         | 291.2        |
| 120/50-60 Hz               | 2609D39G19                                      | 2609D42G19  | 2605D15G19                          | 120 AC                          | 0.88                                        | 105.6        |
| 60/50-60 Hz                | 2609D39G20                                      | 2609D42G20  | 2605D15G20                          | 60 AC                           | 9.10                                        | 546.0        |
| 48/50-60 Hz                | 2609D39G21                                      | 2609D42G21  | 2605D15G21                          | 48 AC                           | 7.50                                        | 360.0        |
| 24/50-60 Hz                | 2609D39G22                                      | 2609D42G22  | 2605D15G22                          | 24 AC                           | 3.95                                        | 94.8         |
| 250 Dc                     | 2609D39G23                                      | 2609D42G23  | 2605D15G23                          | 250 DC                          | 2.5                                         | 625.0        |
| 125 Dc                     | 2609D39G24                                      | 2609D42G24  | 2605D15G24                          | 125 DC                          | 0.975                                       | 121.9        |
| 60 Dc                      | 2609D39G25                                      | 2609D42G25  | 2605D15G25                          | 60 DC                           | 0.525                                       | 31.5         |
| 48 Dc                      | 2609D39G26                                      | 2609D42G26  | 2605D15G26                          | 48 DC                           | 1.3                                         | 62.4         |
| 24 Dc                      | 2609D39G27                                      | 2609D42G27  | 2605D15G27                          | 24 DC (FB)                      | 6.0                                         | 144.0        |
| 12 Dc                      | 2609D39G28                                      | 2609D42G28  | 2605D15G28                          | 24 DC (KB)                      | 3.8                                         | 91.2         |
|                            |                                                 |             |                                     | 24 DC (Other)                   | 8.                                          | 192.         |
|                            |                                                 |             |                                     | 12 DC                           | 6.                                          | 72.          |
| <b>Left Hand Mounting</b>  |                                                 |             |                                     |                                 |                                             |              |
| 600/50-60 Hz               | 2609D39G01                                      | 2609D42G01  | 2605D15G01                          |                                 |                                             |              |
| 480/50-60 Hz               | 2609D39G02                                      | 2609D42G02  | 2605D15G02                          |                                 |                                             |              |
| 240/50-60 Hz               | 2609D39G03                                      | 2609D42G03  | 2605D15G03                          |                                 |                                             |              |
| 208/50-60 Hz               | 2609D39G04                                      | 2609D42G04  | 2605D15G04                          |                                 |                                             |              |
| 120/50-60 Hz               | 2609D39G05                                      | 2609D42G05  | 2605D15G05                          |                                 |                                             |              |
| 60/50-60 Hz                | 2609D39G06                                      | 2609D42G06  | 2605D15G06                          |                                 |                                             |              |
| 48/50-60 Hz                | 2609D39G07                                      | 2609D42G07  | 2605D15G07                          |                                 |                                             |              |
| 24/50-60 Hz                | 2609D39G08                                      | 2609D42G08  | 2605D15G08                          |                                 |                                             |              |
| 250 Dc                     | 2609D39G09                                      | 2609D42G09  | 2605D15G09                          |                                 |                                             |              |
| 125 Dc                     | 2609D39G10                                      | 2609D42G10  | 2605D15G10                          |                                 |                                             |              |
| 60 Dc                      | 2609D39G11                                      | 2609D42G11  | 2605D15G11                          |                                 |                                             |              |
| 48 Dc                      | 2609D39G12                                      | 2609D42G12  | 2605D15G12                          |                                 |                                             |              |
| 24 Dc                      | 2609D39G13                                      | 2609D42G13  | 2605D15G13                          |                                 |                                             |              |
| 12 Dc                      | 2609D39G14                                      | 2609D42G14  | 2605D15G14                          |                                 |                                             |              |

**List Prices:** See Price List 29-021, Dis. RCB-2

① Right hand mounting considered standard unless specified otherwise.  
② 120 volt Ac ratings suitable for 55% pickup for

## Shunt Trip Coil Data

| Shunt Trip<br>Voltage<br>Rating | For All Breakers Listed<br>On Previous Page |              |
|---------------------------------|---------------------------------------------|--------------|
|                                 | Coil Inrush<br>Amperes                      | Volt-Amperes |
| 600 AC                          | 0.105                                       | 63.0         |
| 480 AC                          | 0.085                                       | 40.8         |
| 240 AC                          | 1.7                                         | 408.0        |
| 208 AC                          | 1.4                                         | 291.2        |
| 120 AC                          | 0.88                                        | 105.6        |
| 60 AC                           | 9.10                                        | 546.0        |
| 48 AC                           | 7.50                                        | 360.0        |
| 24 AC                           | 3.95                                        | 94.8         |
| 250 DC                          | 2.5                                         | 625.0        |
| 125 DC                          | 0.975                                       | 121.9        |
| 60 DC                           | 0.525                                       | 31.5         |
| 48 DC                           | 1.3                                         | 62.4         |
| 24 DC (FB)                      | 6.0                                         | 144.0        |
| 24 DC (KB)                      | 3.8                                         | 91.2         |
| 24 DC (Other)                   | 8.                                          | 192.         |
| 12 DC                           | 6.                                          | 72.          |

**List Prices:** See Price List 29-021, Dis. RCB-2

## Factory Mounted Shunt Trips<sup>①②</sup>

All of the above shunt trips can be specified for factory mounting at the same price as listed for the kit. These shunt trips have the leads out the side and are UL listed when factory mounted, unless other non-UL Listed modifications are used.

Factory mounted shunt trips only can be supplied for the following breakers:

FB magnetic only<sup>⑥⑦</sup>, HFB magnetic only<sup>⑥⑦</sup> and non-auto breakers (MCS)<sup>③</sup>

Price same as similar kit.

- ① Right hand mounting considered standard unless specified otherwise.
- ② 120 volt Ac ratings suitable for 55% pickup for ground fault applications.
- ③ Not field mountable on non-automatic breakers (MCS).
- ④ Field mounting voids breakers' UL listing except on KB, HKB, KA, HKA, LB, HLB.
- ⑤ Available similar to this except "Leads out the load end – (not UL listed)". Order by description.
- ⑥ Right hand mounting only.
- ⑦ Not UL listed.

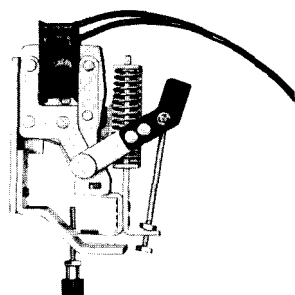


March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Modifications

## Replacement AB DE-ION® Circuit Breakers

### Standard Undervoltage Release



For undervoltage protection. A solenoid device mounts within breaker case. Coil must be energized before closing breaker. Trips breaker when voltage drops below 40 to 60% of coil rating. Picks up and seals in at 80% of coil rating. For line voltages up to 250 volts Dc or 600 volts Ac. Externally mounted resistors are supplied for certain ratings. Standard leads extend 18" outside of breaker. **Note:** U.V.R. attachments are not designed for, and should not be used as, circuit interlocks. For further information, refer to Westinghouse.

#### Factory Mounted Undervoltage Releases. ②

All of the above undervoltage releases can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side and are U.L. listed when factory mounted unless other non-U.L. listed modifications are used.

Factory mounted undervoltage releases only can be supplied for the following breakers:

EB③, EHB③, FB③, HFB③, FB①④ and  
HFB magnetic only ①④, JB, KB, HKB

### Undervoltage release Attachment Kits for Field Mounting ⑤ ⑥

| Attachment<br>Voltage<br>Hertz | Breaker Type<br>JA, KA, DA, HKA,<br>LB, LBB, HLB |
|--------------------------------|--------------------------------------------------|
|--------------------------------|--------------------------------------------------|

#### For Left Hand Mounting

|        |            |
|--------|------------|
| 120 60 | 458D070G01 |
| 208 60 | 458D070G05 |
| 240 60 | 458D070G02 |
| 480 60 | 458D070G03 |
| 600 60 | 458D070G04 |
| 12 DC  | 458D070G09 |
| 24 DC  | 458D070G10 |
| 48 DC  | 458D070G11 |
| 125 DC | 458D070G12 |
| 250 DC | 458D070G13 |

### Undervoltage Release Coil Data

| Voltage<br>Rating,<br>Hertz | Breaker Type<br>EB, EHB, FB, HFB,<br>JB, KB and HKB |                                |             | JA, KA, HKA, DA, LB, LBB, HLB |                                            |             |
|-----------------------------|-----------------------------------------------------|--------------------------------|-------------|-------------------------------|--------------------------------------------|-------------|
|                             | Coil<br>Amperes                                     | Series<br>Resistance<br>(Ohms) | Total<br>VA | Coil<br>Amperes               | External<br>Series<br>Resistance<br>(Ohms) | Total<br>VA |
| 600AC                       | 0.020                                               | 25,000                         | 12.0        | 0.012                         | 50,000                                     | 7.2         |
| 480AC                       | 0.016                                               | 20,000                         | 7.7         | 0.013                         | 30,000                                     | 6.3         |
| 240AC                       | 0.021                                               | 6,000                          | 5.1         | 0.013                         | .....                                      | 3.2         |
| 208AC                       | 0.019                                               | 6,000                          | 4.0         | 0.018                         | .....                                      | 3.8         |
| 120 AC                      | 0.023                                               | .....                          | 2.8         | 0.023                         | .....                                      | 2.8         |
| 60 AC                       | 0.203                                               | 250                            | 12.2        | .....                         | .....                                      | ..          |
| 48 AC                       | 0.245                                               | 150                            | 11.8        | .....                         | .....                                      | ..          |
| 24 AC                       | 0.250                                               | 50                             | 6.0         | .....                         | .....                                      | ..          |
| 250 DC                      | 0.026                                               | 5,000                          | 6.5         | 0.013                         | 16,500                                     | 3.3         |
| 125 DC                      | 0.026                                               | .....                          | 3.3         | 0.013                         | 6,500                                      | 1.7         |
| 60 DC                       | 0.248                                               | 200                            | 14.9        | 0.013                         | 1,500                                      | 0.8         |
| 48 DC                       | 0.260                                               | 150                            | 12.5        | 0.012                         | 600                                        | 0.6         |
| 24 DC                       | 0.141                                               | .....                          | 3.4         | 0.023                         | .....                                      | 0.6         |
| 12 DC                       | 0.286                                               | .....                          | 3.5         | 0.048                         | .....                                      | 0.6         |

List Prices: See Price List 29-021 Dis. RCB-2

① Not UL listed.

② Righthand mounting considered standard unless specified otherwise except JA, KA, DA, HKA, LB, LBB, HLB and seltronic available for lefthand only, and JB, KB, HKB lefthand is standard.

● Not available on ambient compensating breakers.

④ Righthand mounting only.

⑤ Not field mountable on non automatic breakers. (Molded case switches)

⑥ Field mounting voids UL listing of breaker except on KA, HKA, LB, HLB.



## Alarm Switch

**Availability:** DA thru HLB. For light or alarm indication when breaker trips. Does not function with manual operation. Automatically resets when breaker is relatched. Standard leads extend 18" out side of breaker. Not field mountable.

| Breaker Frame                  | Normal Pole Mtg. | Contact Operation (Specify Type Desired) |
|--------------------------------|------------------|------------------------------------------|
| DA                             | Left             | Make or Break                            |
| EB, EHB, FB, HFB <sup>①②</sup> | Mechanism        | Make or Break                            |
| JA, KA, LB, LBB, HKA, HLB      | Left             | Make or Break                            |
| JB, KB, HKB                    | Left             | Make or Break                            |

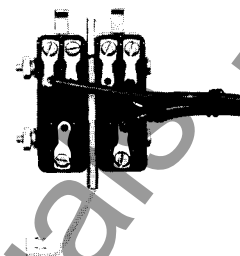
## Alarm Switch Contact Rating (Non Inductive)

EB, EHB, FB, HFB:  
5 amp, 120 volt Ac.  
All other breakers:  
10 amps, 120-240 volt Ac.

**List Prices:** See Price List 29-021 Dis. RCB-2.

## Auxiliary Switch<sup>③</sup>

For auxiliary control circuits. Miniature switches mount within breaker. Commonly used for remote indication of open or closed breaker and electrically interlocking component control circuits. "A" contacts are closed when breaker is closed. "B" contacts are open when breaker is closed. Standard leads extend 18" out side of breaker.



## Auxiliary Switch Attachment Kits for Field Mounting<sup>④⑤⑥</sup>

| Breaker Type                  | For Right Hand Mounting |                         | For Left Hand Mounting |                         | Max Ac Voltage Rating <sup>⑦</sup> | Max. Non-Inductive Amps. |
|-------------------------------|-------------------------|-------------------------|------------------------|-------------------------|------------------------------------|--------------------------|
|                               | 1A-1B                   | 2A-2B                   | 1A-1B                  | 2A-2B                   |                                    |                          |
| EB, EHB, FB, HFB <sup>⑥</sup> | 4979D06G03              | 4979D06G08              | 4979D06G03             | 4979D06G09              | 240                                | 5                        |
| JA, KA, DA, HKA, LB, LBB, HLB | 458D067G08              | 656D527G09 <sup>①</sup> | 458D067G03             | 656D527G01●             | 480                                | 10                       |
| JB, KB, HKB                   | 2600D97G08              | 2609D45G08 <sup>①</sup> | 2600D97G03             | 2609D45G03 <sup>①</sup> | 240                                | 5                        |
|                               |                         |                         |                        |                         | 480                                | 10                       |
|                               |                         |                         |                        |                         | 240                                | 5                        |

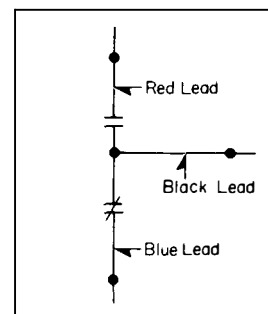
## Factory Mounted Auxiliary Switches<sup>③</sup>

All of the above auxiliary switches can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side of the breaker and are UL listed when factory mounted unless other non UL listed modifications are used (except as noted).

Factory mounted switches only can be supplied for the following breakers:

FB magnetic only<sup>①⑨</sup> and HFB magnetic only<sup>①⑨</sup>.

Price same as a similar kit.



- ① Not UL listed.
- ② Not available for Magnetic Only, Ambient Compensating, or breakers with Undervoltage Release.
- ③ Righthand mounting standard for EB, EHB, FB, HFB, JB, KB, HKB. All others are lefthand mounting as standard unless otherwise specified.
- ④ Not for use on non-automatic breakers. (Molded case switches).
- ⑤ All switches are multiples of 1A-1B with a common electrical connection (See diagram below).
- ⑥ Field mounting voids UL listing of breaker except on KB, HKB, KA, HKA, LB, HLB.
- ⑦ For Dc applications refer to factory.
- ⑧ Thermal magnetic only.
- Righthand mounting only.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



March, 1988  
New Information  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

#### Modifications

## Replacement AB DE-ION® Circuit Breakers

#### Modifications, Continued Moisture-Fungus Treatment<sup>①</sup>

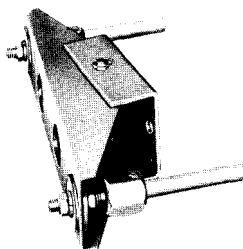
**Availability:** DA thru HLB

Treatment can be provided to meet customer's specific atmospheric conditions. Moisture-fungus treating material used meets JAN-T-152; treatment meets MIL-V-173a. Requests and orders should specify government specifications or conditions to be met.

#### Mechanical Interlocks<sup>①</sup>

For mechanically interlocking a pair of breakers so that only one may be closed at one time, but both may be open simultaneously.

#### Walking Beam Type<sup>①</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) at rear of breaker. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, JB, KB, HFB, HKB: 4 $\frac{3}{8}$ " center to center. Order as a set of two special factory drilled breakers and 1 walking beam interlock. Specify breaker type, panel thickness and center-to-center dimension of breakers.

#### Sliding Bar Type (Field Mountable)<sup>① ②</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) fitting over front of breakers. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, HFB: 4 $\frac{3}{8}$ " center to center; JB, KB, HKB: 4 $\frac{3}{8}$ " center to center.

#### Kirk Key Interlock<sup>②</sup>



**Availability:** 100 Amp Frames (EB) thru 400 Amp Frames (HLB).

Permits interlocking of two breakers or one breaker with other devices. Before breaker can be closed, key must be inserted and turned in breaker interlock. Breaker must be opened before key can be removed. It can then be inserted in interlock or other devices to permit their closure. Requests and orders should completely outline interlocking scheme, ultimate user and his address.

<sup>①</sup> Not UL Listed.

<sup>②</sup> Not available on motor operated breakers.



Accessories, Continued

Motor Operators<sup>①</sup>

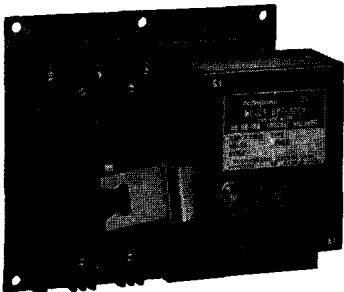
Motor operators provide complete remote control by means of a pushbutton or similar pilot device<sup>②</sup>. Positive switching action is accomplished by use of an operating arm engaging the breaker handle. The unit is energized momentarily to actuate the lever arm moving it to either the "ON" or "OFF" position. The control is broken by an internal cutoff switch. Means for emergency manual operation is provided.

Motor operators are available with motors rated 120 volts Ac, 208 volts Ac, and 240 volts Ac.

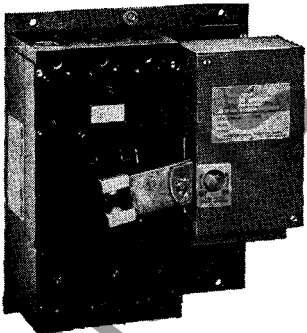
The 480 volt operators utilize a 120 volt Ac motor in conjunction with a 480/240 to 120 volt dual voltage transformer.

**Note:** The motor operator is intended only for infrequent operation in line with Underwriters' Laboratories, Inc. endurance standards for AB molded case breakers.

**List Prices:** See Price List 29-021, Dis. RCB-2



For EB, EHB, FB and HFB



For DA, JA, KA, JB, LB, LBB, HKA, HKB and HLB Breakers

Motor Operator Selection

| Type Breaker     | Ac Voltage   |              |              |              |
|------------------|--------------|--------------|--------------|--------------|
|                  | 120          | 208          | 240          | 480          |
|                  | Style Number | Style Number | Style Number | Style Number |
| EB, EHB, FB, HFB | 656D148G01   | 656D148G04   | 656D148G02   | 656D148G03   |
| DA, JA, KA, HKA  | 657D819G07   | 657D819G10   | 657D819G08   | 657D819G09   |
| LB, LBB, HLB     | 657D819G13   | 657D819G16   | 657D819G14   | 657D819G15   |
| JB, KB, HKB      | 2600D28G01   | 2600D28G04   | 2600D28G02   | 2600D28G03   |

Back Mounting Plates

| Type Breaker     | 120, 208, 240, 480 Volts Ac |
|------------------|-----------------------------|
|                  | Style Number                |
| EB, EHB, FB, HFB | 503C707G01                  |
| DA, JA, KA, LB   | 503C981G01                  |
| JB, KB, HKB      | 1250C26G01                  |

Motor Data

| Type Breaker                          | Motor       | Hp.  | Inrush Current, Ampere (Peak) |           |           | Continuous Current (RMS) |           |           | Operating Time, Open or Close |
|---------------------------------------|-------------|------|-------------------------------|-----------|-----------|--------------------------|-----------|-----------|-------------------------------|
|                                       |             |      | 120 Volts                     | 208 Volts | 240 Volts | 120 Volts                | 208 Volts | 240 Volts |                               |
| EB, EHB, FB, HFB                      | Split Phase | 1/75 | 10                            | 4         | 5         | 2.3                      | 1.17      | 1.65      | 1.5 Seconds                   |
| DA, JA, KA, JB, KB, LB, LBB, HKB, HLB | Split Phase | 1/50 | 14                            | 6         | 7         | 3.5                      | 1.6       | 1.75      | 1.5 Seconds                   |

**Dimensions:** Dimension Sheet 29-170

<sup>①</sup> Ac voltage rated operators are UL listed as recognized components.  
<sup>②</sup> The pilot device must be maintained contact type for EB, EHB, FB, HFB, DA, JA, KA, JB, KB, HKB and LB mechanisms.



March, 1988  
New Information and supersedes Technical  
Data 29-320, pages 1-2, dated February, 1980  
Mailed to: E, D, C/29-100A, 29-300A,  
31-400A, 31-500A

## Replacement MCP Motor Circuit Protector

### Motor Circuit Protector

The MCP is designed specifically for the protection of motor circuits. It operates on the magnetic principle with a current sensing coil in each of the three poles, with the trip-point adjustable from the front. MCP's are the fastest devices available for clearing low level faults and offer circuit breaker features and convenience, resettable, quick make-quick break, dead front, and protection against single phasing.

MCP's are rated to correspond to NEMA starter sizes.

### Current Limiter Attach. (Size 0-4 Only)

The EL current limiter is an attachment that bolts to the load end of the MCP to provide increased interrupting capacity. The combination is UL Listed as a recognized component for application at up to 200,000 amps symmetrical at 600 volts Ac. It is coordinated with the MCP so that normal short circuits will be cleared automatically by the MCP, opening all 3 poles, and only the rare high fault will cause the limiter to function. Current limiters must be applied as shown in the table below.

### Terminals

Terminals are included with both the MCP and Current Limiter. Standard terminals are aluminum alloy, with non-aluminum terminals optional for use with only the MCP. Both standard and optional terminals will accommodate aluminum or copper conductors. When using aluminum conductors, use of joint compound is recommended. Wire ranges are listed below.

| MCP or<br>Limiter     | Terminals         |                       |
|-----------------------|-------------------|-----------------------|
|                       | Standard<br>Alum. | Optional<br>Non-Alum. |
| Size 0, 1, 2          | #14-#4            | #14-1/0               |
| Size 3                | #6-3/0            | #14-1/0               |
| Size 4                | #4-4/0            | #4-4/0                |
| Size 5 (250 Amp.)     | #4-350MCM         | #4-350MCM             |
| Size 5 (400 Amp.)     | .....             | (2)-3/0<br>-250MCM    |
| Limiters to 50 amps.  | #14-#2            | .....                 |
| Limiters to 100 amps. | #1-4/0            | .....                 |
| Limiters to 150 amps. | #1-4/0            | .....                 |

### Underwriters' Laboratories Inc. Listed

The MCP is listed with Underwriters' Laboratories as a recognized component and requires additional listing by the control manufacturer in combination with a contactor and overload relay.



Size 0-4 MCP With Current Limiter

Size 5 MCP 532500

**Motor Circuit Protectors** – For Prices, see Price List 29-021 Dis. Sym. RCB-12

| Starter<br>Size | Trip<br>Range,<br>Amps. | Contin-<br>uous<br>Amp.<br>Rating | Catalog Numbers                              |                                             |
|-----------------|-------------------------|-----------------------------------|----------------------------------------------|---------------------------------------------|
|                 |                         |                                   | With Standard<br>Aluminum Alloy<br>Terminals | With Optional<br>Non-Aluminum<br>Terminals® |
| 0               | 7-22                    | 3                                 | MCP0322R                                     | MCP0322CR                                   |
| 0               | 18-58                   | 7                                 | MCP0358R                                     | MCP0358CR                                   |
| 0               | 50-150                  | 15                                | MCP03150R                                    | MCP03150CR                                  |
| 1               | 100-300                 | 30                                | MCP13300R                                    | MCP13300CR                                  |
| 2               | 160-480                 | 50                                | MCP23480R                                    | MCP23480CR                                  |
| 3               | 275-1000                | 100                               | MCP331000R                                   | MCP331000CR                                 |
| 4               | 450-1550                | 150                               | MCP431550R                                   | MCP431550CR                                 |
| 4               | 575-1800                | 150                               | MCP431800R                                   | MCP431800CR                                 |
| 5               | 1250-2500               | 250                               | MCP532500                                    | MCP532500C                                  |
| 5               | 2000-4000               | 400                               | .....                                        | MCP534000C                                  |

### Current Limiters

| Limiter<br>Cat. No. | For MCP<br>Cat. No.® |
|---------------------|----------------------|
| EL3003R             | MCP0322R             |
| EL3007R             | MCP0358R             |
| EL3015R             | MCP03150R            |
| EL3030R             | MCP13300R            |
| EL3050R             | MCP23480R            |
| EL3100R             | MCP331000R           |
| EL3150R             | MCP431550R           |
| EL3150R             | MCP431800R           |

### Modifications for MCP®

These modifications must be factory installed.

#### Description

Auxiliary Switches®  
1A and 1B, 2A's and 2B's  
Shunt Trip®  
Undervoltage Release® ② ③ ④  
Moisture-Fungus Treatment

### Accessories for MCP®

For accessories such as motor operators, terminal shields, handle locks, handle mechanisms and rear studs, refer to Technical Data 29-121 and Technical Data 29-520 and select as follows:

| For MCP Size | Use Access. For |
|--------------|-----------------|
| 0-4          | FB              |
| 5 (250 Amp.) | KB              |
| 5 (400 Amp.) | LB              |

- ② On 400 amp size 5, an external resistor is supplied for voltages above 240 volts Ac and 24 volts Dc.
- ③ Mounts only in right pole; only one Modification marked ③ can be used in MCP. (Size 0-4).
- ④ On size 0-4 and 250 amp size 5, an external resistor is supplied for customer mounting, except for 120 volts Ac, 12, 24, 125 volts Dc.
- ⑤ Also applicable to MCP's with optional terminals.
- ⑥ Not Underwriters' Laboratories listed.
- ⑦ Except 400 amp size 5. Non-aluminum terminal suitable for copper only.
- ⑧ Cat. No.'s ending in CR were previously listed ending in RC. This is a Cat. No. change only, not a material change.



#### **Interrupting Ratings**

Maximum application current shall be determined by testing the MCP in combination with a contactor and overload relay. Additional capacity can be obtained by using the current limiter attachment.

#### **Base Mounting Hardware**

No charge when ordered with MCP. Order separately when required.

Size 0-4, Style No. 21C6782G18

Size 5 (250 Amp.), Style No.  
673B125G12

Size 5 (400 Amp.), Style No.  
21C6782G22

#### **Further Information**

List Prices: Price List 29-021

Application: Application Data 29-360

Characteristic Curves: Appl. Data 29-360-A

Dimensions: Dimension Sheet 29-370



December 1990  
Supersedes Technical Data 29-121,  
pages 29-30, dated August, 1989  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

100 and 150 Ampere Frames

## Panelboard Replacement Breakers

UL Listed

### Out-of-Production Circuit Breakers

Several models of Westinghouse molded case circuit breakers are no longer manufactured. These circuit breakers are considered by Westinghouse to be out of production.

However, some firms have been offering Westinghouse out-of-production circuit breakers in a reconditioned state. These circuit breakers are not new units and may have been in service for extended periods of service time.

Westinghouse molded case circuit breakers are not designed to be repaired or calibrated in the field. When these circuit breakers are reconditioned by firms other than Westinghouse, it is extremely difficult to maintain the original factory specifications of the circuit breakers.

### Replacement of Out-of-Production Circuit Breakers

When out-of-production circuit breakers must be replaced, Westinghouse recommends one of these solutions:

- Upgrade or retrofit the equipment to use the most current molded case circuit breaker technology. This includes the Series C® family of molded case circuit breakers that have higher interrupting capacities in each frame size while being smaller and lighter.
- Use currently manufactured Westinghouse replacement industrial circuit breakers. They're available from stock and can be used to replace many out-of-production circuit breakers.
- Use Westinghouse Panelboard Replacement Circuit Breakers in panelboards and small switchboards with group mounted circuit breaker distribution sections. These UL listed replacement circuit breakers are newly manufactured and are physically interchangeable with the circuit breakers they are designed to replace. (These circuit breakers may be suitable for other replacement applications as well.)
- Westinghouse strongly recommends that out-of-production circuit breakers be replaced with one of the newly manufactured circuit breakers described in the preceding paragraphs.

As a last resort, another alternative is to utilize out-of-production circuit breakers that have been reconditioned by Westinghouse at the original factory. Factory reconditioned breakers are available for all styles of out-of-production breakers (E, F, G, J, K, L, . . .). These breakers are not UL-listed, but have been reconditioned and tested at the factory according to the manufacturing and engineering standards to which the original breakers were built.

Westinghouse Panelboard Replacement Circuit Breakers are newly manufactured and tested to the latest applicable standards at the Westinghouse molded case circuit breaker plant in Beaver, Pennsylvania. This plant has a long and well-recognized tradition of product safety, integrity, and quality.

The Panelboard Replacement Circuit Breaker solution eliminates the need to consider alternative approaches. Westinghouse customers are assured that the high standards of product quality and reliability do not have to be sacrificed when replacing Westinghouse out-of-production circuit breakers.

All Panelboard Replacement Circuit Breakers are easily identified by the prefix "R" added to the out-of-production type circuit breaker catalog number they replace.

Here is an example of the new Panelboard Replacement Circuit Breaker catalog numbering system.

1. An RF3100 is a newly manufactured, three-pole, 100 ampere trip Panelboard Replacement Circuit Breaker. It replaces an out-of-production F circuit breaker.

**R F 3 100**

- R** Designates New Panelboard Replacement Circuit Breaker
- F** Identifies the Out-of-Production Circuit Breaker Frame
- 3** Number of Poles
- 100** Trip Unit Ampere Rating

### Replacement Chart

| Current Panelboard<br>Circuit Breaker Type | Out-of-Production<br>Circuit Breaker Type<br>① | Volts AC<br>(50/60 Hz) |     |     |
|--------------------------------------------|------------------------------------------------|------------------------|-----|-----|
|                                            |                                                | 240                    | 480 | 600 |
| REA                                        | EA                                             | •                      |     |     |
| RE                                         | E                                              | •                      |     |     |
| REH                                        | EH                                             |                        | •   |     |
| RFA                                        | FA                                             |                        |     | •   |
| RHFA                                       | HFA                                            |                        |     | •   |
| RF                                         | F                                              |                        |     | •   |
| RHF                                        | HF                                             |                        |     | •   |

Panelboard Replacement Circuit Breakers have noninterchangeable trip units and the same interrupting capacity as the out-of-production circuit breakers they replace.

① Last manufacture date – 1974.

### Panelboard Replacement Breaker Interrupting Amp Ratings

| Breaker Type | Amps   | Ⓢ 120<br>Volts Ac | Ⓢ 240<br>Volts Ac | Ⓢ 277<br>Volts Ac | Ⓢ 480<br>Volts Ac | Ⓢ 600<br>Volts Ac | Ⓢ 125<br>Volts Dc | Ⓢ 250<br>Volts Dc |
|--------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| RE           | 15-100 | 7500              | 7500              |                   |                   |                   | (1 P) 5000        | 5000              |
| REA          | 15-100 | 7500              | 7500              | 10000             |                   |                   | (1 P) 5000        | 5000              |
| REH          | 15-100 |                   | 18000             | 10000             | 10000             |                   |                   | 10000             |
| RF           | 15-100 |                   | 18000             |                   | 14000             | 14000             |                   | 10000             |
| RFA          | 15-150 |                   | 18000             |                   | 14000             | 14000             |                   | 10000             |
| RHF          | 15-100 |                   | 65000             |                   | 25000             | 18000             |                   | 20000             |
| RHFA         | 15-150 |                   | 65000             |                   | 25000             | 18000             |                   | 20000             |



Panelboard Replacement Breakers can be installed in the following styles of old Westinghouse panelboards:

| Installed<br>Panelboard<br>Type | Installed<br>Branch<br>Circuit<br>Breakers | Replacement<br>Circuit<br>Breakers |
|---------------------------------|--------------------------------------------|------------------------------------|
| ABH                             | E①                                         | RE                                 |
| A2B                             | E①                                         | RE                                 |
| CDP                             | E①                                         | RE                                 |
|                                 | EA                                         | REA                                |
|                                 | EH                                         | REH                                |
|                                 | FA                                         | RFA                                |
|                                 | F                                          | RF                                 |
| NAB                             | E①                                         | RE                                 |
| NAIB                            | E①, EA                                     | RE, REA                            |
| NAIB-LX                         | E①                                         | RE                                 |
| NDP                             | E①, EA, EAH                                | RE, REA, REH                       |
| NEB                             | EA                                         | REA                                |
| NHDP                            | EH                                         | REH                                |
| NHEB                            | EH/FA                                      | REH, RFA                           |
| NHIB                            | E-277①                                     | RE                                 |
| NLAB-AB                         | E①                                         | RE                                 |
| NLAB-ABH                        | E①                                         | RE                                 |

**Note:** This information covers most panelboards built by Westinghouse since 1937.

**Notes:**

1. The RE breaker has off-center terminals just like the E breaker it is replacing.
2. For out-of-production breakers, the "B" suffix denoted a long handle, however the "B" suffix denotes 277 voltage rating for the Panelboard Replacement Breakers.
3. Some Panelboard Replacement Breakers do not have the same physical dimensions or mounting holes as the breakers they replace. For example, the types REH, RFA and RHFA are 6 inches in length and the breakers they replace, EH, FA and HFA are 6½ inches in length. Mounting hardware is provided with each breaker to resolve these differences, and must be installed to ensure a proper fit.

**Additional Information**

See instruction leaflets for detailed mounting information:

|                |            |
|----------------|------------|
| RE, REA        | I.L. 15558 |
| RF, RHF        | I.L. 15559 |
| REH, RFA, RHFA | I.L. 15562 |

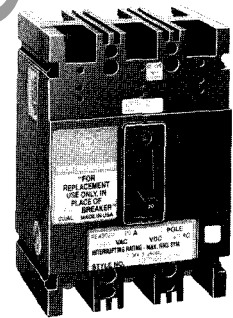


December 1990  
Supersedes Technical Data 29-121,  
pages 29-30, dated August, 1989  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Panelboard Replacement Breakers UL Listed

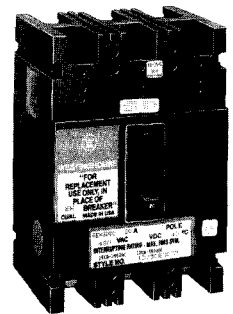
### Type REA 1, 2, 3-Poles; 240 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | REA1015         | REA2015 | REA3015 |
| 20                                       | REA1020         | REA2020 | REA3020 |
| 25                                       | REA1025         | REA2025 | REA3025 |
| 30                                       | REA1030         | REA2030 | REA3030 |
| 40                                       | REA1040         | REA2040 | REA3040 |
| 50                                       | REA1050         | REA2050 | REA3050 |
| 60                                       | REA1060         | REA2060 | REA3060 |
| 70                                       | REA1070         | REA2070 | REA3070 |
| 80                                       | REA1080         | REA2080 | REA3080 |
| 90                                       | REA1090         | REA2090 | REA3090 |
| 100                                      | REA1100         | REA2100 | REA3100 |



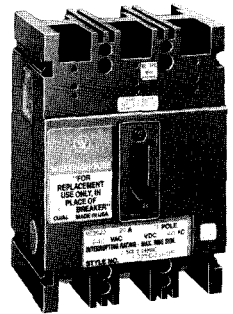
### Type REH 1, 2, 3-Poles; 480 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | REH1015         | REH2015 | REH3015 |
| 20                                       | REH1020         | REH2020 | REH3020 |
| 25                                       | REH1025         | REH2025 | REH3025 |
| 30                                       | REH1030         | REH2030 | REH3030 |
| 40                                       | REH1040         | REH2040 | REH3040 |
| 50                                       | REH1050         | REH2050 | REH3050 |
| 60                                       | REH1060         | REH2060 | REH3060 |
| 70                                       | REH1070         | REH2070 | REH3070 |
| 80                                       | REH1080         | REH2080 | REH3080 |
| 90                                       | REH1090         | REH2090 | REH3090 |
| 100                                      | REH1100         | REH2100 | REH3100 |



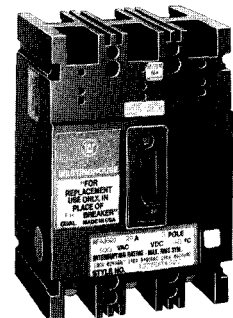
### Type RE 1, 2, 3-Poles; 240 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |        |        |
|------------------------------------------|-----------------|--------|--------|
|                                          | 1-Pole          | 2-Pole | 3-Pole |
| 20                                       | RE1020          | RE2020 | RE3020 |
| 25                                       | RE1025          | RE2025 | RE3025 |
| 30                                       | RE1030          | RE2030 | RE3030 |
| 40                                       | RE1040          | RE2040 | RE3040 |
| 50                                       | RE1050          | RE2050 | RE3050 |
| 60                                       | RE1060          | RE2060 | RE3060 |
| 70                                       | RE1070          | RE2070 | RE3070 |
| 80                                       | RE1080          | RE2080 | RE3080 |
| 90                                       | RE1090          | RE2090 | RE3090 |
| 100                                      | RE1100          | RE2100 | RE3100 |



### Type RFA 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic (Includes Load Terminals only; see Terminals page 8)

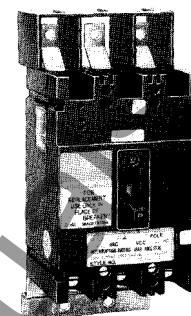
| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | .....           | RFA2015 | RFA3015 |
| 20                                       | .....           | RFA2020 | RFA3020 |
| 25                                       | .....           | RFA2025 | RFA3025 |
| 30                                       | .....           | RFA2030 | RFA3030 |
| 35                                       | .....           | RFA2035 | RFA3035 |
| 40                                       | .....           | RFA2040 | RFA3040 |
| 50                                       | .....           | RFA2050 | RFA3050 |
| 60                                       | .....           | RFA2060 | RFA3060 |
| 70                                       | .....           | RFA2070 | RFA3070 |
| 80                                       | .....           | RFA2080 | RFA3080 |
| 90                                       | .....           | RFA2090 | RFA3090 |
| 100                                      | .....           | RFA2100 | RFA3100 |
| 125                                      | .....           | RFA2125 | RFA3125 |
| 150                                      | .....           | RFA2150 | RFA3150 |





**Type RF 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |        |        |
|------------------------------------------|-----------------|--------|--------|
|                                          | 1-Pole          | 2-Pole | 3-Pole |
| 15                                       | .....           | RF2015 | RF3015 |
| 20                                       | .....           | RF2020 | RF3020 |
| 25                                       | .....           | RF2025 | RF3025 |
| 30                                       | .....           | RF2030 | RF3030 |
| 35                                       | .....           | RF2035 | RF3035 |
| 40                                       | .....           | RF2040 | RF3040 |
| 50                                       | .....           | RF2050 | RF3050 |
| 60                                       | .....           | RF2060 | RF3060 |
| 70                                       | .....           | RF2070 | RF3070 |
| 80                                       | .....           | RF2080 | RF3080 |
| 90                                       | .....           | RF2090 | RF3090 |
| 100                                      | .....           | RF2100 | RF3100 |



**Type RHFA 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |          |          |
|------------------------------------------|-----------------|----------|----------|
|                                          | 1-Pole          | 2-Pole   | 3-Pole   |
| 15                                       | .....           | RHFA2015 | RHFA3015 |
| 20                                       | .....           | RHFA2020 | RHFA3020 |
| 25                                       | .....           | RHFA2025 | RHFA3025 |
| 30                                       | .....           | RHFA2030 | RHFA3030 |
| 35                                       | .....           | RHFA2035 | RHFA3035 |
| 40                                       | .....           | RHFA2040 | RHFA3040 |
| 50                                       | .....           | RHFA2050 | RHFA3050 |
| 60                                       | .....           | RHFA2060 | RHFA3060 |
| 70                                       | .....           | RHFA2070 | RHFA3070 |
| 80                                       | .....           | RHFA2080 | RHFA3080 |
| 90                                       | .....           | RHFA2090 | RHFA3090 |
| 100                                      | .....           | RHFA2100 | RHFA3100 |
| 125                                      | .....           | RHFA2015 | RHFA3125 |
| 150                                      | .....           | RHFA2150 | RHFA3150 |

Refer to photograph for Type RFA on page 31. Type RHFA is the same, except for the molding material.

**Type RHF 1, 2, 3-Poles; 600 Volts Ac Max.; Thermal Magnetic**  
(Includes Load Terminals only; see Terminals page 8)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers |         |         |
|------------------------------------------|-----------------|---------|---------|
|                                          | 1-Pole          | 2-Pole  | 3-Pole  |
| 15                                       | .....           | RHF2015 | RHF3015 |
| 20                                       | .....           | RHF2020 | REA3020 |
| 25                                       | .....           | RHF2025 | RHF3025 |
| 30                                       | .....           | RHF2030 | RHF3030 |
| 40                                       | .....           | RHF2040 | RHF3040 |
| 50                                       | .....           | RHF2050 | RHF3050 |
| 60                                       | .....           | RHF2060 | RHF3060 |
| 70                                       | .....           | RHF2070 | RHF3070 |
| 80                                       | .....           | RHF2080 | RHF3080 |
| 90                                       | .....           | RHF2090 | RHF3090 |
| 100                                      | .....           | RHF2100 | RHF3100 |

Refer to photograph for Type RF above. Type RHF is the same, except for the molding material.

**Accessories and Modifications**  
Description: Pages 19-28

All accessories and modifications available for Replacement Breakers Types EB, EHB and FB are also available for Panelboard Replacement Breakers Types RE, REH, RFA, RF, RHF, REA and RHFA.

**List Prices**  
See Price List 29-021, Dis. RCB-2.

**Terminals**  
Breakers include load terminals only. See Terminal data for Replacement Breakers Types EB, EHB and FB.

**50°C Calibration**  
Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

**Special Breakers<sup>①</sup>**  
Magnetic only, Front Adjustable (includes Line and Load Terminals). Available for 15-150 ampere ratings for 2- and 3-pole RF, RHF and RHFA.

Factory reconditioned F and FA Tri Pac styles also available.<sup>①</sup>

<sup>①</sup> Not listed with Underwriters' Laboratories, Inc.



# Replacement AB DE-ION® Circuit Breakers

② Molded case switch dimensions are the same as the equivalent thermal magnetic breaker. Refer to Dimension Sheet 29-170.



---

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



October, 1975  
Supersedes Price List 29-120, pages 3-4,  
all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

For Lighting, Distribution and Power Circuits

## AB DE-ION® Circuit Breakers

### Standard Breaker Selection Guide

#### DA



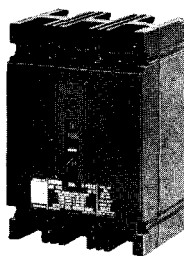
2, 3 Poles<sup>③</sup>  
250-400 Amps  
@40°C

#### BA



1, 2, 3 Poles  
15-100 Amps  
@40°C

#### EB



1, 2, 3 Poles  
15-100 Amps  
@40°C

#### EHB



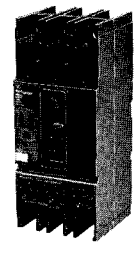
1, 2, 3 Poles  
15-100 Amps  
@40°C

#### FB



2, 3 Poles  
15-150 Amps  
@40°C

#### JB, KB



2, 3 Poles<sup>③</sup>  
70-250 Amps  
@40°C

### Dimensions, Inches, 3 Pole Breakers

| H      | W     | D      | H | W | D     | H | W     | D     | H | W     | D     | H | W     | D     | H  | W     | D      |
|--------|-------|--------|---|---|-------|---|-------|-------|---|-------|-------|---|-------|-------|----|-------|--------|
| 10 1/2 | 5 1/2 | 4 1/16 | 3 | 3 | 2 1/8 | 6 | 4 1/8 | 3 3/8 | 6 | 4 1/8 | 3 3/8 | 6 | 4 1/8 | 3 3/8 | 10 | 4 1/8 | 4 1/16 |

Ac Ratings I. C. Ratings Shown 18,000 are Symmetrical<sup>②</sup>; Ratings Shown 20,000 are Asymmetrical

|                                                   |                                                                                                                                                            |                                                                                                         |                                                                                                                                            |                                                                                                                                       |                                                                                                                                       |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 240 Volts Max.<br>Amps I. C.<br>25,000 and 22,000 | 120/240, 240, 277<br>Volts Max.<br>Amps I. C.<br>120/240 Volts:<br>10,000 and 10,000<br>240 Volts: 10,000<br>and 10,000<br>277 Volts: 10,000<br>and 10,000 | 120, 240 Volts Max.<br>Amps I. C.<br>120 Volts: 10,000<br>and 10,000<br>240 Volts: 10,000<br>and 10,000 | 277, 480 Volts Max.<br>Amps I. C.<br>240 Volts: 20,000<br>and 18,000<br>480 Volts: 15,000<br>and 14,000<br>277 Volts: 15,000<br>and 14,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 20,000<br>and 18,000<br>480 Volts: 15,000<br>and 14,000<br>600 Volts: 15,000<br>and 14,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 30,000<br>and 25,000<br>480 Volts: 25,000<br>and 22,000<br>600 Volts: 25,000<br>and 22,000 |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|

### Dc Ratings<sup>②</sup>

|                                |                                        |                                     |                                |                                |
|--------------------------------|----------------------------------------|-------------------------------------|--------------------------------|--------------------------------|
| 250 Volts<br>10,000 Amps I. C. | 125, 125/250 Volts<br>5,000 Amps I. C. | 125, 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>10,000 Amps I. C. |
|--------------------------------|----------------------------------------|-------------------------------------|--------------------------------|--------------------------------|

Accessories and Modifications See Pages 43-52 for Description and Underwriters' Laboratories, Inc. Status

|                                                                                                                                                                                                                                                                                           |                                                     |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Ground Current Limiter<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Moisture-Fungus<br>Treatment<br>Handle Lock Devices | Shunt Trip<br>Auxiliary Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices<br>Undervoltage Trip<br>Alarm Switch | Shunt Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices<br>Undervoltage Trip | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Field Discharge Contact<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Ground Current Limiter<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

① Not Underwriters' Laboratories, Inc. listed.

② Underwriters' Laboratories, Inc. listed.

③ 2-pole unit supplied in 3-pole frame.



# Standard Breaker Selection Guide

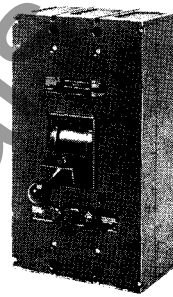
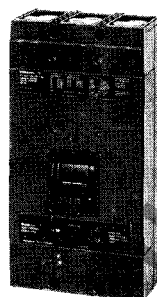
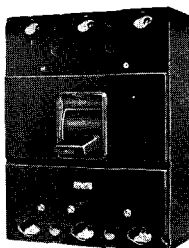
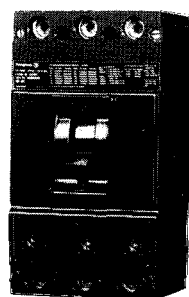
LB, LBB

LA 600

MC

NC

PC, PCC



2, 3 Pole<sup>②</sup>  
70-400 Amps  
@40°C

2, 3 Poles<sup>②</sup>  
250-600 Amps  
@40°C

2, 3 Poles<sup>②</sup>  
400-800 Amps

2, 3 Poles<sup>②</sup>  
600-1200 Amps

2, 3 Poles<sup>②</sup>  
1000-3000 Amps

## Dimensions, Inches, 3-Pole Breakers

| H                | W               | D                | H                | W               | D                | H  | W               | D                | H  | W               | D               | H                | W                 | D                |
|------------------|-----------------|------------------|------------------|-----------------|------------------|----|-----------------|------------------|----|-----------------|-----------------|------------------|-------------------|------------------|
| 10 $\frac{1}{8}$ | 5 $\frac{1}{2}$ | 4 $\frac{1}{16}$ | 10 $\frac{1}{8}$ | 8 $\frac{1}{4}$ | 4 $\frac{1}{16}$ | 16 | 8 $\frac{1}{4}$ | 4 $\frac{1}{16}$ | 16 | 8 $\frac{1}{4}$ | 5 $\frac{1}{2}$ | 22 $\frac{1}{8}$ | 12 $\frac{1}{16}$ | 9 $\frac{1}{16}$ |

Ac Ratings I. C. Ratings Shown **42,000** are **Symmetrical**<sup>①</sup>. Ratings Shown 50,000 are Asymmetrical

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and **42,000**  
480 Volts: 35,000  
and **30,000**  
600 Volts: 25,000  
and **22,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and **42,000**  
480 Volts: 35,000  
and **30,000**  
600 Volts: 25,000  
and **22,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and **42,000**  
480 Volts: 35,000  
and **30,000**  
600 Volts: 25,000  
and **22,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and **42,000**  
480 Volts: 35,000  
and **30,000**  
600 Volts: 25,000  
and **22,000**

600 Volts Max.  
Amps I. C.  
240 Volts: 150,000  
and **125,000**  
480 Volts: 115,000  
and **100,000**  
600 Volts: 115,000  
and **100,000**

## Dc Ratings<sup>①</sup>

250 Volts  
20,000 Amps I. C. <sup>③</sup>

250 Volts  
20,000 Amps I. C. <sup>③</sup>

Accessories and Modifications See Pages 43-52 for Description and Underwriters Laboratories, Inc. Status

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Center Studs  
Rear Connecting Studs  
Ground Current Limiter  
Moisture-Fungus Treatment  
Motor Operator  
Enclosure Handle Mech.  
Parallel Connections  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Center Studs  
Rear Connecting Studs  
Moisture-Fungus Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus Treatment  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus Treatment  
Enclosure Handle Mech.  
Handle Lock Devices

Drawout Frame  
Shunt Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Moisture-Fungus Treatment  
Enclosure Handle Mech.

① Underwriters' Laboratories, Inc. listed.  
② 2-Pole Unit supplied in 3-pole frame.  
③ Ratings above 10,000 amps not UL Listed.



October, 1975  
Supersedes Price List 29-120, pages 5-6,  
all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

## AB DE-ION® Circuit Breakers

### High Interrupting Capacity Breaker Selection Guide

**MARK 75®  
Quicklag® HP**



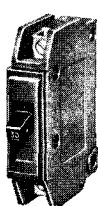
1, 2 Poles  
15-30 Amps;  
3 Poles,  
15-20 Amps  
@40°C

**MARK 75®  
Type HBA**



1, 2 Poles  
15-30 Amps;  
3 Poles  
15-20 Amps  
@40°C

**MARK 75®  
Quicklag® HC**



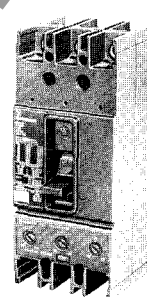
1, 2 Poles  
15-30 Amps;  
3 Poles  
15-20 Amps  
@40°C

**MARK 75® HFB**



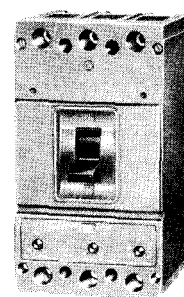
1, 2, 3 Poles②  
15-150 Amps  
@40°C

**MARK 75® HKB**



2, 3 Poles②  
70-250 Amps  
@40°C

**MARK 75® HLB**



2, 3 Poles②  
125-400 Amps  
@40°C

#### Dimensions, Inches, 3 Pole Breakers

| H                             | W          | D                             | H | W          | D                             | H                             | W          | D                             | H | W                             | D                             | H  | W                             | D                             | H                              | W                             | D                             |
|-------------------------------|------------|-------------------------------|---|------------|-------------------------------|-------------------------------|------------|-------------------------------|---|-------------------------------|-------------------------------|----|-------------------------------|-------------------------------|--------------------------------|-------------------------------|-------------------------------|
| 3 <sup>3</sup> / <sub>4</sub> | 1 (1 pole) | 2 <sup>3</sup> / <sub>8</sub> | 3 | 1 (1 pole) | 2 <sup>3</sup> / <sub>8</sub> | 3 <sup>3</sup> / <sub>4</sub> | 1 (1 pole) | 2 <sup>3</sup> / <sub>8</sub> | 6 | 4 <sup>1</sup> / <sub>2</sub> | 3 <sup>3</sup> / <sub>4</sub> | 10 | 4 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>8</sub> | 10 <sup>1</sup> / <sub>2</sub> | 5 <sup>1</sup> / <sub>2</sub> | 4 <sup>1</sup> / <sub>8</sub> |

**Ac Rating I. C.** Ratings Shown **65,000** are **Symmetrical**①; Ratings Shown **75,000** are Asymmetrical

|                                                              |                                                              |                                                              |                                                                                                                                                            |                                                                                                                                                            |                                                                                                                                                            |
|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 120/240 Volts Max.<br>Amps I. C.<br>75,000 and <b>65,000</b> | 120/240 Volts Max.<br>Amps I. C.<br>75,000 and <b>65,000</b> | 120/240 Volts Max.<br>Amps I. C.<br>75,000 and <b>65,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and <b>65,000</b><br>480 Volts:<br>30,000 and <b>25,000</b><br>600 Volts:<br>20,000 and <b>18,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and <b>65,000</b><br>480 Volts:<br>30,000 and <b>25,000</b><br>600 Volts:<br>25,000 and <b>22,000</b> | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and <b>65,000</b><br>480 Volts:<br>40,000 and <b>35,000</b><br>600 Volts:<br>30,000 and <b>25,000</b> |
|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Dc Ratings①

|       |       |       |                                 |                                 |                                 |
|-------|-------|-------|---------------------------------|---------------------------------|---------------------------------|
| ..... | ..... | ..... | 250 Volts<br>20,000 Amps I. C.③ | 250 Volts<br>20,000 Amps I. C.③ | 250 Volts<br>20,000 Amps I. C.③ |
|-------|-------|-------|---------------------------------|---------------------------------|---------------------------------|

**Accessories and Modifications.** See Pages 43-52 for Description and Underwriters' Laboratories, Inc. Status.)

Moisture-Fungus  
Treatment  
Handle Lock Devices

Moisture-Fungus  
Treatment  
Handle Lock Devices

Moisture-Fungus  
Treatment  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Center Studs  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Parallel Connections  
Handle Lock Devices

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Center Studs  
Rear Connecting Studs  
Ground Current Limiter  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Parallel Connections  
Handle Lock Devices

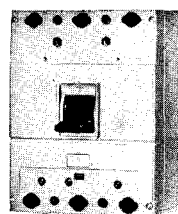
Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Center Studs  
Rear Connecting Studs  
Ground Current Limiter  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Parallel Connections  
Handle Lock Devices

① Underwriters' Laboratories, Inc. listed.  
② 2-pole unit supplied in 3-pole frame.  
③ Ratings above 10,000 amps not UL Listed.

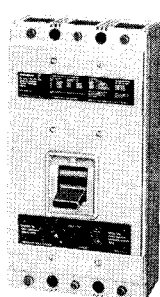


# High Interrupting Capacity Breaker Selection Guide

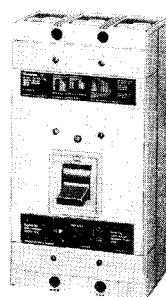
MARK 75® HLA MARK 75® HMC MARK 75® HNC TRI-PAC® FB TRI-PAC® LA TRI-PAC® NB TRI-PAC® PB



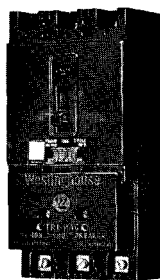
2, 3 Poles②  
250-600 Amps  
@40°C



2, 3 Poles②  
400-800 Amps



2, 3 Poles②  
600-1200 Amps



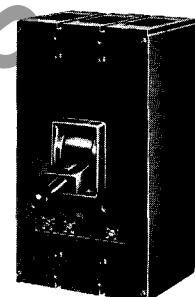
2, 3 Poles②  
15-100 Amps  
@40°C



2, 3 Poles②  
70-400 Amps  
@40°C



2, 3 Poles②  
300-800 Amps④  
@40°C



2, 3 Poles②  
600-1200 Amps  
@40°C

## Dimensions, Inches, 3 Pole Breakers

| H      | W     | D      | H  | W     | D      | H  | W     | D     | H     | W     | D     | H  | W     | D     | H  | W     | D     | H      | W       | D     |
|--------|-------|--------|----|-------|--------|----|-------|-------|-------|-------|-------|----|-------|-------|----|-------|-------|--------|---------|-------|
| 10 1/4 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 5 1/2 | 8 3/4 | 4 1/4 | 3 1/2 | 16 | 8 1/4 | 4 1/4 | 22 | 8 1/4 | 5 1/2 | 22 1/2 | 12 1/16 | 9 1/4 |

Ac Ratings I. C. Ratings Shown 65,000 are Symmetrical①; Ratings Shown 75,000 are Asymmetrical

|                                                                                                                                       |                                                                                                                                       |                                                                                                                                       |                                                                                                |                                                                                                |                                                                                                |                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 50,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 50,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 200,000<br>480 Volts: 200,000<br>600 Volts: 200,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 200,000<br>480 Volts: 200,000<br>600 Volts: 200,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 200,000<br>480 Volts: 200,000<br>600 Volts: 200,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 200,000<br>480 Volts: 200,000<br>600 Volts: 200,000 |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|

## Dc Ratings①

|                                 |       |       |                                  |                                  |                                   |                                   |
|---------------------------------|-------|-------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|
| 250 Volts<br>20,000 Amps I. C.③ | ..... | ..... | 250 Volts<br>100,000 Amps I. C.④ | 250 Volts<br>100,000 Amps I. C.④ | 250 Volts⑥<br>100,000 Amps I. C.④ | 250 Volts⑤<br>100,000 Amps I. C.④ |
|---------------------------------|-------|-------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|

Accessories and Modifications, See Pages 43-52 for Description and Underwriters' Laboratories, Inc. Status

|                                                                                                                                                                                                                                                                 |                                                                                                                                                                                  |                                                                                                                                                                                  |                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                        |                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Shunt Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Moisture-Fungus<br>Treatment<br>Enclosure Handle Mech.<br>Handle Lock Devices<br>Rear Connecting Studs | Shunt Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ① Underwriters' Laboratories, Inc. listed.
- ② 2-pole unit supplied in 3-pole frame.
- ③ Ratings above 10,000 amps not UL Listed.
- ④ Based on NEMA test procedures.
- ⑤ Dc rating applies only to magnetic only breakers.
- ⑥ For ratings above 350 amps, Dc rating applies only to magnetic only breakers.

Westinghouse Electric Corporation  
Low Voltage Breaker Division  
Beaver, Pa. 15009



October, 1975  
Supersedes Price List 29-120, pages 7-8,  
all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/P.L.  
E, C/2430

## AB DE-ION® Circuit Breakers

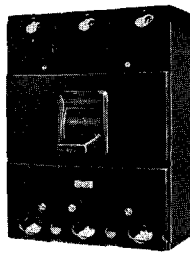
### Replacement Breaker Selection Guide

JA, KA



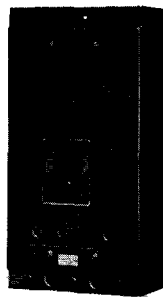
2, 3 Poles<sup>②</sup>  
70-225 Amps  
@40°C

LAB, LA 400



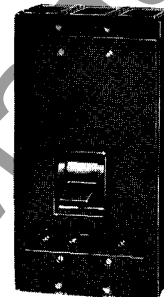
2, 3 Poles<sup>②</sup>  
125-400 Amps  
@40°C

MA



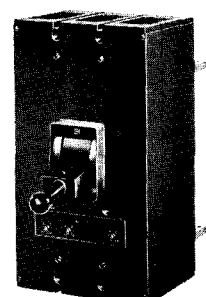
2, 3 Poles<sup>②</sup>  
125-800 Amps  
@40°C

NB



2, 3 Poles<sup>②</sup>  
700-1200 Amps  
@40°C

PB



2, 3 Poles<sup>②</sup>  
600-3000 Amps  
@40°C

#### Dimensions, Inches, 3 Pole Breakers

| H      | W     | D      | H      | W     | D      | H  | W     | D      | H  | W     | D     | H      | W       | D     |
|--------|-------|--------|--------|-------|--------|----|-------|--------|----|-------|-------|--------|---------|-------|
| 10 1/2 | 5 1/2 | 4 1/16 | 10 1/2 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 5 1/2 | 22 1/2 | 12 1/16 | 9 1/4 |

AC Ratings I. C. Ratings Shown 25,000 are Symmetrical<sup>①</sup>; Ratings Shown 30,000 are Asymmetrical.

|                                                                                                                              |                                                                                                                               |                                                                                                                               |                                                                                                                              |                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 600 Volts Max.<br>Amps I. C.<br>240 Volts: 30,000 and 25,000<br>480 Volts: 25,000 and 22,000<br>600 Volts: 25,000 and 22,000 | 600 Volts Max.<br>Amps. I. C.<br>240 Volts: 50,000 and 42,000<br>480 Volts: 35,000 and 30,000<br>600 Volts: 25,000 and 22,000 | 600 Volts Max.<br>Amps. I. C.<br>240 Volts: 50,000 and 42,000<br>480 Volts: 35,000 and 30,000<br>600 Volts: 25,000 and 22,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 50,000 and 42,000<br>480 Volts: 35,000 and 30,000<br>600 Volts: 25,000 and 22,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts: 150,000 and 125,000<br>480 Volts: 115,000 and 100,000<br>600 Volts: 115,000 and 100,000 |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

#### Dc Ratings<sup>①</sup>

|                                |                                             |                                                          |                                                          |                                                            |
|--------------------------------|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------|
| 250 Volts<br>10,000 Amps I. C. | 250 Volts<br>20,000 Amps I. C. <sup>③</sup> | 250 Volts <sup>⑥</sup><br>20,000 Amps I. C. <sup>③</sup> | 250 Volts <sup>⑤</sup><br>20,000 Amps I. C. <sup>③</sup> | 250 Volts <sup>⑤</sup><br>75,000 Amps I. C. <sup>③ ④</sup> |
|--------------------------------|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------|

Accessories and Modifications See Pages 43-51 for Description and Underwriters Laboratories, Inc. Status.

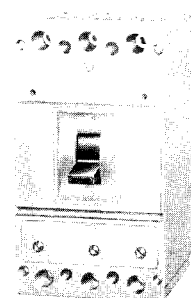
|                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                      |                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Ground Current Limiter<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Moisture-Fungus Treatment<br>Motor Operator<br>Enclosure Handle Mech. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ① Underwriters' Laboratories, Inc. listed  
② 2-pole unit supplied in 3-pole frame.  
③ Ratings above 10,000 amps not UL Listed.  
④ Based on NEMA test procedures.  
⑤ Dc rating applies only to magnetic only breakers.  
⑥ For ratings 700 amps and up, Dc Rating applies only to magnetic only breakers.



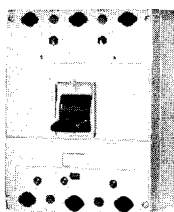
# Replacement Breaker Selection Guide

## MARK 75® HKA



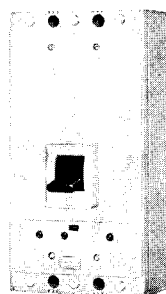
2, 3 Poles<sup>②</sup>  
70-225 Amps  
@40°C

## MARK 75® HLA 400



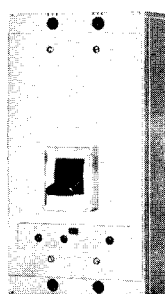
2, 3 Poles<sup>②</sup>  
125-400 Amps  
@40°C

## MARK 75® HMA



2, 3 Poles<sup>②</sup>  
125-800 Amps  
@40°C

## MARK 75® HNB



2, 3 Poles<sup>②</sup>  
700-1200 Amps  
@40°C

### Dimensions, Inches, 3 Pole Breakers

| H      | W     | D      | H      | W     | D      | H  | W     | D      | H  | W     | D     |
|--------|-------|--------|--------|-------|--------|----|-------|--------|----|-------|-------|
| 10 1/8 | 5 1/2 | 4 1/16 | 10 1/8 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 4 1/16 | 16 | 8 1/4 | 5 1/2 |

Ac Rating I. C. Ratings Shown 65,000 are Symmetrical<sup>①</sup>; Ratings Shown 75,000 are Asymmetrical

|                                                                                                                                       |                                                                                                                                       |                                                                                                                                       |                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 | 600 Volts Max.<br>Amps I. C.<br>240 Volts:<br>75,000 and 65,000<br>480 Volts:<br>40,000 and 35,000<br>600 Volts:<br>30,000 and 25,000 |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|

### Dc Ratings<sup>①</sup>

|                                             |                                             |                                                          |                                                          |
|---------------------------------------------|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| 250 Volts<br>20,000 Amps I. C. <sup>③</sup> | 250 Volts<br>20,000 Amps I. C. <sup>③</sup> | 250 Volts <sup>④</sup><br>20,000 Amps I. C. <sup>③</sup> | 250 Volts <sup>④</sup><br>20,000 Amps I. C. <sup>③</sup> |
|---------------------------------------------|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|

Accessories and Modifications. See Page 43-51 for Description and Underwriters' Laboratories, Inc. Status

|                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                |                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Ground Current Limiter<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Parallel Connections<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices | Shunt Trip<br>Undervoltage Trip<br>Auxiliary Switch<br>Alarm Switch<br>Mechanical Interlock<br>Center Studs<br>Rear Connecting Studs<br>Moisture-Fungus<br>Treatment<br>Motor Operator<br>Enclosure Handle Mech.<br>Handle Lock Devices |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ① Underwriters' Laboratories, Inc. listed.  
② 2-pole unit supplied in 3-pole frame.  
③ Ratings above 10,000 amps not U.L. Listed.  
④ For ratings above 600 amps, Dc rating applies only to magnetic only breakers.



October, 1975  
Supersedes Price List 29-120  
pages 9-10, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

## AB DE-ION® Circuit Breakers

### Guide to Quicklag® Circuit Breaker Catalog Numbering System

#### Old System

| Catalog Number: QNP LA                                                                                                                                                                                                                                                                                         |                                                 | 1                                     | 070                                                                       | B                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------|------------------------------------------|
| Base                                                                                                                                                                                                                                                                                                           | Variations                                      | No. of Poles                          | Amp Rating                                                                | Modifications                            |
| QNP: Type P, 5,000 Amps. I.C.<br>HQNP: Type P, 10,000 Amps. I.C.<br>QHP: Type P, 65,000 Amps. I.C.<br>QNB: Type B, 5,000 Amps. I.C.Ⓢ<br>HQNB: Type B, 10,000 Amps. I.C.Ⓢ<br>QHB: Type B, 65,000 Amps. I.C.Ⓢ<br>QC: Type C, 5000 Amps. I.C.<br>HQC: Type C, 10,000 Amps. I.C.<br>QHC: Type C, 65,000 Amps. I.C. | L: 120/240 Volts<br>A: Above 50 Amp.<br>V: 50°C | 1: 1 Pole<br>2: 2 Poles<br>3: 3 Poles | 015 = 15 Amp.<br>025 = 25 Amp.<br>070 = 70 Amp.<br>100 = 100 Amp.<br>Etc. | B: 2 Pole Sw. Neutral<br>B: 3 Pole Delta |

#### New System

| Catalog Number: HQP 1                                                                                                                                                                                                                                                     |                                       | 070                                                                           | V                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Base                                                                                                                                                                                                                                                                      | No. of Poles                          | Amp. Rating                                                                   | Modifications                                                               |
| QP: Type P, 5,000 Amps. I.C.<br>HQP: Type P, 10,000 Amps. I.C.<br>QPH: Type P, 22,000 Amps. I.C.<br>QB: Type B, 5,000 Amps. I.C.Ⓢ<br>HQB: Type B, 10,000 Amps. I.C.Ⓢ<br>QBH: Type B, 22,000 Amps. I.C.<br>QC: Type C, 10,000 Amps. I.C.<br>QCH: Type C, 22,000 Amps. I.C. | 1: 1 Pole<br>2: 2 Poles<br>3: 3 Poles | 015 : 15 Amps.<br>025 : 25 Amps.<br>070 : 70 Amps.<br>100 : 100 Amps.<br>Etc. | B: 2 Pole Sw. Neutral<br>B: 3 Pole Delta<br>H: 240 Volt (2 Pole)<br>V: 50°C |

### Guide to Breaker Catalog Numbering System (For Breakers other than Quicklag and SELTRONIC™)

| Catalog Number: EB 3                             |                                                     | 030                                                                                                                                                                        | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Breaker Type                                     | No. of Poles                                        | Trip Amp Rating                                                                                                                                                            | Modifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| BA<br>CA<br>DA<br>EB<br>EHB<br>FB<br>HFB<br>etc. | 1: 1 Pole<br>2: 2 Poles<br>3: 3 Poles<br>4: 4 Poles | Thermal Magnetic<br>030: 30 Amps.<br>100: 100 Amps.<br>1200: 1200 Amps.<br>etc.<br><br>Magnetic Only<br>Use High Setting<br>022<br>045<br>110<br>190<br>270<br>480<br>etc. | A: Ambient Comp<br>B: 277 Volts (BA only)<br>C: Switching Neutral or Delta Breakers (BA only)<br>F: Frame Only<br>H: 240 Volt (BA 2, 3 Pole only)<br>L: Line and Load Lugs (EB, EHB, FB, HFB, FB, TRI-PAC®)<br>M: Magnetic Only<br>N: Molded Case Switch (Non-auto)<br>P: TRI-PAC<br>R: Used with P to indicate redesigned TRI-PAC (Types LA and PB)<br>R: Used with FB magnetic only breakers and Type LFB current Limiters for FB breakers to indicate rejection feature.<br>S: SAF-T-VUE®<br>T: Trip Unit<br>V: 50°C Calibration<br>W: Without Terminals<br>X: Load Terminals Only (except FB line listed under L above)<br>Y: Line Terminals Only<br>Z: Al/Cu Terminals |

Note: Above information is for identification of Catalog Number only. Do not use to construct catalog numbers not listed in this catalog.

Ⓢ Replaced by Types BA or HBA.



### SELTRONIC™ Breaker Catalog Number System

| Catalog Number: <b>MC 3 800 F</b> |              |                      |                                                                          |
|-----------------------------------|--------------|----------------------|--------------------------------------------------------------------------|
| Frame Type                        | No. of Poles | Max. Frame Rating    | Indicates Frame Only Without Rating Plug or Terminals                    |
| LC                                | 2 – 2 Pole   | 800-800 Amps.        | NW<br>Indicates Non Auto with dummy trip or straps and without terminals |
| MC                                | 3 – 3 Pole   | 1200-1200 Amps. Etc. |                                                                          |
| NC                                |              |                      |                                                                          |
| PC                                |              |                      |                                                                          |
| PCF                               |              |                      |                                                                          |
| PCC                               |              |                      |                                                                          |
| PCCF                              |              |                      |                                                                          |
| HLC                               |              |                      |                                                                          |
| HMC                               |              |                      |                                                                          |
| HNC                               |              |                      |                                                                          |
| MCG                               |              |                      |                                                                          |
| HMCG                              |              |                      |                                                                          |
| NCG                               |              |                      |                                                                          |
| HNCG                              |              |                      |                                                                          |
| PCG                               |              |                      |                                                                          |
| PCFG                              |              |                      |                                                                          |
| PCCG                              |              |                      |                                                                          |
| PCCFG                             |              |                      |                                                                          |

### SELTRONIC™ Rating Plug Catalog Numbering System

| Catalog Number: <b>A 25 PC 2500</b>        |                          |                    |                                   |
|--------------------------------------------|--------------------------|--------------------|-----------------------------------|
| Adjustable Plug                            | Max. Frame Rating (Amps) | Breaker Frame Type | Rating Plug Continuous Amp Rating |
| Omit for standard plugs or for G.F. plugs. | 1 – 150                  | LC                 | 75 – 75 Amp.                      |
|                                            | 3 – 300                  | MC (HMC)           | 100 – 100 Amp.                    |
|                                            | 6 – 600                  | NC (HNC)           | 600 – 600 Amp.                    |
|                                            | 8 – 800                  | PC (PCC)           | 3000 – 3000 Amp.                  |
|                                            | 12 – 1200                | MCG (HMCG)         | Etc.                              |
|                                            | 20 – 2000                | NCG (HNCG)         |                                   |
|                                            | 25 – 2500                | PCG (PCCG)         |                                   |
|                                            | 30 – 3000                |                    |                                   |

**Note:** Above information is for identification of Catalog Number only. Do not use to construct Catalog numbers not listed in this catalog.

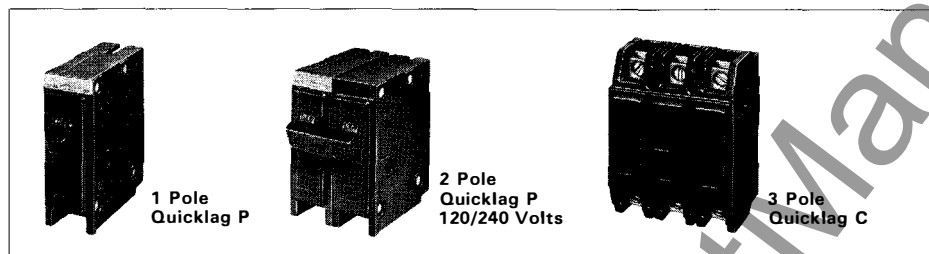


January, 1976  
Supersedes Tech. Data 29-120 T WE A  
pages 11-12, dated October, 1975  
Mailed to: E, D, C/1901, 1903, 1928/PL  
E, D/2430

Quicklag® Types P, C 100 Amperes  
MARK 75® Types HP, HC 15-30 Amperes

## AB DE-ION® Circuit Breakers

### Quicklag Type P, C and MARK 75 Type HP, HC Breakers 5-125 Amperes, 120/240 Volts Ac, 1, 2 and 3-Poles, 10,000 Ampere I. C.



Quicklag Type P and C breakers meet requirements of Federal Specification W-C-375a as follows. Mark 75 Type HP and HC breakers are not defined in Federal Specification W-C-375a.

#### Standard Breakers

1, 2 Poles, 120/240 Volts Ac, Max.: Class 1a  
1 Pole, 120 Volts Ac Max.: Class 2b  
2, 3 Poles, 240 Volts Ac, Max.: Class 1b, 2c

#### Underwriters' Laboratories, Inc. Listed Interrupting Ratings:

Types P, C: 10,000 Amperes (Asym. or Sym.)  
MARK 75 Types HP, HC: 75,000 Amps.  
Asym., 65,000 Amps. Sym.

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

**Note:** All two and three pole breakers are of the common trip type.

**List Prices:** See Price List 29-020 P WE A

#### Selection Data Thermal Magnetic Breakers

| Continuous<br>Ampere<br>Rating<br>@40°C | Catalog Numbers          |         |                          |         |                       |                      |
|-----------------------------------------|--------------------------|---------|--------------------------|---------|-----------------------|----------------------|
|                                         | 1 Pole③                  |         | 2 Pole④                  |         | 3 Pole⑤               |                      |
|                                         | 120/240<br>Volts Ac Max. |         | 120/240<br>Volts Ac Max. |         | 240 Volts<br>Ac, Max. | 240 Volts<br>Ac Max. |
|                                         | Standard                 | MARK 75 | Standard                 | MARK 75 | Standard              | Standard MARK 75     |

#### Quicklag P, HP Plug-in Breakers (Discount Symbol CB-1)

|     |          |          |          |          |           |           |         |
|-----|----------|----------|----------|----------|-----------|-----------|---------|
| 5②⑥ | QNPL1005 | .....    | QNPL2005 | .....    | HQNP2010② | HQNP3010② | .....   |
| 10  | HQP1010  | .....    | HQP2010  | .....    | HQNP2015  | HQNP3015  | .....   |
| 15  | HQP1015  | QHPL1015 | HQP2015  | QHPL2015 | HQNP2015  | HQNP3015  | QHP3015 |
| 20  | HQP1020  | QHPL1020 | HQP2020  | QHPL2020 | HQNP2020  | HQNP3020  | QHP3020 |
| 25  | HQP1025  | .....    | HQP2025  | .....    | HQNP2025  | HQNP3025  | .....   |
| 30  | HQP1030  | QHPL1030 | HQP2030  | QHPL2030 | HQNP2030  | HQNP3030  | .....   |
| 35  | HQP1035  | .....    | HQP2035  | .....    | HQNP2035  | HQNP3035  | .....   |
| 40  | HQP1040  | .....    | HQP2040  | .....    | HQNP2040  | HQNP3040  | .....   |
| 50  | HQP1050  | .....    | HQP2050  | .....    | HQNP2050  | HQNP3050  | .....   |
| 55  | HQP1055  | .....    | HQP2055  | .....    | .....     | .....     | .....   |
| 60  | HQP1060  | .....    | HQP2060  | .....    | .....     | HQNP3060  | .....   |
| 70  | HQP1070  | .....    | HQP2070  | .....    | .....     | HQNP3070  | .....   |
| 90  | .....    | .....    | HQP2090  | .....    | .....     | HQNP3090  | .....   |
| 100 | .....    | .....    | HQP2100  | .....    | .....     | HQNP3100  | .....   |
| 125 | .....    | .....    | HQP2125  | .....    | .....     | .....     | .....   |

#### Quicklag C, HC Bolt-on Breakers (Discount Symbol CB-2)⑥

|     |         |          |          |          |          |          |         |
|-----|---------|----------|----------|----------|----------|----------|---------|
| 5②⑥ | QCL1005 | .....    | QCL2005⑥ | .....    | .....    | .....    | .....   |
| 10  | QC1010⑥ | .....    | QC2010   | .....    | HQC2010② | HQC3010② | .....   |
| 15  | QC1015⑥ | QHCL1015 | QC2015   | QHCL2015 | HQC2015  | HQC3015  | QHC3015 |
| 20  | QC1020⑥ | QHCL1020 | QC2020   | QHCL2020 | HQC2020  | HQC3020  | QHC3020 |
| 25  | QC1025⑥ | .....    | QC2025   | .....    | HQC2025  | HQC3025  | .....   |
| 30  | QC1030⑥ | QHCL1030 | QC2030   | QHCL2030 | HQC2030  | HQC3030  | .....   |
| 35  | QC1035⑥ | .....    | QC2035   | .....    | HQC2035  | HQC3035  | .....   |
| 40  | QC1040⑥ | .....    | QC2040   | .....    | HQC2040  | HQC3040  | .....   |
| 50  | QC1050⑥ | .....    | QC2050   | .....    | HQC2050  | HQC3050  | .....   |
| 55  | QC1055⑥ | .....    | QC2055   | .....    | .....    | .....    | .....   |
| 60  | QC1060⑥ | .....    | QC2060   | .....    | .....    | HQCA3060 | .....   |
| 70  | QC1070⑥ | .....    | QC2070   | .....    | .....    | HQCA3070 | .....   |
| 90  | .....   | .....    | QC2090   | .....    | .....    | HQCA3090 | .....   |
| 100 | .....   | .....    | QC2100   | .....    | .....    | HQCA3100 | .....   |

- ② Not listed with Underwriters' Laboratories, Inc.  
③ Packaged: 24 in single carton, 144 in master; approx.  
ship wt.: 7 lbs. and 46 lbs. respectively.  
④ Packaged: 12 in single carton, 72 in master; approx.  
ship wt.: 9 lbs. and 58 lbs. respectively.  
⑤ Packaged: 8 in single carton, 48 in master; approx.  
ship wt.: 9 lbs. and 58 lbs. respectively.  
⑥ Have reduced interrupting rating; refer to Westing-  
house.  
⑦ Changed since previous issue.



## Quicklag® Type P, C and MARK 75® Type HP, HC, Continued

### Special Quicklag Type P and C Breakers

See Application Data 29-160 or DB 29-150 for description and application.

| Continuous<br>Ampere<br>Rating | Catalog/Style Numbers<br>Quicklag P<br>CB-1 Disc. | Quicklag C<br>C2B- Disc. |
|--------------------------------|---------------------------------------------------|--------------------------|
|--------------------------------|---------------------------------------------------|--------------------------|

#### Switching Neutral Breakers

|    |             |            |
|----|-------------|------------|
| 10 | HQNPL2010B② | HQCL2010B② |
| 15 | HQNPL2015B  | HQCL2015B  |
| 20 | HQNPL2020B  | HQCL2020B  |

#### Delta Breakers

|    |             |            |
|----|-------------|------------|
| 10 | HQNPL3010B② | HQCL3010B② |
| 15 | HQNPL3015B  | HQCL3015B  |
| 20 | HQNPL3020B  | HQCL3020B  |

#### Tungsten Lamp Load Breakers (1 Pole)

|    |            |            |
|----|------------|------------|
| 15 | 2606D61G16 | 2606D71G16 |
| 20 | 2606D61G17 | 2606D71G17 |

### Shock Tested Quicklag C Breakers, 10,000 Amperes I.C.

Available in all standard rating Quicklag C 1, 2 and 3 pole breakers. Order "similar to" and add 30% to price of standard breaker.

### Molded Case Switches

#### Non-Auto Quicklag C Breakers

| No. of<br>Poles | Ampere<br>Rating | Max. Ac<br>Volts | Style<br>Number |
|-----------------|------------------|------------------|-----------------|
| 1               | 50               | 120/240          | QC1050N         |
| 1               | 100              | 120/240          | QC1100N         |
| 2               | 50               | 240              | QC2050N         |
| 2               | 100              | 240              | QC2100N         |
| 3               | 50               | 240              | QC3050N         |
| 3               | 100              | 240              | QC3100N         |

### Panelboard Accessories

| Description                   | Style Number |
|-------------------------------|--------------|
| Number Tabs, 1-42, Gum-Backed | 622B630H01   |
| ON Button, Black on White     | K-72641      |
| OFF Button, Black on White    | K-72642      |
| Branch Breaker Connector Tube | K-82217      |

### Breaker Accessories② (See DB 29-150 for description.)

| Description                                        | Style Number              |
|----------------------------------------------------|---------------------------|
| Dummy Breakers                                     |                           |
| Quicklag P, HP                                     | 2600D71G09                |
| Quicklag C, HC                                     | 2604D91G15                |
| Moisture-Fungus Treatment                          |                           |
| 1 Pole                                             | .....                     |
| 2 Pole                                             | .....                     |
| 3 Pole                                             | .....                     |
| Standard Handle Tie (MARK 75® Breakers Only)       | 1720 375                  |
| California Handle Tie (1 Pole Breakers only)       | 133A633G01                |
| Lock Dog (Non-Padlockable)                         |                           |
| All 1 and 3 Pole Breakers, 2 Pole                  |                           |
| Type HC, HP and 2 Pole, 240 Volt,                  |                           |
| Type P, C                                          | 1256C42G02                |
| Types C, P, 2 Pole, 120/240 Volt                   | 1256C42G01                |
| Padlock Device (Non-Removable per California Code) |                           |
| 1, 2, 3 Pole Quicklag P, HP                        | 1256C41G01                |
| 1, 2, 3 Pole Quicklag C, HC                        | 750B211G01                |
| Padlock Device (Removable)                         |                           |
| All 1, 3 Pole Quicklag Breakers                    | 208B831G02                |
| Face Mounting Plate                                |                           |
| 1 Pole (Clip Style) Type HC                        | 1614256                   |
| 2 Pole (Face Plate) Type HC                        | 313C083G01                |
| 1 Pole Type QC                                     | 1258C07G01                |
| 2 Pole Type QC                                     | 1258C07G02                |
| Front Mounting Insert (Quicklag C, HC)             |                           |
| 2 Pole (240 volt breakers only)                    | Must Be Factory Installed |
| 3 Pole                                             |                           |
| Base Mounting Clamp (Quicklag C, HC - 2 required)  | K82216                    |
| Base Mounting Plate (Quicklag C, HC - 6 poles)     | 207B513G01                |

### Special Calibration②

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See Application Data 29-160 for information regarding special conditions.

| Type of Calibration  | List Price Addition                       |
|----------------------|-------------------------------------------|
| 1-49 Identical Units | 50 or More Identical Units                |
| Thermal              | Add 20% to List Price of Complete Breaker |
| Magnetic             | None                                      |
| Frequency            | None                                      |

List Prices: See Price List 29-020 P WE A

### Special Breakers

**Switching Neutral:** For application in accordance with N. E. C. 514-5,240-12 and 380-1. Availability: 2 poles 120 Volts Ac Max., 10,000 amps I. C.



**Delta:** For application on 3 phase, 4 wire delta systems where a combination of 1 phase and 3 phase circuits are required. Availability: 3 poles, 120/240 Volts Ac Max., 10,000 amps I. C.



**Tungsten Lampload:** For application on circuits feeding tungsten lamps having abnormally high inrush currents and rated in the vicinity of 1000 watts. Magnetic trip is set approximately 20 times thermal rating to override inrush. Availability: 1 Pole, 120/240 Volts Ac Max., 10,000 amps I. C.

### Terminals

Terminals are Underwriters' Laboratories, Inc. listed as suitable for the wire type and size listed below. When used with aluminum conductors, use joint compound.

**Types P, HP:** Terminals on load side only; line terminals are plug-in female clamps which clip on bus stab.

**Types C, HC:** Terminals on line and load ends.

| Breaker<br>Amps                                   | Terminal<br>Type | Wire Range<br>and Type |
|---------------------------------------------------|------------------|------------------------|
| <b>All 5 Amp, MARK 75 and 240 Volt, 2, 3 Pole</b> |                  |                        |
| 5-30                                              | Binding Screw    | #14-#8 Cu              |
| 35-70                                             | Pressure Type    | #14-#2 Cu/Al           |
| 90-100                                            | Pressure Type    | #4-#1 Cu/Al            |
| <b>Type P 120/240 Volt, 1, 2 Pole</b>             |                  |                        |
| 10-30                                             | Pressure Type    | #14-#8 Cu/Al           |
| 35-50                                             | Pressure Type    | #14-#4 Cu/Al           |
| 55-125                                            | Pressure Type    | #8-1/o Cu/Al           |
| <b>Type C 120/240 Volt 1, 2 Pole</b>              |                  |                        |
| 10-20                                             | Binding Screw    | #14-#10                |
| 30                                                | Pressure Type    | #14-#8                 |
| 35-50                                             | Pressure Type    | #14-#4                 |
| 55-70                                             | Pressure Type    | #8-#2                  |
| 90-100                                            | Pressure Type    | #6-#1                  |

② Not Underwriters' Laboratories, Inc. listed.



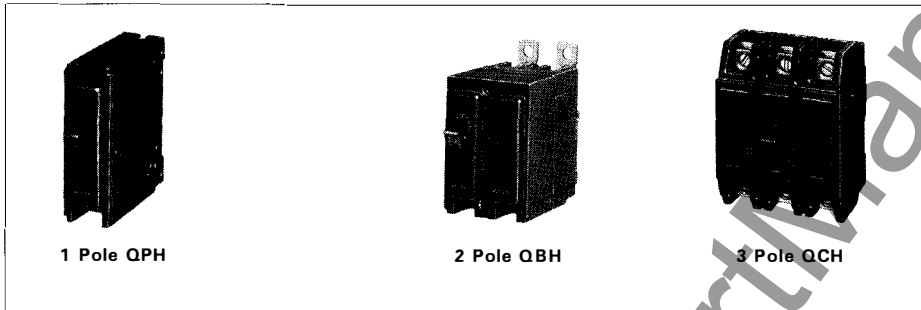
October, 1975  
Supersedes Price List 29-120,  
Pages 13-14, all previous issue.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Quicklag® Type QPH, QBH, QCH,  
100 Amperes  
Quicklag Ground Fault Breakers,  
Type P and C, 15-30 Amperes

## AB DE-ION® Circuit Breakers

### Type QPH, QBH, and QCH Quicklag Breakers

15-100 Amperes, 120/240, 240 Volts Ac, 1, 2 and 3-Poles, 22,000 Ampere I.C.



These breakers are not defined in Federal  
Specification W-C-375a.

Underwriters' Laboratories, Inc. Listed  
Interrupting Ratings:  
22,000 Sym., 25,000 Asym.

Listed with Underwriters' Laboratories,  
Inc. except as noted.

On all 3 phase Delta, Ground B phase applica-  
tions, refer to Westinghouse.

#### Terminals

Terminals are Underwriters' Laboratories, Inc.  
listed as suitable for the wire type and size  
listed below. When used with aluminum con-  
ductors, use joint compound.

**QPH:** Terminals on load side only; line ter-  
minals are plug-in female clamps which clip  
on bus stab.

**QBH:** Terminals on load side only; line ter-  
minals are extended tang which bolts directly  
to bus.

**QCH:** Terminals on line and load ends; line  
terminal screws are packaged separately.

| Continuous<br>Amps, @<br>40°C | Catalog Numbers                               |                                               |                    |                                           |
|-------------------------------|-----------------------------------------------|-----------------------------------------------|--------------------|-------------------------------------------|
|                               | 1 Pole <sup>③</sup><br>120/240 Volts Ac, Max. | 2 Pole <sup>④</sup><br>120/240 Volts Ac, Max. | 240 Volts Ac, Max. | 3 Pole <sup>⑤</sup><br>240 Volts Ac, Max. |

#### Quicklag QPH Plug-in Breakers (Discount Symbol CB-1)

|     |         |         |          |         |
|-----|---------|---------|----------|---------|
| 15  | QPH1015 | QPH2015 | QPH2015H | QPH3015 |
| 20  | QPH1020 | QPH2020 | QPH2020H | QPH3020 |
| 25  | QPH1025 | QPH2025 | QPH2025H | QPH3025 |
| 30  | QPH1030 | QPH2030 | QPH2030H | QPH3030 |
| 35  | QPH1035 | QPH2035 | QPH2035H | QPH3035 |
| 40  | QPH1040 | QPH2040 | QPH2040H | QPH3040 |
| 50  | QPH1050 | QPH2050 | QPH2050H | QPH3050 |
| 55  | QPH1055 | QPH2055 | .....    | .....   |
| 60  | QPH1060 | QPH2060 | .....    | QPH3060 |
| 70  | QPH1070 | QPH2070 | .....    | QPH3070 |
| 90  | .....   | QPH2090 | .....    | QPH3090 |
| 100 | .....   | QPH2100 | .....    | QPH3100 |

#### Quicklag QBH Bolt-on Breakers (Discount Symbol CB-2)

|     |         |         |          |         |
|-----|---------|---------|----------|---------|
| 15  | QBH1015 | QBH2015 | QBH2015H | QBH3015 |
| 20  | QBH1020 | QBH2020 | QBH2020H | QBH3020 |
| 25  | QBH1025 | QBH2025 | QBH2025H | QBH3025 |
| 30  | QBH1030 | QBH2030 | QBH2030H | QBH3030 |
| 35  | QBH1035 | QBH2035 | QBH2035H | QBH3035 |
| 40  | QBH1040 | QBH2040 | QBH2040H | QBH3040 |
| 50  | QBH1050 | QBH2050 | QBH2050H | QBH3050 |
| 55  | QBH1055 | QBH2055 | .....    | .....   |
| 60  | QBH1060 | QBH2060 | .....    | QBH3060 |
| 70  | QBH1070 | QBH2070 | .....    | QBH3070 |
| 90  | .....   | QBH2090 | .....    | QBH3090 |
| 100 | .....   | QBH2100 | .....    | QBH3100 |

#### Quicklag QCH Bolt-on Breakers (Discount Symbol CB-2)

|     |         |         |          |         |
|-----|---------|---------|----------|---------|
| 15  | QCH1015 | QCH2015 | QCH2015H | QCH3015 |
| 20  | QCH1020 | QCH2020 | QCH2020H | QCH3020 |
| 25  | QCH1025 | QCH2025 | QCH2025H | QCH3025 |
| 30  | QCH1030 | QCH2030 | QCH2030H | QCH3030 |
| 35  | QCH1035 | QCH2035 | QCH2035H | QCH3035 |
| 40  | QCH1040 | QCH2040 | QCH2040H | QCH3040 |
| 50  | QCH1050 | QCH2050 | QCH2050H | QCH3050 |
| 55  | QCH1055 | QCH2055 | .....    | .....   |
| 60  | QCH1060 | QCH2060 | .....    | QCH3060 |
| 70  | QCH1070 | QCH2070 | .....    | QCH3070 |
| 90  | .....   | QCH2090 | .....    | QCH3090 |
| 100 | .....   | QCH2100 | .....    | QCH3100 |

| Breaker<br>Amps | Terminal Type | Wire Range<br>and Type |
|-----------------|---------------|------------------------|
| 5-30            | Binding Screw | #14-#8 Cu              |
| 35-70           | Pressure Type | #14-#2 Cu/Al           |
| 90-100          | Pressure Type | #4-#1 Cu/Al            |

**Note:** All two and three pole breakers are of  
the common trip type.

**For Special Calibrations and Accessories,  
see Page 14.**

**List Prices:** See Price List 29-020 P WE A.

- ② Not listed with Underwriters' Laboratories, Inc.  
③ Packaged: 24 in single carton, 144 in master; approx.  
ship wt.: 7 lbs. and 46 lbs. respectively.  
④ Packaged: 12 in single carton, 72 in master; approx.  
ship wt.: 9 lbs. and 58 lbs. respectively.  
⑤ Packaged: 8 in single carton, 48 in master; approx.  
ship wt.: 9 lbs and 58 lbs. respectively.



### Type QPH, QBH, QCH Quicklag Breakers, Continued

#### Special Calibration

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See Application Data 29-160 for information regarding special conditions.

| Type of Calibration | List Price Addition (CB-2 Disc.)          |                            |
|---------------------|-------------------------------------------|----------------------------|
|                     | 1-49 Identical Units                      | 50 or More Identical Units |
| Thermal             | Add 20% to List Price of Complete Breaker | None                       |
| Magnetic            |                                           | None                       |
| Frequency           |                                           | None                       |

#### Breaker Accessories (See DB 29-150 for description.)

| Description                                  | Style Number              |
|----------------------------------------------|---------------------------|
| Dummy Breakers                               |                           |
| QPH                                          | 2600D71G09                |
| QBH                                          | 2600D81G09                |
| QCH                                          | 2604D91G15                |
| Moisture-Fungus Treatment                    |                           |
| 1 Pole                                       | .....                     |
| 2 Pole                                       | .....                     |
| 3 Pole                                       | .....                     |
| Handle Tie                                   |                           |
| California                                   | 133A633G01                |
| Lockdog (Non-Padlockable)                    | 1256C42G02                |
| Padlock Attachment (Removable)               | 208B831G02                |
| Padlock Device (Non-Removable per Cal. Code) |                           |
| 1, 2, 3 Pole Breakers (QPH, QBH)             | 1256C41G01                |
| 1, 2, 3 Pole Breakers (QCH)                  | 750B211G01                |
| Face Mounting Plate (QCH)                    |                           |
| 1 Pole (Clip Style)                          | 1614 256                  |
| 2 Pole (Face Plate)                          | 313C083G01                |
| Front Mounting Insert (QCH)                  |                           |
| 2 Pole                                       | Must Be Factory Installed |
| 3 Pole                                       | K82216                    |
| Base Mounting Clamp (QCH - 2 required)       | 207B513G01                |
| Base Mounting Plate (QCH - 6 Poles)          |                           |

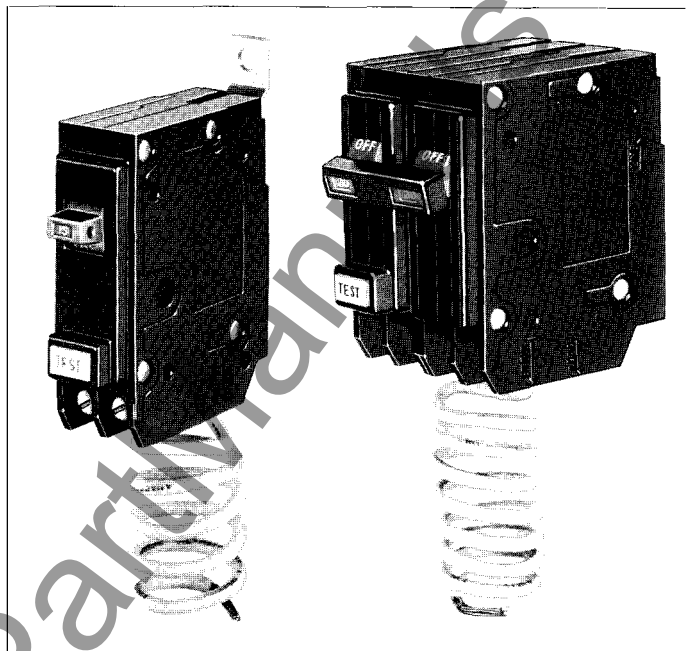
#### Panelboard Accessories

| Description                   | Style Number |
|-------------------------------|--------------|
| Number Tabs, 1-42, Gum-Backed | 622B630H01   |
| ON Button, Black on White     | K-72641      |
| OFF Button, Black on White    | K-72642      |
| Branch Breaker Connector Tube | K-82217      |

List Prices: See Price List 29-020 P WE A.

### Quicklag Ground Fault Circuit Breakers,

Types P and B, 15-30 Amperes, 120 Volts Ac, 1 Pole;  
15-30 Amperes, 120/240 Volts Ac, 2 Poles



**Sensitivity:** 5 Milliamps or greater.

Westinghouse Quicklag Ground Fault circuit breakers are UL listed as Class A, Group 1, ground fault circuit interrupters.

Quicklag Ground Fault circuit breakers are 1 or 2 pole, thermal magnetic circuit breakers, which incorporate a solid state ground fault sensing circuit to detect ground fault current. Available as plug-in (Type P) or bolt-on (Type B) design, they are interchangeable in load centers and panelboards with standard Westinghouse Type P plug-in, and Type B bolt-on Quicklag circuit breakers.

Quicklag Ground Fault circuit breakers are normally used in load-centers or panelboards to protect small branch circuits in residential, commercial or industrial applications. They function to protect humans from ground faults of 5 milliamperes or greater, as well as normal circuit protection providing inverse time overload and instantaneous short circuit protection.

Typical applications include protection against ground fault hazards in circuits near swimming pools and outdoor receptacles for which the NEC requires protection of human life against ground faults. (Reference NEC articles 680-31, 680-20, 680-6, 555-3, 210-22, and 210-7.)

| Contin-<br>uous<br>Ampere<br>Rating               | Catalog Numbers   |                   | Catalog Numbers        |                   |
|---------------------------------------------------|-------------------|-------------------|------------------------|-------------------|
|                                                   | 1 Pole, 120 Volts |                   | 2 Poles, 120/240 Volts |                   |
|                                                   | Type P<br>Plug-in | Type B<br>Bolt-on | Type P<br>Plug-in      | Type B<br>Bolt-on |
| <b>10,000 Amperes I.C. (Discount Symbol CB-3)</b> |                   |                   |                        |                   |
| 15                                                | QPGF1015          | QBGF1015          | QPGF2015               | QBGF2015          |
| 20                                                | QPGF1020          | QBGF1020          | QPGF2020               | QBGF2020          |
| 25                                                | QPGF1025          | QBGF1025          | QPGF2025               | QBGF2025          |
| 30                                                | QPGF1030          | QBGF1030          | QPGF2030               | QBGF2030          |
| <b>22,000 Amperes I.C. (Discount Symbol CB-3)</b> |                   |                   |                        |                   |
| 15                                                | QPHGF1015         | QBHGF1015         | .....                  | .....             |
| 20                                                | QPHGF1020         | QBHGF1020         | .....                  | .....             |
| 25                                                | QPHGF1025         | QBHGF1025         | .....                  | .....             |
| 30                                                | QPHGF1030         | QBHGF1030         | .....                  | .....             |



October, 1975  
Supersedes Price List 29-120,  
pages 15-16, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type CA and CAH 225 Amperes,  
Type DA 400 Amperes,  
Type BA 125 Amperes  
MARK 75® Type HBA 30 Amperes

## AB DE-ION® Circuit Breakers

### Type CA and CAH Breakers

125-225 Amperes, 240 Volts Ac, 2 and 3 Poles, Fixed Trip, Thermal Magnetic Breakers

| Continuous<br>Ampere<br>Rating @ 40°C       | Breakers With Line Terminals Only |                                 | Breakers With Line and Load Terminals |                             |
|---------------------------------------------|-----------------------------------|---------------------------------|---------------------------------------|-----------------------------|
|                                             | Catalog Numbers                   |                                 | Catalog Numbers                       |                             |
|                                             | 2 Pole                            | 3 Pole                          | 2 Pole                                | 3 Pole                      |
| <b>10,000 Amperes I.C. (Dis. Sym. CB-2)</b> |                                   |                                 |                                       |                             |
| 125                                         | CA2125Y                           | CA3125Y                         | CA2125                                | CA3125                      |
| 150                                         | CA2150Y                           | CA3150Y                         | CA2150                                | CA3150                      |
| 175                                         | CA2175Y                           | CA3175Y                         | CA2175                                | CA3175                      |
| 200                                         | CA2200Y                           | CA3200Y                         | CA2200                                | CA3200                      |
| 225                                         | CA2225Y                           | CA3225Y                         | CA2225                                | CA3225                      |
| 225 MCS                                     | CA2225NY                          | CA3225NY                        | CA2225N                               | CA3225N                     |
| <b>22,000 Amperes I.C. (Dis. Sym. CB-2)</b> |                                   |                                 |                                       |                             |
| 125                                         | CAH2125Y                          | CAH3125Y                        | CAH2125                               | CAH3125                     |
| 150                                         | CAH2150Y                          | CAH3150Y                        | CAH2150                               | CAH3150                     |
| 175                                         | CAH2175Y                          | CAH3175Y                        | CAH2175                               | CAH3175                     |
| 200                                         | CAH2200Y                          | CAH3200Y                        | CAH2200                               | CAH3200                     |
| 225                                         | CAH2225Y                          | CAH3225Y                        | CAH2225                               | CAH3225                     |
|                                             | Approx. Ship. Wt.<br>3 1/4 Lbs.   | Approx. Ship. Wt.<br>4 1/2 Lbs. | Approx. Ship. Wt.<br>3 1/4 Lbs.       | Approx. Ship. Wt.<br>5 Lbs. |

Type CA Breakers are not defined in Federal Specification W-C-375a.

**Underwriters' Laboratories, Inc. Listed Interrupting Rating:** (2-Pole listed for grounded B Phase applications).

| 240 Volts Ac | Amperes                   | Max. Amps. | Catalog Number | Wire Range and Type |
|--------------|---------------------------|------------|----------------|---------------------|
| CA           | 10,000 Asym. and Sym.     | 175        | TA175CA1       | #1-4/0 Al/Cu        |
| CAH          | 25,000 Asym., 22,000 Sym. | 225        | TA225CA1       | 2/0-300 MCM Al/Cu   |

### Type DA Breakers

250-400 Amperes, 240 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip Thermal Magnetic Breakers

| Continuous<br>Ampere<br>Rating @ 40°C | Breakers With Line Terminals Only |                              | Breakers With Line and Load Terminals |                              |
|---------------------------------------|-----------------------------------|------------------------------|---------------------------------------|------------------------------|
|                                       | Catalog Numbers                   |                              | Catalog Numbers                       |                              |
|                                       | 2 Pole                            | 3 Pole                       | 2 Pole                                | 3 Pole                       |
| 250                                   | DA2250Y                           | DA3250Y                      | DA2250                                | DA3250                       |
| 300                                   | DA2300Y                           | DA3300Y                      | DA2300                                | DA3300                       |
| 350                                   | DA2350Y                           | DA3350Y                      | DA2350                                | DA3350                       |
| 400                                   | DA2400Y                           | DA3400Y                      | DA2400                                | DA3400                       |
| 400 MCS                               | DA2400NY                          | DA3400NY                     | DA2400N                               | DA3400N                      |
|                                       | Approx. Ship. Wt.<br>13 Lbs.      | Approx. Ship. Wt.<br>15 Lbs. | Approx. Ship. Wt.<br>13 Lbs.          | Approx. Ship. Wt.<br>15 Lbs. |

Type DA breakers are not defined in Federal Specification W-C-375a.

**Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

- ② 2-pole breakers are supplied in 3-pole frames.  
③ Not UL Listed.

### Terminals

Terminals are Underwriters' Laboratories, Inc. listed for the wire type and size listed below. When used with aluminum conductors, use joint compound.

| Max. Amps. | Catalog Number | Wire Range and Type |
|------------|----------------|---------------------|
| 175        | TA175CA1       | #1-4/0 Al/Cu        |
| 225        | TA225CA1       | 2/0-300 MCM Al/Cu   |

### Terminals

Terminals are Underwriters' Laboratories, Inc. listed for the wire type and size listed below. When used with aluminum conductors, use joint compound. To order breaker with optional aluminum body terminals, add suffix Z to the breaker catalog number.

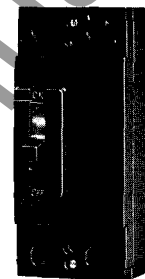
| Max. Amps. | Catalog Number | Wire Range, Type No. of Cables |
|------------|----------------|--------------------------------|
| 350        | T350DA         | 1 250-500 MCM Cu               |
| 400        | T400DA2        | 2 3/0-250 MCM Cu               |

### Standard Terminals (for Copper cable)

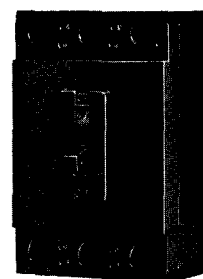
|     |         |                  |
|-----|---------|------------------|
| 350 | T350DA  | 1 250-500 MCM Cu |
| 400 | T400DA2 | 2 3/0-250 MCM Cu |

### Alternate Aluminum Body Terminals

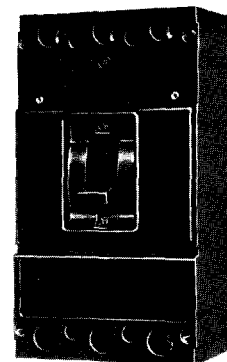
|     |          |                     |
|-----|----------|---------------------|
| 350 | TA350DA  | 1 250-500 MCM Al/Cu |
| 400 | TA400DA1 | 2 3/0-250 MCM Al/Cu |



Type CA 2 Pole



Type CA 3 Pole



Type DA 3 Pole

Listed with Underwriters' Laboratories, Inc.

**List Prices:** See Price List 29-020 P WE A.  
**Accessories and Modifications**  
Description: Pages 43-52

### Special Calibrations®

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See Application Data 29-160 for information regarding special conditions. Maximum 400 Hz calibration: Type CA, 160 amps; Type DA, 300 amps.

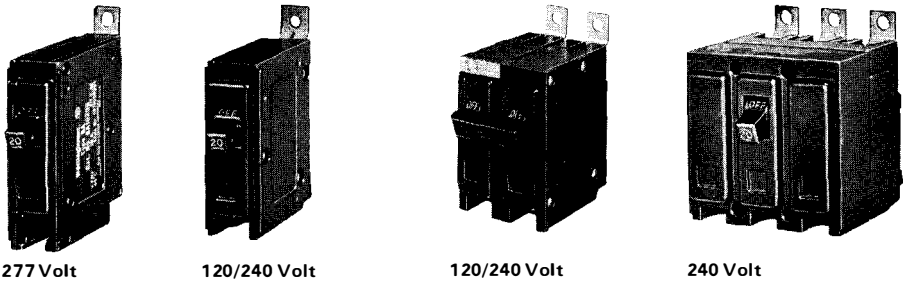
| Type of Calibration | 1-24 Identical Units                      | 25 or More Identical Units |
|---------------------|-------------------------------------------|----------------------------|
| Thermal             | Add 10% of List Price of Complete Breaker | None                       |
| Magnetic            |                                           | None                       |
| Frequency           |                                           | None                       |

### 50°C Calibration®

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



Type B A and MARK 75® Type HBA Breakers  
10-125 Amperes, 120/240, 240, and 277 Volts Ac, 1, 2 and 3-Pole



| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40° C | Catalog Numbers       |         |                                 |         |                       |          |                      |         |                   |         |
|------------------------------------------------|-----------------------|---------|---------------------------------|---------|-----------------------|----------|----------------------|---------|-------------------|---------|
|                                                | 1 Pole ③              |         | 2 Pole④                         |         | 240 Volts             |          | 3 Pole⑤              |         | 240 Volts Ac Max. |         |
|                                                | 120/240 Volts Ac Max. |         | 277 Volts<br>Ac Max<br>Standard |         | 120/240 Volts Ac Max. |          | 240 Volts<br>Ac Max. |         | Standard          |         |
|                                                | Standard              | MARK 75 | Standard                        | MARK 75 | Standard              | MARK 75  | Standard             | MARK 75 | Standard          | MARK 75 |
| 10                                             | BAB1010               |         |                                 | BAB2010 |                       | BA2010H② | BA3010H②             |         |                   |         |
| 15                                             | BAB1015               | HBA1015 | BA1015B                         | BAB2015 | HBA2015               | BA2015H  | BA3015H              | HBA3015 |                   |         |
| 20                                             | BAB1020               | HBA1020 | BA1020B                         | BAB2020 | HBA2020               | BA2020H  | BA3020H              | HBA3020 |                   |         |
| 25                                             | BAB1025               |         |                                 | BAB2025 |                       | BA2025H  | BA3025H              |         |                   |         |
| 30                                             | BAB1030               | HBA1030 | BA1030B                         | BAB2030 | HBA2030               | BA2030H  | BA3030H              |         |                   |         |
| 35                                             | BAB1035               |         |                                 | BAB2035 |                       | BA2035H  | BA3035H              |         |                   |         |
| 40                                             | BAB1040               |         |                                 | BAB2040 |                       | BA2040H  | BA3040H              |         |                   |         |
| 50                                             | BAB1050               |         |                                 | BAB2050 |                       | BA2050H  | BA3050H              |         |                   |         |
| 55                                             | BAB1055               |         |                                 | BAB2055 |                       |          |                      |         |                   |         |
| 60                                             | BAB1060               |         |                                 | BAB2060 |                       |          | BA3060H              |         |                   |         |
| 70                                             | BAB1070               |         |                                 | BAB2070 |                       |          | BA3070H              |         |                   |         |
| 90                                             |                       |         |                                 | BAB2090 |                       |          | BA3090H              |         |                   |         |
| 100                                            |                       |         |                                 | BAB2100 |                       |          | BA3100H              |         |                   |         |
| 125                                            |                       |         |                                 | BAB2125 |                       |          |                      |         |                   |         |

Panelboard Accessories

| Description                   | Style Number |
|-------------------------------|--------------|
| Number Tabs, 1-42, Gum-Backed | 622B630H01   |
| ON Button, Black on White     | K-72641      |
| OFF Button, Black on White    | K-72642      |

Breaker Accessories  
(See DB 29-150 for description.)

| Description                                         | Style Number |
|-----------------------------------------------------|--------------|
| Dummy Breaker                                       | 2600D81 G09  |
| Moisture-Fungus Treat.                              |              |
| 1-Pole                                              |              |
| 2-Pole                                              |              |
| 3-Pole                                              |              |
| California Handle Tie                               |              |
| 1 Pole Breakers Only                                | 133A633G01   |
| Lockdog (Non-padlock)                               |              |
| 1, 3 Pole, 2 Pole 240V                              | 1256C42G02   |
| 2 Pole, 120/240V                                    | 1256C42G01   |
| Padlock Attach., Removable                          |              |
| 1, 3 Pole Only                                      | 208B831 G02  |
| Padlock Device (Non-Remove. per<br>California Code) |              |
| 1, 2, 3 Poles                                       | 1256C41 G01  |

② Not listed with Underwriters' Laboratories, Inc.  
③ 24 breakers in single carton, 144 in master carton.  
Approx. ship. wt.: 7 lbs. and 46 lbs. respectively.

Special Calibration②

Special calibration price additions apply to  
ampere ratings not listed as standard, or for  
ambients other than 40°C or 50°C. Also  
price additions apply to specific calibrations  
for frequencies other than 0-60 Hertz Ac cir-  
cuits. See Application Data 29-160 for in-  
formation regarding special conditions.

| Type<br>of<br>Calibration | List Price Addition     |                               |
|---------------------------|-------------------------|-------------------------------|
|                           | 1-49<br>Identical Units | 50 or More<br>Identical Units |
| Thermal                   | Add 20% to              | None                          |
| Magnetic                  | List Price of           | None                          |
| Frequency                 | Complete Breaker        | None                          |

Type BA breakers meet the requirements of  
Federal Specification W-C-375a as follows:  
1, 2-Pole, 120/240 Volts Ac, Max.: Class 1a  
1-Pole, 120 Volts Ac Max.: Class 2b  
2, 3-Pole, 240 Volts Ac, Max.: Class 1b, 2c  
1-Pole, 277 Volts Ac, Max.: Class 2a  
MARK 75 Type HBA breakers are not defined  
in Federal Specification W-C-375a.

④ 12 breakers in single carton, 72 in master carton.  
Approx. ship. wt.: 9 lbs. and 58 lbs. respectively.

Underwriters' Laboratories, Inc. Listed  
Interrupting Ratings

Type BA: 10,000 Amps. (Asym. or Sym.)  
Type HBA: 75,000 Amps Asym.; 65,000 Amps.  
Sym.

Listed with Underwriters' Laboratories, Inc.  
except as noted.

On all 3 phase Delta, Grounded B phase  
applications, refer to Westinghouse.

Note: All two and three pole breakers are of  
the common trip type.

List Prices: See Price List 29-020 P WE A.

Terminals

Load side only — line side connection is ex-  
tended tang which bolts directly to bus. Load  
terminals are U/L listed as suitable for wire  
type and size listed below. When used with  
aluminum conductors, use joint compound.

| Breaker<br>Amperes                            | Type<br>Terminal | Wire<br>Type | Wire<br>Range  |
|-----------------------------------------------|------------------|--------------|----------------|
| <b>240 Volt Breakers and Type HBA</b>         |                  |              |                |
| 10- 30                                        | Binding Screw    | Cu           | # 14 — # 8     |
| 35- 70                                        | Pressure         | Cu Al        | # 14 — # 2     |
| 90-100                                        | Pressure         | Cu/Al        | # 4 — 1/0      |
| <b>277 Volt Breakers</b>                      |                  |              |                |
| 15- 30                                        | Pressure         | Cu           | # 14 — # 6, or |
|                                               |                  | Al           | # 12 — # 6     |
| <b>120/240 Volt Breakers (1 &amp; 2 Pole)</b> |                  |              |                |
| 10- 30                                        | Pressure         | Cu/Al        | # 14 — # 8     |
| 35- 50                                        | Pressure         | Cu/Al        | # 14 — # 4     |
| 55-100                                        | Pressure         | Cu/Al        | # 8 — 1/0      |

Special Breakers

**Tungsten Lampload:** For application on  
circuits feeding tungsten lamps having ab-  
normally high inrush currents and rated in  
the vicinity of 1000 watts. Magnetic trip is  
set approximately 20 times thermal rating to  
override inrush. (1 pole breakers)

15 Amps: Style 4992D33G21  
20 Amps: Style 4992D33G22

**Switching Neutral:** For application in  
accordance with N.E.C. 514-5, 240-12 and  
380-1. (2 pole breakers)

10 Amps: Cat. No. BA2010C  
15 Amps: Cat. No. BA2015C  
20 Amps: Cat. No. BA2020C

**Delta:** For application on 3 phase, 4 wire  
delta systems where a combination of 1 and  
3 phase circuits are required. (3 pole  
breakers)

10 Amps: Cat. No. BA3010C  
15 Amps: Cat. No. BA3015C  
20 Amps: Cat. No. BA3020C

⑤ 8 breakers in single carton, 48 in master carton.  
Approx. ship. wt.: 9 lbs. and 58 lbs. respectively.



October, 1975  
Supersedes Price List 29-120, pages  
17-18, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

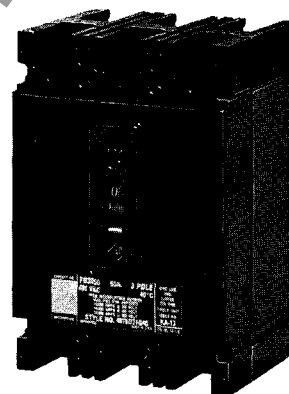
Types EB, EHB, 100 Amperes  
Type FB 150 Amperes  
MARK 75● Type HFB 150 Amperes

## AB DE-ION® Circuit Breakers

### Type EB 1, 2, 3 Poles; 240 Volts Ac Max.; Thermal Magnetic and Saf-T-Vue® (Includes Load Terminals Only; see Terminals page 18)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers                         |  | Catalog Numbers                             |  | Catalog Numbers                             |          |
|------------------------------------------|-----------------------------------------|--|---------------------------------------------|--|---------------------------------------------|----------|
|                                          | 1-Pole<br>120 Volts Ac<br>125 Volts Dc② |  | 2-Pole<br>240 Volts Ac<br>125/250 Volts Dc② |  | 3-Pole<br>240 Volts Ac<br>125/250 Volts Dc② |          |
|                                          | Standard                                |  | Standard                                    |  | Standard Saf-T-Vue①                         |          |
| 5①                                       | EB1005                                  |  | EB2005                                      |  | EB3005                                      |          |
| 10①                                      | EB1010                                  |  | EB2010                                      |  | EB3010                                      | EB3010S  |
| 15                                       | EB1015                                  |  | EB2015                                      |  | EB3015                                      | EB3015S  |
| 20                                       | EB1020                                  |  | EB2020                                      |  | EB3020                                      | EB3020S  |
| 25                                       | EB1025                                  |  | EB2025                                      |  | EB3025                                      | EB3025S  |
| 30                                       | EB1030                                  |  | EB2030                                      |  | EB3030                                      | EB3030S  |
| 35                                       | EB1035                                  |  | EB2035                                      |  | EB3035                                      | EB3035S  |
| 40                                       | EB1040                                  |  | EB2040                                      |  | EB3040                                      | EB3040S  |
| 50                                       | EB1050                                  |  | EB2050                                      |  | EB3050                                      | EB3050S  |
| 60                                       | EB1060                                  |  | EB2060                                      |  | EB3060                                      | EB3060S  |
| 70                                       | EB1070                                  |  | EB2070                                      |  | EB3070                                      | EB3070S  |
| 90                                       | EB1090                                  |  | EB2090                                      |  | EB3090                                      | EB3090S  |
| 100                                      | EB1100                                  |  | EB2100                                      |  | EB3100                                      | EB3100S  |
| 100 MCS                                  | EB1100N                                 |  | EB2100N                                     |  | EB3100N                                     | EB3100SN |
|                                          | Approx. Ship. Wt.: 2 lbs.               |  | Approx. Ship. Wt.: 3 lbs.                   |  | Approx. Ship. Wt.: 4½ lbs.                  |          |

EB: 120, 240 Volts Ac; 125/250 Volts Dc  
EHB: 277, 480 Volts Ac; 250 Volts Dc  
FB, HFB: 600 Volts Ac, 250 Volts Dc



### Type EHB 1, 2, 3 Poles; 480 Volts Ac Max.; Thermal Magnetic and Saf-T-Vue (Includes Load Terminals Only; see Terminals page 18)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers                         |  | Catalog Numbers                         |  | Catalog Numbers            |           |
|------------------------------------------|-----------------------------------------|--|-----------------------------------------|--|----------------------------|-----------|
|                                          | 1-Pole<br>277 Volts Ac<br>125 Volts Dc② |  | 2-Pole<br>480 Volts Ac<br>250 Volts Dc② |  | 3-Pole<br>480 Volts Ac     |           |
|                                          | Standard                                |  | Standard                                |  | Standard Saf-T-Vue①        |           |
| 10①                                      | EHB1010                                 |  | EHB2010                                 |  | EHB3010                    | EHB3010S  |
| 15                                       | EHB1015                                 |  | EHB2015                                 |  | EHB3015                    | EHB3015S  |
| 20                                       | EHB1020                                 |  | EHB2020                                 |  | EHB3020                    | EHB3020S  |
| 25                                       | EHB1025                                 |  | EHB2025                                 |  | EHB3025                    | EHB3025S  |
| 30                                       | EHB1030                                 |  | EHB2030                                 |  | EHB3030                    | EHB3030S  |
| 35                                       | EHB1035                                 |  | EHB2035                                 |  | EHB3035                    | EHB3035S  |
| 40                                       | EHB1040                                 |  | EHB2040                                 |  | EHB3040                    | EHB3040S  |
| 50                                       | EHB1050                                 |  | EHB2050                                 |  | EHB3050                    | EHB3050S  |
| 60                                       | EHB1060                                 |  | EHB2060                                 |  | EHB3060                    | EHB3060S  |
| 70                                       | EHB1070                                 |  | EHB2070                                 |  | EHB3070                    | EHB3070S  |
| 90                                       | EHB1090                                 |  | EHB2090                                 |  | EHB3090                    | EHB3090S  |
| 100                                      | EHB1100                                 |  | EHB2100                                 |  | EHB3100                    | EHB3100S  |
| 100 MCS                                  | EHB1100N                                |  | EHB2100N                                |  | EHB3100N                   | EHB3100SN |
|                                          | Approx. Ship. Wt.: 2 lbs.               |  | Approx. Ship. Wt.: 3 lbs.               |  | Approx. Ship. Wt.: 4½ lbs. |           |

Listed with Underwriters' Laboratories, Inc. except as noted.

#### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max Volts               | Amperes                   |
|-------------------------|---------------------------|
| <b>EB Breakers</b>      |                           |
| 120 and 240 Ac          | 10,000 Asym., Sym.        |
| 125/250 Dc              | 5,000②                    |
| <b>EHB, FB Breakers</b> |                           |
| 240 Ac                  | 20,000 Asym., 18,000 Sym. |
| 277 Ac (EHB)            | 15,000 Asym., 14,000 Sym. |
| 480 Ac                  | 15,000 Asym., 14,000 Sym. |
| 600 Ac (FB)             | 15,000 Asym., 14,000 Sym. |
| 250 Dc                  | 10,000②                   |

### Type FB, HFB 1, 2, 3, 4 Poles; 600 Volts Ac Max.; Thermal Magnetic, MARK 75● Saf-T-Vue (Includes Load Terminals Only; see Terminals, page 18)

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Catalog Numbers                         |          |                                         |          | Catalog Numbers        |         |                         |          |
|------------------------------------------|-----------------------------------------|----------|-----------------------------------------|----------|------------------------|---------|-------------------------|----------|
|                                          | 1-Pole<br>277 Volts Ac<br>125 Volts Dc② |          | 2-Pole<br>600 Volts Ac<br>250 Volts Dc② |          | 3-Pole<br>600 Volts Ac |         | 4-Pole⑤<br>600 Volts Ac |          |
|                                          | MARK 75                                 | Standard | MARK 75                                 | Standard | Saf-T-Vue              | MARK 75 | Standard                | Standard |
| 10①                                      | HFB1010                                 | FB2010   | HFB2010                                 | FB3010   | FB3010S                | HFB3010 |                         |          |
| 15                                       | HFB1015                                 | FB2015   | HFB2015                                 | FB3015   | FB3015S                | HFB3015 | FB4015                  |          |
| 20                                       | HFB1020                                 | FB2020   | HFB2020                                 | FB3020   | FB3020S                | HFB3020 | FB4020                  |          |
| 25                                       | HFB1025                                 | FB2025   | HFB2025                                 | FB3025   | FB3025S                | HFB3025 | FB4025                  |          |
| 30                                       | HFB1030                                 | FB2030   | HFB2030                                 | FB3030   | FB3030S                | HFB3030 | FB4030                  |          |
| 35                                       | HFB1035                                 | FB2035   | HFB2035                                 | FB3035   | FB3035S                | HFB3035 | FB4035                  |          |
| 40                                       | HFB1040                                 | FB2040   | HFB2040                                 | FB3040   | FB3040S                | HFB3040 | FB4040                  |          |
| 50                                       | HFB1050                                 | FB2050   | HFB2050                                 | FB3050   | FB3050S                | HFB3050 | FB4050                  |          |
| 60                                       | HFB1060                                 | FB2060   | HFB2060                                 | FB3060   | FB3060S                | HFB3060 | FB4060                  |          |
| 70                                       | HFB1070                                 | FB2070   | HFB2070                                 | FB3070   | FB3070S                | HFB3070 | FB4070                  |          |
| 90                                       | HFB1090                                 | FB2090   | HFB2090                                 | FB3090   | FB3090S                | HFB3090 | FB4090                  |          |
| 100                                      | HFB1100                                 | FB2100   | HFB2100                                 | FB3100   | FB3100S                | HFB3100 | FB4100                  |          |
| 100 MCS                                  |                                         | FB2100N  |                                         | FB3100N  | FB3100SN               |         | FB4100N                 |          |
| 125                                      |                                         | FB2125   | HFB2125                                 | FB3125   | FB3125S                | HFB3125 | FB4125                  |          |
| 150                                      |                                         | FB2150   | HFB2150                                 | FB3150   | FB3150S                | HFB3150 | FB4150                  |          |
| 150 MCS                                  |                                         | FB2150N  |                                         | FB3150N  | FB3150SN               |         | FB4150N                 |          |

#### MARK 75 Type HFB

|                 |                           |
|-----------------|---------------------------|
| 240 Ac          | 75,000 Asym., 65,000 Sym. |
| 277 Ac③         | 75,000 Asym., 65,000 Sym. |
| 480 Ac          | 30,000 Asym., 25,000 Sym. |
| 600 Ac          | 20,000 Asym., 18,000 Sym. |
| 250 Dc (2 Pole) | 20,000②④                  |

These breakers meet requirements of Federal Specification W-C-375a as follows:

EB, 1, 2, 3 Poles: Classes 2b, 2c  
EHB, 1 Pole: Class 2a  
EHB, 2, 3 Poles: Class 2d  
FB, 2, 3 Poles: Class 2d  
HFB, 2, 3 Poles: Class 2f (1 pole not defined in W-C-375a)

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

#### Accessories and Modifications Description: Pages 43-52

- ④ Ratings above 10,000 amps not UL Listed.  
⑤ All 4 poles have thermal magnetic trip elements.  
Can be supplied with 3 poles protected plus 1 pole non-automatic if required. Order by description. No price or dimensional differences.

① Not listed with Underwriters' Laboratories, Inc.  
② Dc ratings apply to substantially non-inductive circuits.

③ 15 thru 30 amp ratings only have 75,000 amp I. C.  
40 thru 100 amp ratings have 30,000 amp Asym., 25,000 Sym. I. C.



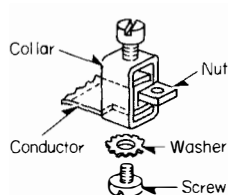
### Special Breakers<sup>①</sup>

**Type FB, Magnetic Only, Front Adjustable** (Includes Line and Load Terminals)

| Continuous<br>Amperes<br>Rating | Magnetic<br>Trip Range<br>Amperes | Catalog/Style Numbers |            | 2-Pole <sup>②③</sup> , 600 Volts Ac |             |            | 3-Pole, 600 Volts Ac |             |            |
|---------------------------------|-----------------------------------|-----------------------|------------|-------------------------------------|-------------|------------|----------------------|-------------|------------|
|                                 |                                   | Standard              | MARK 75    | Standard                            | Saf-T-Vue   | MARK 75    | Standard             | Saf-T-Vue   | MARK 75    |
| 3                               | 7- 22                             | FB2022MRL             | HFB2022ML  | FB3022MRL                           | FB3022SMRL  | HFB3022ML  | FB3022MRL            | FB3022SMRL  | HFB3022ML  |
| 5                               | 15- 45                            | FB2045MRL             | HFB2045ML  | FB3045MRL                           | FB3045SMRL  | HFB3045ML  | FB3045MRL            | FB3045SMRL  | HFB3045ML  |
| 10                              | 35- 110                           | FB2110MRL             | HFB2110ML  | FB3110MRL                           | FB3110SMRL  | HFB3110ML  | FB3110MRL            | FB3110SMRL  | HFB3110ML  |
| 25                              | 32- 80                            | 2606D95G12            | .....      | 2606D95G30                          | .....       | .....      | 2606D95G30           | .....       | .....      |
| 25                              | 66- 190                           | FB2190MRL             | HFB2190ML  | FB3190MRL                           | FB3190SMRL  | HFB3190ML  | FB3190MRL            | FB3190SMRL  | HFB3190ML  |
| 30                              | 50- 150                           | 1250C29G05            | .....      | 1250C29G06                          | .....       | .....      | 1250C29G06           | .....       | .....      |
| 30                              | 90- 270                           | FB2270MRL             | HFB2270ML  | FB3270MRL                           | FB3270SMRL  | HFB3270ML  | FB3270MRL            | FB3270SMRL  | HFB3270ML  |
| 50                              | 66- 190                           | 1250C29G01            | .....      | 1250C29G02                          | .....       | .....      | 1250C29G02           | .....       | .....      |
| 50                              | 160- 480                          | FB2480MRL             | HFB2480ML  | FB3480MRL                           | FB3480SMRL  | HFB3480ML  | FB3480MRL            | FB3480SMRL  | HFB3480ML  |
| 70                              | 100- 270                          | 2606D95G13            | .....      | 2606D95G31                          | .....       | .....      | 2606D95G31           | .....       | .....      |
| 100                             | 150- 480                          | 1250C29G03            | .....      | 1250C29G04                          | .....       | .....      | 1250C29G04           | .....       | .....      |
| 100                             | 450-1550                          | FB21550MRL            | HFB21550ML | FB31550MRL                          | FB31550SMRL | HFB31550ML | FB31550MRL           | FB31550SMRL | HFB31550ML |
| 150                             | 575-1800                          | FB21800MRL            | HFB21800ML | FB31800MRL                          | FB31800SMRL | HFB31800ML | FB31800MRL           | FB31800SMRL | HFB31800ML |

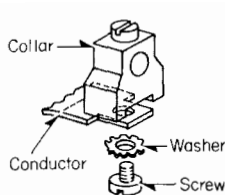
### Terminals

Breakers include load terminals only<sup>⑤⑥</sup>. Terminals are Underwriters' Laboratories, Inc. listed as suitable for wire type and size as listed below. When used with aluminum conductors, use joint compound. When line terminals are required, order by style number from table at no charge with the breaker. To order optional aluminum terminals, add suffix "Z" to complete breaker catalog number, and specify line terminals separately from table when required.



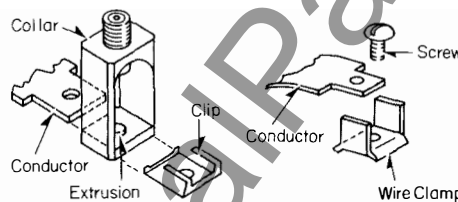
Style 624B100G2

Insert collar enclosing conductor as shown. Locate nut on top of conductor and tighten securely with screw and washer. **Caution:** Collar must surround conductor.



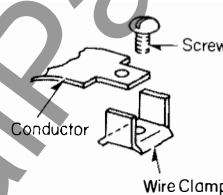
Style 624B100G10

Assemble collar on top of conductor as shown. Tighten securely with screw and washer.



Style 624B100G17

Insert collar enclosing conductor and center on extrusion in collar. Install clip with legs on top of conductor and snap end around bottom of collar.



Style 624B100G14

Assemble wire clamp to bottom of conductor as shown.

### LFB Current Limiter Attachment

The LFB Current Limiter is an attachment that bolts to the load end of a standard FB thermal magnetic or magnetic only breaker, providing 200,000 amps interrupting capacity at up to 600 volts Ac. Limiters for thermal magnetic breakers are listed with Underwriters' Laboratories, Inc. for the above. Current limiters must be applied as indicated in the table.

| Breaker Rating,<br>Amperes           | Limiter<br>Catalog Number |
|--------------------------------------|---------------------------|
| <b>For Thermal Magnetic Breakers</b> |                           |
| 15-70                                | LFB3070R                  |
| 90-150                               | LFB3150R                  |
| <b>For Magnetic Only Breakers</b>    |                           |
| 3                                    | LFB3003MR                 |
| 5                                    | LFB3005MR                 |
| 10                                   | LFB3010MR                 |
| 25                                   | LFB3025MR                 |
| 30                                   | LFB3030MR                 |
| 50                                   | LFB3050MR                 |
| 70                                   | LFB3070MR                 |
| 100                                  | LFB3100MR                 |
| 150                                  | LFB3150MR                 |

### Special Calibrations<sup>①</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See application data 29-160 for information regarding special conditions. Maximum calibration for 400 Hz. is 135 amps.

| Type of<br>Calibration | 1-24<br>Identical Units | 25 or More<br>Identical<br>Units |
|------------------------|-------------------------|----------------------------------|
| Thermal                | Add 10% to              | None                             |
| Magnetic               | List Price of           | None                             |
| Frequency              | Complete Breaker        | None                             |

### 50°C Calibration<sup>①</sup>

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

### Ambient Compensating Breakers<sup>①</sup>

To order, add suffix letter "A" to standard thermal magnetic breaker catalog number.

Available in all standard ratings of EB, EHB, FB and HFB breakers up to ratings of 125 amps. Add 10% to price of standard breaker.

To order, add suffix letter "A" to standard thermal magnetic breaker catalog numbers. Add 10% to the price of the standard breaker.

### Further Information

**List Prices:** See Price List 29-020 P WE A.  
**Application, Operating Characteristics:** AD 29-160  
**Dimensions:** DS 29-170

- Not listed with Underwriters' Laboratories, Inc.
- 2-Pole magnetic only breakers supplied in 3-Pole frame with current carrying parts omitted from center pole.
- Magnetic only breakers for Dc applications require special calibration. Order by description.
- Style listed is for package of 3 terminals. Order quantity equal to 1/3 total terminals required.
- Magnetic-only breakers include both line and load terminals.
- Suffix "L" on catalog number indicates line and load terminals included. If factory installation is required, specify on order.



Westinghouse Electric Corporation  
Low Voltage Breaker Division  
Beaver, Pennsylvania 15009

29-120 TWEA  
Technical Data

Page 19

October, 1975  
Supersedes Price List 29-120,  
pages 19-20, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type JB 250 Amperes  
Type KB 250 Amperes  
MARK 75® Type HKB 250 Amperes

## AB DE-ION® Circuit Breakers

### Type JB Breakers

70-250 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip Thermal Magnetic,  
Saf-T-Vue Breakers

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip Setting,<br>Amperes (Set on High<br>Side, Adjustable to<br>Lower Limits) |      | Complete Breaker<br>Includes Pressure Type Copper<br>Terminals③ |            | Breaker Without Terminals  |            |
|------------------------------------------|----------------------------------------------------------------------------------------|------|-----------------------------------------------------------------|------------|----------------------------|------------|
|                                          | Low                                                                                    | High | Catalog Number<br>Standard                                      | Saf-T-Vue① | Catalog Number<br>Standard | Saf-T-Vue① |
| 2-Poles, 600 Volts Ac, 250 Volts Dc②     |                                                                                        |      |                                                                 |            |                            |            |
| 70                                       | 350                                                                                    | 700  | JB2070                                                          | JB2070S    | JB2070W                    | JB2070SW   |
| 90                                       | 450                                                                                    | 900  | JB2090                                                          | JB2090S    | JB2090W                    | JB2090SW   |
| 100                                      | 500                                                                                    | 1000 | JB2100                                                          | JB2100S    | JB2100W                    | JB2100SW   |
| 125                                      | 625                                                                                    | 1250 | JB2125                                                          | JB2125S    | JB2125W                    | JB2125SW   |
| 150                                      | 750                                                                                    | 1500 | JB2150                                                          | JB2150S    | JB2150W                    | JB2150SW   |
| 175                                      | 875                                                                                    | 1750 | JB2175                                                          | JB2175S    | JB2175W                    | JB2175SW   |
| 200                                      | 1000                                                                                   | 2000 | JB2200                                                          | JB2200S    | JB2200W                    | JB2200SW   |
| 225                                      | 1125                                                                                   | 2250 | JB2225                                                          | JB2225S    | JB2225W                    | JB2225SW   |
| 250                                      | 1250                                                                                   | 2500 | JB2250                                                          | JB2250S    | JB2250W                    | JB2250SW   |
| 250                                      | MCS                                                                                    |      | JB2250N                                                         | JB2250SN   | JB2250NW                   | JB2250SNW  |
|                                          |                                                                                        |      | Approx. Ship. Wt. 12 Lbs.                                       |            | Approx. Ship. Wt. 12 Lbs.  |            |
| 3 Poles, 600 Volts Ac Only               |                                                                                        |      |                                                                 |            |                            |            |
| 70                                       | 350                                                                                    | 700  | JB3070                                                          | JB3070S    | JB3070W                    | JB3070SW   |
| 90                                       | 450                                                                                    | 900  | JB3090                                                          | JB3090S    | JB3090W                    | JB3090SW   |
| 100                                      | 500                                                                                    | 1000 | JB3100                                                          | JB3100S    | JB3100W                    | JB3100SW   |
| 125                                      | 625                                                                                    | 1250 | JB3125                                                          | JB3125S    | JB3125W                    | JB3125SW   |
| 150                                      | 750                                                                                    | 1500 | JB3150                                                          | JB3150S    | JB3150W                    | JB3150SW   |
| 175                                      | 875                                                                                    | 1750 | JB3175                                                          | JB3175S    | JB3175W                    | JB3175SW   |
| 200                                      | 1000                                                                                   | 2000 | JB3200                                                          | JB3200S    | JB3200W                    | JB3200SW   |
| 225                                      | 1125                                                                                   | 2250 | JB3225                                                          | JB3225S    | JB3225W                    | JB3225SW   |
| 250                                      | 1250                                                                                   | 2500 | JB3250                                                          | JB3250S    | JB3250W                    | JB3250SW   |
| 250                                      | MCS                                                                                    |      | JB3250N                                                         | JB3250SN   | JB3250NW                   | JB3250SNW  |
|                                          |                                                                                        |      | Approx. Ship. Wt. 14 Lbs.                                       |            | Approx. Ship. Wt. 12 Lbs.  |            |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Magnetic Only Breakers, Front Adjustable<sup>①</sup>

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip Setting,<br>Amperes (Set on High<br>Side, Adjustable to<br>Lower Limits) |      | Breaker Only, No Terminals <sup>④</sup> |                           |
|------------------------------------------|----------------------------------------------------------------------------------------|------|-----------------------------------------|---------------------------|
|                                          | Low                                                                                    | High | 2-Poles <sup>②</sup><br>Catalog Number  | 3-Poles<br>Catalog Number |
|                                          |                                                                                        |      | Standard                                | Standard                  |
| 250                                      | 350                                                                                    | 700  | JB2700MW                                | JB3700MW                  |
| 250                                      | 625                                                                                    | 1250 | JB21250MW                               | JB31250MW                 |
| 250                                      | 750                                                                                    | 1500 | JB21500MW                               | JB31500MW                 |
| 250                                      | 875                                                                                    | 1750 | JB21750MW                               | JB31750MW                 |
| 250                                      | 1125                                                                                   | 2250 | JB22250MW                               | JB32250MW                 |
| 250                                      | 1250                                                                                   | 2500 | JB22500MW                               | JB32500MW                 |

### Special Calibrations<sup>①</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also Price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions. Maximum 400 Hz calibration is 200 amps.

- ① Not listed with Underwriters' Laboratories, Inc.
- ② 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ③ Terminals are shipped separately from breaker frame.
- ④ Select desired terminal from table and order as separate item.

| Type of<br>Calibration | 1-24<br>Identical Units                         | 25 or More<br>Identical Units |
|------------------------|-------------------------------------------------|-------------------------------|
| Thermal                | Add 10% to<br>List Price of<br>Complete Breaker | None                          |
| Magnetic               |                                                 | None                          |
| Frequency              |                                                 | None                          |

### 50°C Calibration<sup>①</sup>

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type JB breakers meet requirements of Class 3A and 3B circuit breakers as defined by Federal Specification W-C-375a.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 30,000 Asym., 25,000 Sym. |
| 480 Ac     | 25,000 Asym., 22,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Terminals<sup>③</sup>

Two terminals are required per pole. Terminals are Underwriter's Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional aluminum copper terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Breaker,<br>Amps                 | Terminal<br>Catalog<br>Number | Wire Range, Type<br>No. of Cables      |
|------------------------------------------|-------------------------------|----------------------------------------|
| <b>Standard Pressure Terminals</b>       |                               |                                        |
| 250                                      | T250KB                        | 1 #4-350 MCM Cu, or<br>1 #2-350 MCM Al |
| <b>Optional Al/Cu Pressure Terminals</b> |                               |                                        |
| 250                                      | TA250KB                       | 1 #4-350 MCM Al/Cu                     |

### Magnetic Only Breakers

For description, refer to DB 29-150 and AD 29-160. To order these breakers, select catalog number from table at left, plus terminals above.

List Prices: See Price List 29-020 PWEA.

Accessories and Modifications  
Description: Pages 43-52



# Type KB and MARK 75® Type HKB

70-250 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Interchangeable Trip Thermal Magnetic, Saf-T-Vue® Breakers

| Con-<br>tin-<br>uous<br>Am-<br>pere<br>Rat-<br>ing<br>@<br>40°C | Magnetic<br>Trip<br>Setting<br>Amperes④ |      | Complete Breaker              |                |         | Shipped as Frame, Trip Unit and Terminals③ |                |                |                                   |
|-----------------------------------------------------------------|-----------------------------------------|------|-------------------------------|----------------|---------|--------------------------------------------|----------------|----------------|-----------------------------------|
|                                                                 |                                         |      | Includes Pressure Type Copper |                |         | Frame Only                                 |                | Trip Unit Only |                                   |
|                                                                 |                                         |      | Terminals③                    |                |         | Catalog Number                             |                | Cat. No.       |                                   |
|                                                                 | Low                                     | High | Standard                      | Saf-T-Vue<br>① | MARK 75 | Standard                                   | Saf-T-Vue<br>① | MARK 75        | Standard<br>Saf-T-Vue,<br>MARK 75 |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc②</b>                     |                                         |      |                               |                |         |                                            |                |                |                                   |
| 70                                                              | 350                                     | 700  | KB2070                        | KB2070S        | HKB2070 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2070T                          |
| 90                                                              | 450                                     | 900  | KB2090                        | KB2090S        | HKB2090 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2090T                          |
| 100                                                             | 500                                     | 1000 | KB2100                        | KB2100S        | HKB2100 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2100T                          |
| 125                                                             | 625                                     | 1250 | KB2125                        | KB2125S        | HKB2125 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2125T                          |
| 150                                                             | 750                                     | 1500 | KB2150                        | KB2150S        | HKB2150 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2150T                          |
| 175                                                             | 875                                     | 1750 | KB2175                        | KB2175S        | HKB2175 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2175T                          |
| 200                                                             | 1000                                    | 2000 | KB2200                        | KB2200S        | HKB2200 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2200T                          |
| 225                                                             | 1125                                    | 2250 | KB2225                        | KB2225S        | HKB2225 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2225T                          |
| 250                                                             | 1250                                    | 2500 | KB2250                        | KB2250S        | HKB2250 | KB2250F                                    | KB2250FS       | HKB2250F       | HKB2250T                          |
| 250                                                             | MCS                                     |      | KB2250N                       | KB2250SN       | .....   | KB2250NW                                   | KB2250SNW      | .....          | Incl. in Frame                    |

Approx. Ship. Wt. 12 Lbs.

Approx. Ship. Wt. 9 Lbs.

Approx. Ship.  
Wt. 2 Lbs.

## 3 Poles, 600 Volts Ac Only

|     |      |      |         |          |         |          |           |          |                |
|-----|------|------|---------|----------|---------|----------|-----------|----------|----------------|
| 70  | 350  | 700  | KB3070  | KB3070S  | HKB3070 | KB3250F  | KB3250FS  | HKB3250F | HKB3070T       |
| 90  | 450  | 900  | KB3090  | KB3090S  | HKB3090 | KB3250F  | KB3250FS  | HKB3250F | HKB3090T       |
| 100 | 500  | 1000 | KB3100  | KB3100S  | HKB3100 | KB3250F  | KB3250FS  | HKB3250F | HKB3100T       |
| 125 | 625  | 1250 | KB3125  | KB3125S  | HKB3125 | KB3250F  | KB3250FS  | HKB3250F | HKB3125T       |
| 150 | 750  | 1500 | KB3150  | KB3150S  | HKB3150 | KB3250F  | KB3250FS  | HKB3250F | HKB3150T       |
| 175 | 875  | 1750 | KB3175  | KB3175S  | HKB3175 | KB3250F  | KB3250FS  | HKB3250F | HKB3175T       |
| 200 | 1000 | 2000 | KB3200  | KB3200S  | HKB3200 | KB3250F  | KB3250FS  | HKB3250F | HKB3200T       |
| 225 | 1125 | 2250 | KB3225  | KB3225S  | HKB3225 | KB3250F  | KB3250FS  | HKB3250F | HKB3225T       |
| 250 | 1250 | 2500 | KB3250  | KB3250S  | HKB3250 | KB3250F  | KB3250FS  | HKB3250F | HKB3250T       |
| 250 | MCS  |      | KB3250N | KB3250SN | .....   | KB3250NW | KB3250SNW | .....    | Incl. in Frame |

Approx. Ship. Wt. 14 Lbs.

Approx. Ship. Wt. 11 Lbs.

Approx. Ship.  
Wt. 2 Lbs.

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

## Magnetic Only, Front Adjustable Breakers①

| Con-<br>tin-<br>uous<br>Am-<br>pere<br>Rating | Magnetic<br>Trip Setting<br>Amperes④ |      | Trip Units Only             |            |
|-----------------------------------------------|--------------------------------------|------|-----------------------------|------------|
|                                               | Low                                  | High | Catalog Numbers<br>2 Poles② | 3 Poles    |
| 250                                           | 350                                  | 700  | HKB2700TM                   | HKB3700TM  |
| 250                                           | 625                                  | 1250 | HKB21250TM                  | HKB31250TM |
| 250                                           | 750                                  | 1500 | HKB21500TM                  | HKB31500TM |
| 250                                           | 875                                  | 1750 | HKB21750TM                  | HKB31750TM |
| 250                                           | 1125                                 | 2250 | HKB22250TM                  | HKB32250TM |
| 250                                           | 1250                                 | 2500 | HKB22500TM                  | HKB32500TM |

ambients other than 40°C or 50°C, also price additions apply to specific calibrations for frequencies other than 0-60 Hz ac circuits. See AD 29-160 for information regarding special conditions. Maximum 400 Hz calibration is 200 amps.

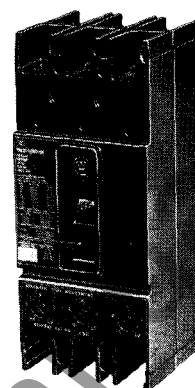
## Special Calibrations①

Special calibration price additions apply to ampere ratings not listed as standard, or for

- ① Not listed with Underwriters' Laboratories, Inc.
- ② 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ③ Terminals shipped separately from breaker frame.
- ④ Set on high side, adjustable to lower limit.
- ⑤ Ratings above 10,000 amps not UL Listed.

## 50°C Calibration①

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type KB breakers meet requirements for class 3A and 3B, as defined by Federal Specification W-C-375a. Type HKB breakers not defined in W-C-375a.

## Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 30,000 Asym., 25,000 Sym. |
| 480 Ac                   | 25,000 Asym., 22,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc                   | 10,000                    |

## Mark 75 Breakers

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 30,000 Asym., 25,000 Sym. |
| 600 Ac | 25,000 Asym., 22,000 Sym. |
| 250 Dc | 20,000⑤                   |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

## Terminals③

Two required per pole. Select from table on page 19.

## Magnetic Only Breakers

For description, refer to DB 29-150 and AD 29-160. To order these breakers, select frame, trip unit and terminals.

List Prices: See Price List 29-020 P WE A.

## Accessories and Modifications

Description: Pages 43-52



January, 1976  
Supersedes Tech. Data 29-120 T WE A  
pages 21-22, dated October, 1975  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type LBB 400 Amperes  
Type LB 400 Amperes  
MARK 75 Type HLB 400 Amperes

## AB DE-ION® Circuit Breakers

### Type LBB Breakers

125-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Fixed Trip Thermal Magnetic,  
Saf-T-Vue® Breakers

| Continuous<br>Ampere<br>Rating<br>@<br>40°C            | Magnetic Trip Setting<br>Amperes <sup>⑤</sup> |      | Complete Breaker                                        |                        | Breaker Without Terminals |                        |
|--------------------------------------------------------|-----------------------------------------------|------|---------------------------------------------------------|------------------------|---------------------------|------------------------|
|                                                        | Low                                           | High | Includes Pressure Type Copper<br>Terminals <sup>④</sup> |                        |                           |                        |
|                                                        |                                               |      | Catalog Number                                          |                        | Catalog Number            |                        |
|                                                        |                                               |      | Standard                                                | Saf-T-Vue <sup>②</sup> | Standard                  | Saf-T-Vue <sup>②</sup> |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>③</sup></b> |                                               |      |                                                         |                        |                           |                        |
| 125                                                    | 625                                           | 1250 | LBB2125                                                 | LBB2125S               | LBB2125W                  | LBB2125SW              |
| 150                                                    | 750                                           | 1500 | LBB2150                                                 | LBB2150S               | LBB2150W                  | LBB2150SW              |
| 175                                                    | 875                                           | 1750 | LBB2175                                                 | LBB2175S               | LBB2175W                  | LBB2175SW              |
| 200                                                    | 1000                                          | 2000 | LBB2200                                                 | LBB2200S               | LBB2200W                  | LBB2200SW              |
| 225                                                    | 1125                                          | 2250 | LBB2225                                                 | LBB2225S               | LBB2225W                  | LBB2225SW              |
| 250                                                    | 1250                                          | 2500 | LBB2250                                                 | LBB2250S               | LBB2250W                  | LBB2250SW              |
| 300                                                    | 1500                                          | 3000 | LBB2300                                                 | LBB2300S               | LBB2300W                  | LBB2300SW              |
| 350                                                    | 1750                                          | 3500 | LBB2350                                                 | LBB2350S               | LBB2350W                  | LBB2350SW              |
| 400                                                    | 2000                                          | 4000 | LBB2400                                                 | LBB2400S               | LBB2400W                  | LBB2400SW              |
| 400                                                    | MCS                                           |      | LBB2400N                                                | LBB2400SN              | LBB2400NW                 | LBB2400SNW             |
|                                                        |                                               |      | Approx. Ship. Wt. 13 Lbs.                               |                        | Approx. Ship. Wt. 13 Lbs. |                        |

### 3-Poles, 600 Volts Ac Only

|     |      |      |                           |           |                           |            |
|-----|------|------|---------------------------|-----------|---------------------------|------------|
| 125 | 625  | 1250 | LBB3125                   | LBB3125S  | LBB3125W                  | LBB3125SW  |
| 150 | 750  | 1500 | LBB3150                   | LBB3150S  | LBB3150W                  | LBB3150SW  |
| 175 | 875  | 1750 | LBB3175                   | LBB3175S  | LBB3175W                  | LBB3175SW  |
| 200 | 1000 | 2000 | LBB3200                   | LBB3200S  | LBB3200W                  | LBB3200SW  |
| 225 | 1125 | 2250 | LBB3225                   | LBB3225S  | LBB3225W                  | LBB3225SW  |
| 250 | 1250 | 2500 | LBB3250                   | LBB3250S  | LBB3250W                  | LBB3250SW  |
| 300 | 1500 | 3000 | LBB3300                   | LBB3300S  | LBB3300W                  | LBB3300SW  |
| 350 | 1750 | 3500 | LBB3350                   | LBB3350S  | LBB3350W                  | LBB3350SW  |
| 400 | 2000 | 4000 | LBB3400                   | LBB3400S  | LBB3400W                  | LBB3400SW  |
| 400 | MCS  |      | LBB3400N                  | LBB3400SN | LBB3400NW                 | LBB3400SNW |
|     |      |      | Approx. Ship. Wt. 15 Lbs. |           | Approx. Ship. Wt. 15 Lbs. |            |

For panelboard or switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Magnetic Only, Ambient Compensating Breakers<sup>②</sup>

| Continuous<br>Ampere<br>Rating                                                  | Magnetic Trip Setting,<br>Amperes <sup>⑤</sup> |      | 2-Pole Breakers <sup>③</sup> |             | 3-Pole Breakers            |             |
|---------------------------------------------------------------------------------|------------------------------------------------|------|------------------------------|-------------|----------------------------|-------------|
|                                                                                 | Low                                            | High | Catalog Number<br>Standard   | Saf-T-Vue   | Catalog Number<br>Standard | Saf-T-Vue   |
| <b>Magnetic Only Breakers, Front Adjustable - Without Terminals<sup>⑧</sup></b> |                                                |      |                              |             |                            |             |
| 400                                                                             | 350                                            | 700  | LBB2700MW                    | LBB2700SMW  | LBB3700MW                  | LBB3700SMW  |
| 400                                                                             | 625                                            | 1250 | LBB21250MW                   | LBB21250SMW | LBB31250MW                 | LBB31250SMW |
| 400                                                                             | 750                                            | 1500 | LBB21500MW                   | LBB21500SMW | LBB31500MW                 | LBB31500SMW |
| 400                                                                             | 875                                            | 1750 | LBB21750MW                   | LBB21750SMW | LBB31750MW                 | LBB31750SMW |
| 400                                                                             | 1125                                           | 2250 | LBB22250MW                   | LBB22250SMW | LBB32250MW                 | LBB32250SMW |
| 400                                                                             | 1500                                           | 3000 | LBB23000MW                   | LBB23000SMW | LBB33000MW                 | LBB33000SMW |
| 400                                                                             | 2000                                           | 4000 | LBB24000MW                   | LBB24000SMW | LBB34000MW                 | LBB34000SMW |

### Ambient Compensating Breakers - Includes Terminals

|     |      |      |          |           |          |           |
|-----|------|------|----------|-----------|----------|-----------|
| 125 | 625  | 1250 | LBB2125A | LBB2125SA | LBB3125A | LBB3125SA |
| 150 | 750  | 1500 | LBB2150A | LBB2150SA | LBB3150A | LBB3150SA |
| 175 | 875  | 1750 | LBB2175A | LBB2175SA | LBB3175A | LBB3175SA |
| 200 | 1000 | 2000 | LBB2200A | LBB2200SA | LBB3200A | LBB3200SA |
| 225 | 1125 | 2250 | LBB2225A | LBB2225SA | LBB3225A | LBB3225SA |
| 250 | 1250 | 2500 | LBB2250A | LBB2250SA | LBB3250A | LBB3250SA |
| 300 | 1500 | 3000 | LBB2300A | LBB2300SA | LBB3300A | LBB3300SA |
| 350 | 1750 | 3500 | LBB2350A | LBB2350SA | LBB3350A | LBB3350SA |
| 400 | 2000 | 4000 | LBB2400A | LBB2400SA | LBB3400A | LBB3400SA |

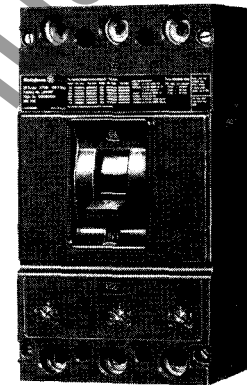
### Terminals<sup>④</sup>

Two required per pole. Select from page 22.

### Magnetic Only and Ambient Compensating Breakers

For description, refer to DB 29-150 and AD 29-160. To order, select catalog number from table above.

- ② Not listed with Underwriters' Laboratories, Inc.
- ③ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ④ Terminals shipped separately from breaker.
- ⑤ Set on high side, adjustable to lower limits.
- ⑥ Optional terminal.
- ⑦ Ratings above 10,000 amps not U.L. Listed.
- ⑧ Select desired terminals from page 22, and order as separate item.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LBB breakers meet requirements for class 4b circuit breakers, as defined by Federal Specification W-C-375a.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 50,000 Asym., 42,000 Sym. |
| 480 Ac     | 35,000 Asym., 30,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 20,000 <sup>⑦</sup>       |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Special Calibrations<sup>②</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions. Maximum calibration for 400 Hz is 300 amps.

| Type of Calibration | 1-24 Identical Units                      | 25 or More Identical Units |
|---------------------|-------------------------------------------|----------------------------|
| Thermal             | Add 10% to List Price of Complete Breaker | None                       |
| Magnetic            |                                           | None                       |
| Frequency           |                                           | None                       |

### 50° Calibration<sup>②</sup>:

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

### Accessories and Modifications

Description: Pages 43-52

List Prices: See Price List 29-020 P WE A  
Discount Symbol CB-2



**Type LB and MARK 75® Type HLB**  
70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3, Poles, Interchangeable Trip  
Thermal Magnetic, Saf-T-Vue and MARK 75 Breakers

| Con-<br>tin-<br>uous<br>Setting<br>Am-<br>pere<br>Rat-<br>ing<br>@<br>40°C | Magnetic<br>Trip<br>Setting<br>Am-<br>peres<br>④ | Complete Breaker                            |                |         | Shipped as Frame, Trip Unit and Terminals⑤ |                |         |
|----------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------|----------------|---------|--------------------------------------------|----------------|---------|
|                                                                            |                                                  | Includes Pressure Type<br>Copper Terminals⑤ |                |         | Frame Only                                 |                |         |
|                                                                            |                                                  | Catalog Number                              |                |         | Catalog Number                             |                |         |
|                                                                            |                                                  | Standard                                    | Saf-T-Vue<br>② | MARK 75 | Standard                                   | Saf-T-Vue<br>② | MARK 75 |

**2 Poles, 600 Volts Ac, 250 Volts DC③**

|     |      |      |                           |          |         |                           |           |          |                                               |
|-----|------|------|---------------------------|----------|---------|---------------------------|-----------|----------|-----------------------------------------------|
| 70  | 350  | 700  | LB2070                    | LB2070S  | .....   | LB2400F                   | LB2400FS  | .....    | HLB2070T                                      |
| 90  | 450  | 900  | LB2090                    | LB2090S  | .....   | LB2400F                   | LB2400FS  | .....    | HLB2090T                                      |
| 100 | 500  | 1000 | LB2100                    | LB2100S  | .....   | LB2400F                   | LB2400FS  | .....    | HLB2100T                                      |
| 125 | 625  | 1250 | LB2125                    | LB2125S  | HLB2125 | LB2400F                   | LB2400FS  | HLB2400F | HLB2125T                                      |
| 150 | 750  | 1500 | LB2150                    | LB2150S  | HLB2150 | LB2400F                   | LB2400FS  | HLB2400F | HLB2150T                                      |
| 175 | 875  | 1750 | LB2175                    | LB2175S  | HLB2175 | LB2400F                   | LB2400FS  | HLB2400F | HLB2175T                                      |
| 200 | 1000 | 2000 | LB2200                    | LB2200S  | HLB2200 | LB2400F                   | LB2400FS  | HLB2400F | HLB2200T                                      |
| 225 | 1125 | 2250 | LB2225                    | LB2225S  | HLB2225 | LB2400F                   | LB2400FS  | HLB2400F | HLB2225T                                      |
| 250 | 1250 | 2500 | LB2250                    | LB2250S  | HLB2250 | LB2400F                   | LB2400FS  | HLB2400F | HLB2250T                                      |
| 300 | 1500 | 3000 | LB2300                    | LB2300S  | HLB2300 | LB2400F                   | LB2400FS  | HLB2400F | HLB2300T                                      |
| 350 | 1750 | 3500 | LB2350                    | LB2350S  | HLB2350 | LB2400F                   | LB2400FS  | HLB2400F | HLB2350T                                      |
| 400 | 2000 | 4000 | LB2400                    | LB2400S  | HLB2400 | LB2400F                   | LB2400FS  | HLB2400F | HLB2400T                                      |
| 400 | MCS  |      | LB2400N                   | LB2400SN | .....   | LB2400NW                  | LB2400SNW | .....    | Incl. in Frame<br>Approx. Ship.<br>Wt. 2 Lbs. |
|     |      |      | Approx. Ship. Wt. 13 Lbs. |          |         | Approx. Ship. Wt. 10 Lbs. |           |          |                                               |

**3 Poles, 600 Volts Ac Only**

|     |      |      |                           |          |         |                           |           |          |                                                |
|-----|------|------|---------------------------|----------|---------|---------------------------|-----------|----------|------------------------------------------------|
| 70  | 350  | 700  | LB3070                    | LB3070S  | .....   | LB3400F                   | LB3400FS  | .....    | HLB3070T                                       |
| 90  | 450  | 900  | LB3090                    | LB3090S  | .....   | LB3400F                   | LB3400FS  | .....    | HLB3090T                                       |
| 100 | 500  | 1000 | LB3100                    | LB3100S  | .....   | LB3400F                   | LB3400FS  | .....    | HLB3100T                                       |
| 125 | 625  | 1250 | LB3125                    | LB3125S  | HLB3125 | LB3400F                   | LB3400FS  | HLB3400F | HLB3125T                                       |
| 150 | 750  | 1500 | LB3150                    | LB3150S  | HLB3150 | LB3400F                   | LB3400FS  | HLB3400F | HLB3150T                                       |
| 175 | 875  | 1750 | LB3175                    | LB3175S  | HLB3175 | LB3400F                   | LB3400FS  | HLB3400F | HLB3175T                                       |
| 200 | 1000 | 2000 | LB3200                    | LB3200S  | HLB3200 | LB3400F                   | LB3400FS  | HLB3400F | HLB3200T                                       |
| 225 | 1125 | 2250 | LB3225                    | LB3225S  | HLB3225 | LB3400F                   | LB3400FS  | HLB3400F | HLB3225T                                       |
| 250 | 1250 | 2500 | LB3250                    | LB3250S  | HLB3250 | LB3400F                   | LB3400FS  | HLB3400F | HLB3250T                                       |
| 300 | 1500 | 3000 | LB3300                    | LB3300S  | HLB3300 | LB3400F                   | LB3400FS  | HLB3400F | HLB3300T                                       |
| 350 | 1750 | 3500 | LB3350                    | LB3350S  | HLB3350 | LB3400F                   | LB3400FS  | HLB3400F | HLB3350T                                       |
| 400 | 2000 | 4000 | LB3400                    | LB3400S  | HLB3400 | LB3400F                   | LB3400FS  | HLB3400F | HLB3400T                                       |
| 400 | MCS  |      | LB3400N                   | LB3400SN | .....   | LB3400NW                  | LB3400SNW | .....    | Incl. in Frame<br>Approx. Ship.<br>Wt. 2½ Lbs. |
|     |      |      | Approx. Ship. Wt. 15 Lbs. |          |         | Approx. Ship. Wt. 12 Lbs. |           |          |                                                |

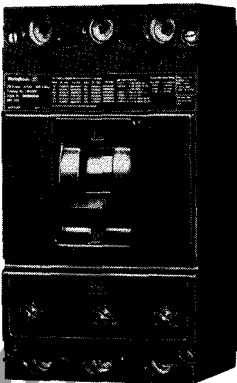
For Panelboard and switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

- ② Not listed with Underwriters' Laboratories, Inc.
- ③ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ④ Set on high side, adjustable to lower limits.
- ⑤ Terminals shipped separately from breaker.
- ⑥ Optional terminal.
- ⑦ Ratings above 10,000 amps not UL Listed.
- ⑧ Changed since previous issue.

**Terminals⑤**

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum cable, use joint compound. To order optional aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Amps.                             | Terminal<br>Cat. No. | Wire Range, Type,<br>No. of Cables       |
|-------------------------------------------|----------------------|------------------------------------------|
| <b>Standard Copper Pressure Terminals</b> |                      |                                          |
| 225                                       | T225LA               | 1 # 6-350 MCM Cu                         |
| 225⑥                                      | T225LBF              | 1 # 6-250 MCM Cu                         |
| 350                                       | T350DA               | 1 250-500 MCM Cu                         |
| 400                                       | T400DA2              | 2 3/0-250 MCM Cu                         |
| <b>Optional Al/Cu Pressure Terminals</b>  |                      |                                          |
| 225                                       | TA225LA1             | 1 # 6-350 MCM Cu, or<br>1 # 4-350 MCM Al |
| 350                                       | TA350DA              | 1 250-500 MCM Al/Cu                      |
| 400                                       | TA400DA1             | 2 3/0-250 MCM Al/Cu                      |



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LB breakers meet requirements for class 4b circuit breakers, and Type HLB meet requirements for class 4c, as defined by Federal Specification W-C-375a.

**Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

| Volts Max.               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 50,000 Asym., 42,000 Sym. |
| 480 Ac                   | 35,000 Asym., 30,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc                   | 20,000⑦                   |

**MARK 75 Breakers**

|        |                            |
|--------|----------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym.  |
| 480 Ac | 40,000 Asym., 35,000 Sym.⑧ |
| 600 Ac | 30,000 Asym., 25,000 Sym.  |
| 250 Dc | 20,000⑦                    |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

List Prices: See Price List 29-020 P WE A.

**Accessories and Modifications**  
Description: Pages 43-52



October, 1975  
Supersedes Price List 29-210,  
pages 23-24, all previous issues.  
Mailed to: E,D,C/1901, 1903, 1928/PL;  
E, D/2430

Type LB 400 Amperes  
Mark 75® Type HLB 400 Amperes  
Type LA 600 Amperes  
Mark 75® Type HLA 600 Amperes

## AB DE-ION® Circuit Breakers

**Type LB and MARK 75® Type HLB Breakers, Continued**  
70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip

### Special Breakers® Trip Units Only

| Continuous<br>Ampere<br>Rating | Magnetic Trip<br>Setting, Amperes® |      | Trip Unit Only             |                           |
|--------------------------------|------------------------------------|------|----------------------------|---------------------------|
|                                | Low                                | High | 2-Poles®<br>Catalog Number | 3-Poles<br>Catalog Number |

#### Magnetic Only Breakers, Front Adjustable

|     |      |      |            |            |
|-----|------|------|------------|------------|
| 400 | 350  | 700  | HLB2700TM  | HLB3700TM  |
| 400 | 625  | 1250 | HLB21250TM | HLB31250TM |
| 400 | 750  | 1500 | HLB21500TM | HLB31500TM |
| 400 | 875  | 1750 | HLB21750TM | HLB31750TM |
| 400 | 1125 | 2250 | HLB22250TM | HLB32250TM |
| 400 | 1500 | 3000 | HLB23000TM | HLB33000TM |
| 400 | 2000 | 4000 | HLB24000TM | HLB34000TM |

#### Ambient Compensating Breakers

|     |      |      |           |           |
|-----|------|------|-----------|-----------|
| 70  | 350  | 700  | HLB2070TA | HLB3070TA |
| 90  | 450  | 900  | HLB2090TA | HLB3090TA |
| 100 | 500  | 1000 | HLB2100TA | HLB3100TA |
| 125 | 625  | 1250 | HLB2125TA | HLB3125TA |
| 150 | 750  | 1500 | HLB2150TA | HLB3150TA |
| 175 | 875  | 1750 | HLB2175TA | HLB3175TA |
| 200 | 1000 | 2000 | HLB2200TA | HLB3200TA |
| 225 | 1125 | 2250 | HLB2225TA | HLB3225TA |
| 250 | 1250 | 2500 | HLB2250TA | HLB3250TA |
| 300 | 1500 | 3000 | HLB2300TA | HLB3300TA |
| 350 | 1750 | 3500 | HLB2350TA | HLB3350TA |
| 400 | 2000 | 4000 | HLB2400TA | HLB3400TA |

**List Prices:** See Price List 29-020 P WE A.

### Magnetic Only and Ambient Compensating Breakers®

For description, refer to DB 29-150 and AD 29-160. To order, select trip unit from table at left, frame and terminals from page 22.

### Special Calibrations®

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz ac circuits. See application data 29-160 for information regarding special conditions. Maximum calibration for 400 Hz is 300 amps.

| Type of<br>Calibration | 1-24<br>Identical Units                    | 25 or More<br>Identical Units |
|------------------------|--------------------------------------------|-------------------------------|
| Thermal                | { Add 30% to<br>List Price of<br>Trip Unit | None                          |
| Ambient<br>Frequency   |                                            | None                          |

### 50°C Calibration®

Add suffix "V" to catalog number for complete breaker or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

② Two-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.

③ Not listed with Underwriters' Laboratories, Inc.

④ Set on high side, adjustable to lower limits.

**Type LA and MARK 75® Type HLA 600 Amp Frame Breakers**250-600 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip  
Thermal Magnetic, Saf-T-Vue and MARK 75 Breakers

| Continuous<br>Ampere<br>Rating<br>⑥<br>40°C | Magnetic<br>Trip<br>Setting<br>Amperes<br>⑥<br>Low High | Complete Breaker              |                |         | Shipped as Frame, Trip Unit and Terminals④ |                |         |                                    |
|---------------------------------------------|---------------------------------------------------------|-------------------------------|----------------|---------|--------------------------------------------|----------------|---------|------------------------------------|
|                                             |                                                         | Includes Pressure Type Copper |                |         | Frame Only                                 |                |         | Trip Unit                          |
|                                             |                                                         | Terminals④                    |                |         |                                            |                |         | Only                               |
|                                             |                                                         | Catalog Number                |                |         | Catalog Number                             |                |         | Catalog                            |
|                                             |                                                         |                               |                |         |                                            |                |         | Number                             |
|                                             |                                                         |                               |                |         |                                            |                |         |                                    |
|                                             |                                                         | Standard                      | Saf-T-Vue<br>⑤ | MARK 75 | Standard                                   | Saf-T-Vue<br>⑤ | MARK 75 | Standard,<br>Saf-T-Vue,<br>MARK 75 |

**600 Ampere Frame Breakers③****2 Poles, 600 Volts Ac, 250 Volts Dc②**

|     |      |      |            |            |            |           |          |                |            |
|-----|------|------|------------|------------|------------|-----------|----------|----------------|------------|
| 250 | 1250 | 2500 | 2603D50G01 | 2603D50G13 | 1256C10G02 | LA2600F   | LA2600FS | HLA2600F       | 2603D46G07 |
| 300 | 1500 | 3000 | 2603D50G02 | 2603D50G14 | 1256C10G03 | LA2600F   | LA2600FS | HLA2600F       | 2603D46G08 |
| 350 | 1750 | 3500 | 2603D50G03 | 2603D50G15 | 1256C10G04 | LA2600F   | LA2600FS | HLA2600F       | 2603D46G09 |
| 400 | 2000 | 4000 | 2603D50G04 | 2603D50G16 | 1256C10G05 | LA2600F   | LA2600FS | HLA2600F       | 2603D46G10 |
| 500 | 2500 | 5000 | LA2500     | LA2500S    | HLA2500    | LA2600F   | LA2600FS | HLA2600F       | HLA2500T   |
| 600 | 3000 | 6000 | LA2600     | LA2600S    | HLA2600    | LA2600F   | LA2600FS | HLA2600F       | HLA2600T   |
| 600 | MCS  |      | LA2600N    | LA2600SN   | LA2600NW   | LA2600SNW |          | Incl. in Frame |            |

**3 Poles, 600 Volts Ac Only**

|     |      |      |            |            |            |           |          |                |            |
|-----|------|------|------------|------------|------------|-----------|----------|----------------|------------|
| 250 | 1250 | 2500 | 2603D50G07 | 2603D50G19 | 1256C10G12 | LA3600F   | LA3600FS | HLA3600F       | 2603D46G26 |
| 300 | 1500 | 3000 | 2603D50G08 | 2603D50G20 | 1256C10G13 | LA3600F   | LA3600FS | HLA3600F       | 2603D46G27 |
| 350 | 1750 | 3500 | 2603D50G09 | 2603D50G21 | 1256C10G14 | LA3600F   | LA3600FS | HLA3600F       | 2603D46G28 |
| 400 | 2000 | 4000 | 2603D50G10 | 2603D50G22 | 1256C10G15 | LA3600F   | LA3600FS | HLA3600F       | 2603D46G29 |
| 500 | 2500 | 5000 | LA3500     | LA3500S    | HLA3500    | LA3600F   | LA3600FS | HLA3600F       | HLA3500T   |
| 600 | 3000 | 6000 | LA3600     | LA3600S    | HLA3600    | LA3600F   | LA3600FS | HLA3600F       | HLA3600T   |
| 600 | MCS  |      | LA3600N    | LA3600SN   | LA3600NW   | LA3600SNW |          | Incl. in Frame |            |

For Panelboard and Switchboards applications where only line side terminals are required, add suffix "X" to complete breaker catalog number.

**Special Breakers⑤ Trip Units Only**

| Contin-<br>uous<br>Ampere<br>Rating | Magnetic<br>Trip Setting,<br>Amperes⑥<br>Low High | Cat/Style Number |         |
|-------------------------------------|---------------------------------------------------|------------------|---------|
|                                     |                                                   | 2-Poles②         | 3-Poles |

**Magnetic Only Breakers, Front Adjustable****600 Ampere Frame Breakers③**

|     |      |      |            |            |
|-----|------|------|------------|------------|
| 600 | 1125 | 2250 | 2603D47G07 | 2603D47G26 |
| 600 | 1500 | 3000 | 2603D47G08 | 2603D47G27 |
| 600 | 2000 | 4000 | 2603D47G10 | 2603D47G29 |
| 600 | 2500 | 5000 | HLA2500TM  | HLA3500TM  |
| 600 | 3000 | 6000 | HLA2600TM  | HLA3600TM  |

**Ambient Compensating Breakers****600 Ampere Frame Breakers③**

|     |      |      |            |            |
|-----|------|------|------------|------------|
| 250 | 1250 | 2500 | 5683D88G07 | 5683D88G26 |
| 300 | 1500 | 3000 | 5683D88G08 | 5683D88G27 |
| 350 | 1750 | 3500 | 5683D88G09 | 5683D88G28 |
| 400 | 2000 | 4000 | 5683D88G10 | 5683D88G29 |
| 500 | 2500 | 5000 | HLA2500TA  | HLA3500TA  |
| 600 | 3000 | 6000 | HLA2600TA  | HLA3600TA  |

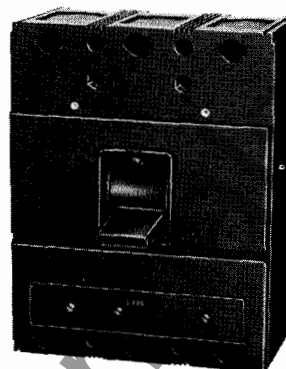
**Special Calibrations⑤**

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hz Ac circuits. See application data 29-160 for information regarding special conditions. Maximum 400 Hz calibration: 600 amp frame, 450 amps.

| Type of<br>Calibration          | 1-24 Identical<br>Units                  | 25 or More<br>Identical Units |
|---------------------------------|------------------------------------------|-------------------------------|
| Thermal<br>Ambient<br>Frequency | Add 20% to<br>List Price of<br>Trip Unit | None<br>None<br>None          |

**50°C Calibration⑤**

Add suffix "V" to catalog number for complete breaker or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriter's Laboratories, Inc. except as noted.

Type LA breakers meet requirements for class 4b circuit breakers, and Type HLA meet requirements for class 4c as defined by Federal Specification W-C-375a.

**Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

Volts Max. Amperes

**Standard Breakers**

|        |                           |
|--------|---------------------------|
| 240 Ac | 50,000 Asym., 42,000 Sym. |
| 480 Ac | 35,000 Asym., 30,000 Sym. |
| 600 Ac | 25,000 Asym., 22,000 Sym. |
| 250 Dc | 20,000⑧                   |

**Mark 75 Breakers**

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |
| 250 Dc | 20,000⑧                   |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

**Terminals③④**

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used aluminum cable, use joint compound. To order optional aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Amps                              | Terminal<br>Cat. Number | Wire Range, Type<br>No. of Cables |
|-------------------------------------------|-------------------------|-----------------------------------|
| <b>Standard Copper Pressure Terminals</b> |                         |                                   |
| 600⑦                                      | T600LA                  | 2 250-500 MCM Cu                  |
| <b>Optional Al/Cu Pressure Terminals</b>  |                         |                                   |
| 600⑦                                      | TA600LA                 | 2 250-500 MCM Al/Cu               |

**Magnetic Only and Ambient Compensating Breakers⑤**

For description, refer to DB 29-150 and AD 29-160. To order, select frame, trip unit and terminals from tables this page.

**Accessories and Modifications**  
Description: Pages 43-52

② Two-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.

③ Terminals, trip units and accessories are not interchangeable between 400 and 600 ampere frames.

④ Terminals shipped separately from breakers.

⑤ Not listed with Underwriters' Laboratories, Inc.

⑥ Set on high side, adjustable to lower limits.

⑦ For 600 amp frame breakers only.

⑧ Ratings above 10,000 amps not UL listed.



January, 1976  
New Information  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type LC and MARK 75 Type HLC  
75-600 Amperes SELTRONIC™ Breakers

## AB DE-ION® Circuit Breakers

### Type LC and HLC MARK 75® SELTRONIC™ Circuit Breakers With Solid State Trip Units

Standard Breakers, 600 Volts Ac, 60 Hz Complete Breaker Requires Frame,  
Rating Plug and Terminals

#### Frame Only

| Poles<br>④                | Catalog Numbers                                    |                   | Rating Plugs Only (For 2 or 3 Pole Frame) |                                     |      |                       |                              |
|---------------------------|----------------------------------------------------|-------------------|-------------------------------------------|-------------------------------------|------|-----------------------|------------------------------|
|                           | Standard<br>(Long Delay<br>and Mag-<br>netic Trip) | Magnetic<br>Only⑥ | Cont.<br>Amp.<br>Rat-<br>ing②             | Magnetic<br>Trip Setting<br>Amperes |      | Fixed Rating<br>Plugs | Adjustable Rating<br>Plugs①⑤ |
|                           |                                                    |                   |                                           | Low                                 | High | Catalog<br>Number     | Catalog<br>Number            |
| Type LC 150 (75-150 Amp.) |                                                    |                   |                                           |                                     |      |                       |                              |
| 2                         | LC2150F                                            | LC2150FM          | 75                                        | 375                                 | 750  | 1LC75                 | .....                        |
| 3                         | LC3150F                                            | LC3150FM          | 90                                        | 450                                 | 900  | 1LC90                 | .....                        |
|                           |                                                    |                   | 100                                       | 500                                 | 1000 | 1LC100                | A1LC100                      |
|                           |                                                    |                   | 125                                       | 625                                 | 1250 | 1LC125                | A1LC125                      |
|                           |                                                    |                   | 150                                       | 750                                 | 1500 | 1LC150                | A1LC150                      |

#### MARK 75 Type HLC 150 (75-150 Amp.)

|   |          |           |                                     |  |  |  |  |
|---|----------|-----------|-------------------------------------|--|--|--|--|
| 2 | HLC2150F | HLC2150FM | Use LC150 rating plugs listed above |  |  |  |  |
| 3 | HLC3150F | HLC3150FM |                                     |  |  |  |  |

#### Type LC 300 (150-300 Amp.)

|   |         |           |     |      |      |        |         |
|---|---------|-----------|-----|------|------|--------|---------|
| 2 | LC2300F | HLC2300FM | 150 | 750  | 1500 | 3LC150 | .....   |
| 3 | LC3300F | HLC3300FM | 175 | 875  | 1750 | 3LC175 | .....   |
|   |         |           | 200 | 1000 | 2000 | 3LC200 | .....   |
|   |         |           | 225 | 1125 | 2250 | 3LC225 | A3LC225 |
|   |         |           | 250 | 1250 | 2500 | 3LC250 | A3LC250 |
|   |         |           | 275 | 1375 | 2750 | 3LC275 | A3LC275 |
|   |         |           | 300 | 1500 | 3000 | 3LC300 | A3LC300 |

#### MARK 75 Type HLC 300 (150-300 Amp.)

|   |          |           |                                      |  |  |  |  |
|---|----------|-----------|--------------------------------------|--|--|--|--|
| 2 | HLC2300F | HLC2300FM | Use LC300 rating plugs listed above. |  |  |  |  |
| 3 | HLC3300F | HLC3300FM |                                      |  |  |  |  |

#### Type LC 600 (300-600 Amp.)

|   |         |          |     |      |      |        |         |
|---|---------|----------|-----|------|------|--------|---------|
| 2 | LC2600F | LC2600FM | 300 | 1500 | 3000 | 6LC300 | .....   |
| 3 | LC3600F | LC3600FM | 350 | 1750 | 3500 | 6LC350 | .....   |
|   |         |          | 400 | 2000 | 4000 | 6LC400 | A6LC400 |
|   |         |          | 450 | 2250 | 4500 | 6LC450 | A6LC450 |
|   |         |          | 500 | 2500 | 5000 | 6LC500 | A6LC500 |
|   |         |          | 600 | 3000 | 6000 | 6LC600 | A6LC600 |

#### MARK 75 Type HLC 600 (300-600 Amps.)

|   |          |           |                                       |  |  |  |  |
|---|----------|-----------|---------------------------------------|--|--|--|--|
| 2 | HLC2600F | HLC2600FM | Use LC 600 rating plugs listed above. |  |  |  |  |
| 3 | HLC3600F | HLC3600FM |                                       |  |  |  |  |

#### Type LC 600 MCS (Non-auto)⑩

|   |          |       |     |                            |  |  |  |
|---|----------|-------|-----|----------------------------|--|--|--|
| 2 | LC2600NW | ..... | 600 | Rating plugs not required. |  |  |  |
| 3 | LC3600NW | ..... | 600 |                            |  |  |  |

#### Field Mountable Attachments⑦⑧⑨⑩⑪

| Description                                                                                                                     | Style Number |
|---------------------------------------------------------------------------------------------------------------------------------|--------------|
| Provision to trip flux transfer shunt trip from external 32 to 120 Volt (Dc to 60 Hz) source⑧.....                              | 2609D30G10   |
| Provision to trip flux transfer shunt trip from external 32-120⑧ volts (Dc to 60 Hz) source, plus a 1A-1B auxiliary switch..... | 2609D30G09   |
| 1A-1B Auxiliary Switch.....                                                                                                     | 2609D30G03   |

② Ampere rating when used in magnetic only frames:  
LC-150: 150 Amps; LC-300: 300 Amps; LC-600:  
600 Amps

③ Magnetic trip range of adjusting plug: 5 to 10  
times amp setting.

④ Two pole breakers supplied in three pole frames  
with current carrying parts omitted from center  
pole.

⑤ Adjustable 70-100%, except 100 amp and 400  
amp plugs are 75-100%.

⑥ Not UL Listed.

⑦ Only one attachment may be mounted per breaker.

⑧ Rated 48 volts minimum for ground fault appli-  
cations requiring tripping @ 55% of voltage.

⑨ For other possible combinations refer to West-  
inghouse.

⑩ Non-auto breakers do not use standard SELTRONIC  
attachments, and should be ordered by description  
for factory mounting.

⑪ Does not void listing of UL Listed breakers.



Listed with Underwriters' Laboratories,  
Inc. except as noted.

Type LC breakers meet requirements for class  
4B circuit breakers, and Type HLC meet re-  
quirements for class 4C as defined by Federal  
Specification W- C-375a.

Underwriters' Laboratories, Inc. Listed  
Interrupting Ratings

Volts Max.      Amperes

#### Standard Breakers

|        |                           |
|--------|---------------------------|
| 240 Ac | 50,000 Asym., 42,000 Sym. |
| 480 Ac | 35,000 Asym., 30,000 Sym. |
| 600 Ac | 25,000 Asym., 22,000 Sym. |

#### MARK 75 Breakers

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |

On all 3 phase Delta, Grounded B phase  
applications, refer to Westinghouse.

List Prices: Price List 29-020 P WE A

Terminals: Page 24.2

Factory Mounted and Other Accessories

and Modifications: Pages 43-52

(these include factory mounted Undervoltage  
Release attachments that are priced the same  
as those listed for Type MC breakers.)

For the following accessories:

|                      |                 |
|----------------------|-----------------|
| Rear Connected Studs | For LC-150,     |
| Panelboard Straps    | LC-300: Use     |
| Plug-in Adapter Kits | Same as LA400   |
| Handle Locks         | For LC-600: Use |
| Base Mtg. Hardware   | same as LA600   |



**Terminals (Order Separately)**

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum cable, use joint compound.

| Max.<br>Amps. | Terminal<br>Cat. No. | Wire Range, type<br>No. of Cables |
|---------------|----------------------|-----------------------------------|
|---------------|----------------------|-----------------------------------|

**LC150, HLC150, LC300 and HLC300**

**Standard Copper Pressure Terminals**

|     |         |                                                |
|-----|---------|------------------------------------------------|
| 225 | T225LA  | (1) # 6-350 MCM Cu                             |
| 225 | T225LBF | (1) # 6-250 MCM Cu                             |
| 300 | T401LA  | (1) # 4-250 MCM Cu, plus<br>(1) 3/0-600 MCM Cu |

**Optional Al/Cu Pressure Terminals**

|     |          |                                                      |
|-----|----------|------------------------------------------------------|
| 225 | TA225LA1 | (1) # 6-350 MCM Cu, or<br>(1) # 4-350 MCM Al         |
| 300 | TA400LA1 | (1) # 4-250 MCM Al/Cu, plus<br>(1) 3/0-600 MCM Al/Cu |
| 300 | TA401LA  | (1) 600-750 MCM Al                                   |

**LC600 and HLC 600 Only**

**Standard Copper Pressure Terminals**

|     |        |                    |
|-----|--------|--------------------|
| 600 | T600LA | (2) 250-500 MCM Cu |
|-----|--------|--------------------|

**Optional Al/Cu Pressure Terminals**

|     |         |                       |
|-----|---------|-----------------------|
| 600 | TA600LA | (2) 250-500 MCM Al/Cu |
|-----|---------|-----------------------|



June, 1976  
Supersedes Price List 29-120,  
pages 25-26, dated October, 1975  
Mailed to: E,D,C/1901, 1903, 1928/DB

Type MC and MARK 75 type HMC  
800 Ampere SELTRONIC™ Breakers  
Type NC and MARK 75 Type HNC  
1200 Ampere SELTRONIC Breakers

## AB DE-ION® Circuit Breakers

### Type MC and HMC MARK 75® SELTRONIC™ Circuit Breakers with Solid State Trip Units.

#### Standard Breakers, 600 volts Ac 50/60 Hz Complete Breaker Requires Frame, Rating Plug, and Terminals

| Frame Only              |                                         |                | Rating Plugs Only (For 2 or 3 Pole Frame) |                                |      |                    |                           |
|-------------------------|-----------------------------------------|----------------|-------------------------------------------|--------------------------------|------|--------------------|---------------------------|
| Poles                   | Catalog Numbers                         |                | Cont. Amp Rating<br>②                     | Magnetic Trip Setting, Amperes |      | Fixed Rating Plugs | Adjustable Rating Plugs③⑤ |
| ⑨                       | Standard (Long Delay and Magnetic Trip) | Magnetic Only⑥ |                                           | Low                            | High | Catalog Numbers    | Catalog Numbers           |
| Type MC 400 to 800 Amps |                                         |                |                                           |                                |      |                    |                           |
| 2                       | MC2800F                                 | MC2800FM       | 400                                       | 2000                           | 4000 | 8MC400             | .....                     |
| 3                       | MC3800F                                 | MC3800FM       | 500                                       | 2500                           | 5000 | 8MC500             | A8MC500                   |
|                         |                                         |                | 600                                       | 3000                           | 6000 | 8MC600             | A8MC600                   |
|                         |                                         |                | 700                                       | 3500                           | 7000 | 8MC700             | A8MC700                   |
|                         |                                         |                | 800                                       | 4000                           | 8000 | 8MC800             | A8MC800                   |

#### Mark 75 Type HMC 400 to 800 Amps

|   |          |           |                                                                     |
|---|----------|-----------|---------------------------------------------------------------------|
| 2 | HMC2800F | HMC2800FM | Use MC rating plugs listed above, and MC<br>terminals listed below. |
| 3 | HMC3800F | HMC3800FM |                                                                     |

#### SELTRONIC Breakers With Built-in Ground Fault Protection Includes Extra Current Transformer for Neutral⑩⑪

| Frame Only                  |                                                                                | Rating Plugs Only (For G.F. Breakers only) |                                     |      |                       | Ground Fault Characteristics |                 |
|-----------------------------|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------|------|-----------------------|------------------------------|-----------------|
| Poles<br>⑨                  | Catalog Numbers<br>Standard (Long<br>Delay, Magnetic and<br>Ground Fault Trip) | Cont.<br>Amp<br>Rating                     | Magnetic<br>Trip Setting<br>Amperes |      | Fixed Rating<br>Plug⑧ | Pick-up<br>Setting           | Time<br>Setting |
|                             |                                                                                |                                            | Low                                 | High | Cat. Number           |                              |                 |
| Type MCG 400 to 800 Amperes |                                                                                |                                            |                                     |      |                       |                              |                 |
| 2                           | MCG2800F                                                                       | 400                                        | 2000                                | 4000 | 8MCG400               | { 2-1.0X Rtg.                | 6-30Cy          |
| 3                           | MCG3800F                                                                       | 500                                        | 2500                                | 5000 | 8MCG500               |                              |                 |
|                             |                                                                                | 600                                        | 3000                                | 6000 | 8MCG600               |                              |                 |
|                             |                                                                                | 700                                        | 3500                                | 7000 | 8MCG700               |                              |                 |
|                             |                                                                                | 800                                        | 4000                                | 8000 | 8MCG800               |                              |                 |

#### MARK 75 HMCG 400 to 800 Amperes

|   |           |                                                              |
|---|-----------|--------------------------------------------------------------|
| 2 | HMCG2800F | Use same rating plugs, terminals and data for type MCG above |
| 3 | HMCG3800F |                                                              |

#### Molded Case Switches⑫ (Non-Automatic Breakers)

Rating plugs are not required. Order terminals  
separately.

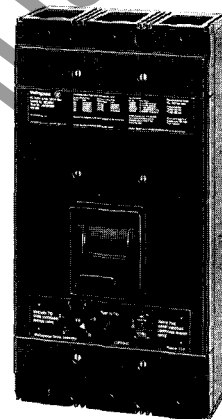
| Poles | Max.<br>Amps | Catalog<br>Numbers |
|-------|--------------|--------------------|
| 2     | 800          | MC2800NW           |
| 3     | 800          | MC3800NW           |

#### Terminals (Two Required per Pole)⑬

| Max.<br>Amps                   | Terminal<br>Cat. No. | No., Size of Cable |
|--------------------------------|----------------------|--------------------|
| Copper Only Pressure Terminals |                      |                    |
| 600                            | T600MA1              | (2) 2/0-500MCM     |
| 800                            | T800MA1              | (3) 3/0-300MCM     |
| Al/Cu Pressure Terminals       |                      |                    |
| 600                            | TA700MA1             | (2) #1-500MCM      |
| 800                            | TA800MA2             | (3) 3/0-400MCM     |
| 800                            | TA801MA              | (2) 500-750MCM     |

#### Field Mountable Attachments⑭⑮⑯⑰

| Description                                                                                                                          | Style Number |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Provision to trip flux transfer shunt trip from external 32 to 120 Volt (Dc to 60 Hz) source.⑮.....                                  | 2609D10G10   |
| Provision to trip flux transfer shunt trip from external 240 to 600 Volt Ac 50/60 Hz source⑮.....                                    | 2609D10G30   |
| Provision to trip flux transfer shunt trip from external 32-120⑮ volts (Dc to 60 Hz) source, plus<br>a 1A-1B auxiliary switch.....   | 2609D10G09   |
| Provision to trip flux transfer shunt trip from external 240 to 600 Volt Ac 50/60 Hz source,<br>⑮ plus a 1A-1B auxiliary switch..... | 2609D10G29   |
| 1A-1B Auxiliary Switch.....                                                                                                          | 2609D10G03   |



Listed with Underwriters' Laboratories,  
Inc. except as noted.

Type MC SELTRONIC breakers meet require-  
ments for class 21a, and MARK 75. Type HMC  
meet class 23a as defined by Federal Spec  
W-C-375b.

#### UL Listed Interrupting Capacity, RMS Symmetrical Amperes

| Breaker   | Ac Volts |       |       |
|-----------|----------|-------|-------|
|           | 240      | 480   | 600   |
| MC, MCG   | 42000    | 30000 | 22000 |
| HMC, HMCG | 65000    | 50000 | 25000 |

Factory Mounted Accessories and  
Modifications: Page 43-52  
Portable Test Kit: Page 28

⑨ Changed since previous issue.

② Ampere rating when used in magnetic only frames:  
MC=800 Amps

③ Magnetic trip range of adjusting plug:

MC=5 to 10 times Amp setting

④ Does not void listing of UL Listed breakers.

⑤ Adjustable 70-100%, except MC500 amp is 80-  
100%.

⑥ Not U/L listed.

⑦ Only one of the attachments may be mounted per  
breaker.

⑧ Rated 48 volts minimum for ground fault applications  
requiring tripping @ 55% of voltage.

⑨ Two pole breakers are supplied in three pole frames  
with current-carrying parts omitted from center pole.

⑩ For other possible combinations, refer to factory.

⑪ Non-automatic breakers do not use standard sel-  
tronic attachments and should be ordered by description

⑫ Also used on breakers with ground fault and on  
separately mounted neutral current transformers.

⑬ Adjustable rating plug not available.

⑭ Available without extra C.T. for neutral. Order by

description, as similar to above except without neutral

C.T. or external C.T. Terminal connections. (Same Price)

Note the standard ground fault unit above can also be  
used without the neutral C.T.

⑮ Order two of the desired terminals for each pole of the  
breaker and two for the neutral C.T.

⑯ Not for Ground Fault Applications.

**Type NC and HNC MARK 75® SELTRONIC™ Circuit Breakers with Solid State Trip Units.**

**Standard Breakers, 600 volts Ac 50/60 Hz Complete Breaker Requires Frame, Rating Plug, and Terminals**

| Frame Only                |                                                  |                   | Rating Plugs Only (For 2 or 3 Pole Frame) |                                      |      |                       |                              |
|---------------------------|--------------------------------------------------|-------------------|-------------------------------------------|--------------------------------------|------|-----------------------|------------------------------|
| Poles<br>⑨                | Catalog Numbers                                  |                   | Cont.<br>Amp<br>Rating<br>②               | Magnetic<br>Trip Setting,<br>Amperes |      | Fixed Rating<br>Plugs | Adjustable Rating<br>Plugs③⑤ |
|                           | Standard<br>(Long Delay<br>and Magnetic<br>Trip) | Magnetic<br>Only⑥ |                                           |                                      |      | Catalog<br>Numbers    | Catalog<br>Numbers           |
| Type NC 800 to 1200 Amps④ |                                                  |                   |                                           |                                      |      |                       |                              |
| 2                         | NC21200F                                         | NC21200FM         | 800                                       | 3200                                 | 6400 | 12NC800               | A12NC800                     |
| 3                         | NC31200F                                         | NC31200FM         | 900                                       | 3600                                 | 7200 | 12NC900               | A12NC900                     |
|                           |                                                  |                   | 1000                                      | 4000                                 | 8000 | 12NC1000              | A12NC1000                    |
|                           |                                                  |                   | 1200                                      | 4800                                 | 9600 | 12NC1200              | A12NC1200                    |

**Mark 75 Type HNC 800 to 1200 Amps④**

|   |           |            |                                                                    |  |  |  |  |
|---|-----------|------------|--------------------------------------------------------------------|--|--|--|--|
| 2 | HNC21200F | HNC21200FM | Use NC rating plugs listed above, and NC<br>Terminals listed below |  |  |  |  |
| 3 | HNC31200F | HNC31200FM |                                                                    |  |  |  |  |

**SELTRONIC Breakers With Built-in Ground Fault Protection  
Includes Extra Current Transformer for Neutral⑩⑪**

| Frame Only                    |                                                                                | Rating Plugs Only (For G.F. Breakers Only) |                                     |      |                       | Ground Fault Characteristics |                 |
|-------------------------------|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------|------|-----------------------|------------------------------|-----------------|
| Poles<br>⑨                    | Catalog Numbers<br>Standard (Long<br>Delay, Magnetic and<br>Ground Fault Trip) | Cont.<br>Amp<br>Rating                     | Magnetic<br>Trip Setting<br>Amperes |      | Fixed Rating<br>Plug⑩ | Pick-up<br>Setting           | Time<br>Setting |
|                               |                                                                                |                                            | Low                                 | High | Style Number          |                              |                 |
| Type NCG 800 to 1200 Amperes④ |                                                                                |                                            |                                     |      |                       |                              |                 |
| 2                             | NCG21200F                                                                      | 800                                        | 3200                                | 6400 | 12NCG800              | 2-1.0X Rtg.                  | 6-30Cy          |
| 3                             | NCG31200F                                                                      | 900                                        | 3600                                | 7200 | 12NCG900              |                              |                 |
|                               |                                                                                | 1000                                       | 4000                                | 8000 | 12NCG1000             |                              |                 |
|                               |                                                                                | 1200                                       | 4800                                | 9600 | 12NCG1200             |                              |                 |

**MARK 75 HNCG 800 to 1200 Amperes④**

|   |            |                                                              |  |  |  |  |  |
|---|------------|--------------------------------------------------------------|--|--|--|--|--|
| 2 | HNCG21200F | Use same rating plugs, terminals and data for type NCG above |  |  |  |  |  |
| 3 | HNCG31200F |                                                              |  |  |  |  |  |

**Molded Case Switches®  
(Non-Automatic Breakers)**

Rating plugs are not required. Order terminals separately.

| Poles | Max.<br>Amps | Catalog<br>Numbers |
|-------|--------------|--------------------|
| 2     | 1200         | NC21200NW          |
| 3     | 1200         | NC31200NW          |

**Terminals (Two Required Per Pole)⑫**

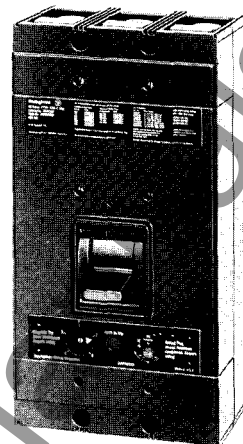
| Max.<br>Amps                          | Terminal<br>Cat. No. | No., Size of Cable |
|---------------------------------------|----------------------|--------------------|
| <b>Copper Only Pressure Terminals</b> |                      |                    |
| 1000                                  | T1000NB1             | (3) 3/0-500MCM     |
| 1200                                  | T1200NB1             | (4) 3/0-400MCM     |
| <b>Al/Cu Pressure Terminals</b>       |                      |                    |
| 1000                                  | TA1000NB1            | (3) 3/0-400MCM     |
| 1200                                  | TA1200NB1            | (4) 4/0-500MCM     |
| 1200                                  | TA1201NB1            | (3) 500-750MCM     |

**Field Mountable Attachments⑭⑮⑯⑰**

| Description                                                                                                                        | Style Number |
|------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Provision to trip flux transfer shunt trip from external 32 to 120 Volt (Dc to 60 Hz) source.⑮                                     | 2609D11G10   |
| Provision to trip flux transfer shunt trip from external 240 to 600 Volts Ac 50/60 Hz source⑮                                      | 2609D11G30   |
| Provision to trip flux transfer shunt trip from external 32-120⑮ volts (Dc to 60 Hz) source, plus<br>a 1A-1B auxiliary switch.⑰    | 2609D11G09   |
| Provision to trip flux transfer shunt trip from external 240 to 600 Volts Ac 50/60 Hz source,<br>⑮ plus a 1A-1B auxiliary switch.⑰ | 2609D11G29   |
| 1A-1B Auxiliary Switch.⑰                                                                                                           | 2609D11G03   |

**List Prices:** See Price List 29-020 P WE A

**Discount Symbol:** CB-2



**Listed with Underwriters' Laboratories, Inc. except as noted.**

Type NC SELTRONIC breakers meet requirements for class 21a, and MARK 75.  
Type HNC meet class 23a as defined by Federal Spec W-C-375b.

**UL Listed Interrupting Capacity, RMS Symmetrical Amperes**

| Breaker   | Ac Volts |       |       |
|-----------|----------|-------|-------|
|           | 240      | 480   | 600   |
| NC, NCG   | 42000    | 30000 | 22000 |
| HNC, HNCG | 65000    | 50000 | 25000 |

**Factory Mounted Accessories and Modifications: Page 43-52.  
Portable Test Kit: Page 28.**

- ④ Changed since previous issue.
- ⑤ Ampere rating when used in magnetic only frames: NC=1200 Amps
- ⑥ Magnetic trip range of adjustable plug: NC=4 to 8 Times Amp setting
- ⑦ Does not void listing of UL Listed breakers.
- ⑧ Adjustable 70-100%, except NC 800 amp is 75-100%.
- ⑨ Not U/L listed.
- ⑩ Only one of the attachments may be mounted per breaker.
- ⑪ Rated 48 volts minimum for ground fault applications requiring tripping @ 55% of voltage.
- ⑫ Two pole breakers are supplied in three pole frames with current-carrying parts omitted from center pole.
- ⑬ For other possible combinations, refer to factory.
- ⑭ Non-automatic breakers do not use standard seltronic attachments and should be ordered by description.
- ⑮ Also used on breakers with ground fault and on separately mounted neutral current transformers.
- ⑯ Adjustable rating plug not available.
- ⑰ Available without extra C.T. for neutral. Order by description as similar to above except without neutral C.T. or external C.T. Terminal connections. (Same Price)
- Note** the standard ground fault unit above can also be used without the neutral C.T.
- ⑱ Order two of the desired terminals for each pole of the breaker and two for the neutral C.T.
- ⑲ Not for Ground Fault Applications



January, 1976  
Supersedes Tech. Data 29-120 T WE A  
pages 27-28, dated October, 1975.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type PC and PCC 2000, 2500  
and 3000 Ampere SELTRONIC Breakers

## AB DE-ION® Circuit Breakers

### Type PC and PCC 2000, 2500 and 3000 Ampere SELTRONIC™ Circuit Breakers With Solid State Trip Units, 600 Volts Ac, 60 Hz Complete Breaker Requires Frame, Rating Plug and Rear Connectors

#### Breakers for Standard Applications

| Frame Only |                    |          |
|------------|--------------------|----------|
| Poles      | Catalog Numbers    |          |
| ⑥          | Standard           | Magnetic |
|            | (Long Delay        | Only ④   |
|            | and Magnetic Trip) |          |

#### Type PC 2000, 1000 to 2000 Amps ⑤

| Rear Connected Breakers |          |           |
|-------------------------|----------|-----------|
| 2                       | PC22000F | PC22000FM |
| 3                       | PC32000F | PC32000FM |

#### Front Connected Breakers

|   |           |            |
|---|-----------|------------|
| 2 | PCF22000F | PCF22000FM |
| 3 | PCF32000F | PCF32000FM |

#### Type PC 2500, 1400 to 2500 Amps ⑤

| Rear Connected Breakers |          |           |
|-------------------------|----------|-----------|
| 2                       | PC22500F | PC22500FM |
| 3                       | PC32500F | PC32500FM |

#### Front Connected Breakers

|   |           |            |
|---|-----------|------------|
| 2 | PCF22500F | PCF22500FM |
| 3 | PCF32500F | PCF32500FM |

#### Type PC 3000, 1600 to 3000 Amps ⑤

|   |          |           |
|---|----------|-----------|
| 2 | PC23000F | PC23000FM |
| 3 | PC33000F | PC33000FM |

#### Breakers for Application at 100% Rating

| Frame Only |                    |          |
|------------|--------------------|----------|
| Poles      | Catalog Numbers    |          |
| ⑥          | Standard           | Magnetic |
|            | (Long Delay        | Only ④   |
|            | and Magnetic Trip) |          |

#### Type PCC 2000, 1000 to 2000 Amps ⑦

| Rear Connected Breakers |           |            |
|-------------------------|-----------|------------|
| 2                       | PCC22000F | PCC22000FM |
| 3                       | PCC32000F | PCC32000FM |

#### Front Connected Breakers

|   |            |             |
|---|------------|-------------|
| 2 | PCCF22000F | PCCF22000FM |
| 3 | PCCF32000F | PCCF32000FM |

#### Type PCC 2500, 1400 to 2500 Amps ⑦

| Rear Connected Breakers |           |            |
|-------------------------|-----------|------------|
| 2                       | PCC22500F | PCC22500FM |
| 3                       | PCC32500F | PCC32500FM |

#### Front Connected Breakers

|   |            |             |
|---|------------|-------------|
| 2 | PCCF22500F | PCCF22500FM |
| 3 | PCCF32500F | PCCF32500FM |

#### Type PCC 3000, 1600 to 3000 Amps ⑦

|   |           |            |
|---|-----------|------------|
| 2 | PCC23000F | PCC23000FM |
| 3 | PCC33000F | PCC33000FM |

#### Rating Plugs Only (For 2 or 3 Pole Frame)

| Cont.<br>Amp.<br>Rat-<br>ing<br>① | Magnetic<br>Trip Setting<br>Amperes |      | Fixed Rating<br>Plugs | Adjustable②③<br>Rating Plugs |
|-----------------------------------|-------------------------------------|------|-----------------------|------------------------------|
|                                   | Low                                 | High |                       |                              |
|                                   |                                     |      | Catalog<br>Number     | Catalog<br>Number            |

|      |      |       |          |           |
|------|------|-------|----------|-----------|
| 1000 | 3000 | 6000  | 20PC1000 | .....     |
| 1200 | 3600 | 7200  | 20PC1200 | .....     |
| 1400 | 4200 | 8400  | 20PC1400 | .....     |
| 1600 | 4800 | 9600  | 20PC1600 | A20PC1600 |
| 1800 | 5400 | 10800 | 20PC1800 | A20PC1800 |
| 2000 | 6000 | 12000 | 20PC2000 | A20PC2000 |
| 1400 | 3500 | 7000  | 25PC1400 | .....     |
| 1600 | 4000 | 8000  | 25PC1600 | .....     |
| 1800 | 4500 | 9000  | 25PC1800 | A25PC1800 |
| 2000 | 5000 | 10000 | 25PC2000 | A25PC2000 |
| 2500 | 6250 | 12500 | 25PC2500 | A25PC2500 |
| 1600 | 3200 | 6400  | 30PC1600 | .....     |
| 1800 | 3600 | 7200  | 30PC1800 | .....     |
| 2000 | 4000 | 8000  | 30PC2000 | .....     |
| 2500 | 5000 | 10000 | 30PC2500 | A30PC2500 |
| 3000 | 6000 | 12000 | 30PC3000 | A30PC3000 |

### SELTRONIC Circuit Breakers With Built-in Ground Fault Protection -- Includes

#### External Current Transformer for Neutral⑧

#### Breakers for Standard Applications

| Frames Only |                    |          |
|-------------|--------------------|----------|
| Poles       | Catalog Numbers    |          |
| ⑥           | Standard           | Magnetic |
|             | (Long Delay        | Only ④   |
|             | and Magnetic Trip) |          |

#### Type PCG 2000 ⑤

| Rear Connected Breakers |           |            |
|-------------------------|-----------|------------|
| 2                       | PCG22000F | PCG22000FM |
| 3                       | PCG32000F | PCG32000FM |

#### Front Connected Breakers

|   |            |             |
|---|------------|-------------|
| 2 | PCFG22000F | PCFG22000FM |
| 3 | PCFG32000F | PCFG32000FM |

#### Type PCG 2500 ⑤

| Rear Connected Breakers |           |            |
|-------------------------|-----------|------------|
| 2                       | PCG22500F | PCG22500FM |
| 3                       | PCG32500F | PCG32500FM |

#### Front Connected Breakers

|   |            |             |
|---|------------|-------------|
| 2 | PCFG22500F | PCFG22500FM |
| 3 | PCFG32500F | PCFG32500FM |

#### Type PCG 3000⑤

|   |           |            |
|---|-----------|------------|
| 2 | PCG23000F | PCG23000FM |
| 3 | PCG33000F | PCG33000FM |

#### Breakers for Application at 100% Rating

| Frames Only |                    |          |
|-------------|--------------------|----------|
| Poles       | Catalog Numbers    |          |
| ⑥           | Standard           | Magnetic |
|             | (Long Delay        | Only ④   |
|             | and Magnetic Trip) |          |

#### Type PCCG 2000⑦, 1000 to 2000 Amps

| Rear Connected Breakers |            |             |
|-------------------------|------------|-------------|
| 2                       | PCCG22000F | PCCG22000FM |
| 3                       | PCCG32000F | PCCG32000FM |

#### Front Connected Breakers

|   |             |              |
|---|-------------|--------------|
| 2 | PCCFG22000F | PCCFG22000FM |
| 3 | PCCFG32000F | PCCFG32000FM |

#### Type PCCG 2500⑦, 1400 to 2500 Amps

| Rear Connected Breakers |            |             |
|-------------------------|------------|-------------|
| 2                       | PCCG22500F | PCCG22500FM |
| 3                       | PCCG32500F | PCCG32500FM |

#### Front Connected Breakers

|   |             |              |
|---|-------------|--------------|
| 2 | PCCFG22500F | PCCFG22500FM |
| 3 | PCCFG32500F | PCCFG32500FM |

#### Type PCCG 3000⑦, 1600 to 3000 Amps

|   |            |             |
|---|------------|-------------|
| 2 | PCCG23000F | PCCG23000FM |
| 3 | PCCG33000F | PCCG33000FM |

#### Rating Plugs Only For Breakers with Ground Fault

| Cont.<br>Amp.<br>Rat-<br>ing<br>① | Magnetic<br>Trip Setting<br>Amperes |      | Fixed Rating<br>Plugs ⑧ | Ground Fault<br>Characteristics |
|-----------------------------------|-------------------------------------|------|-------------------------|---------------------------------|
|                                   | Low                                 | High |                         |                                 |
|                                   |                                     |      | Style Number            | Pick-up Time<br>Setting<br>Amps |

|      |      |       |           |              |         |
|------|------|-------|-----------|--------------|---------|
| 1000 | 3000 | 6000  | 20PCG1000 | 200-<br>1200 | 6-30 Cy |
| 1200 | 3600 | 7200  | 20PCG1200 |              |         |
| 1400 | 4200 | 8400  | 20PCG1400 |              |         |
| 1600 | 4800 | 9600  | 20PCG1600 |              |         |
| 1800 | 5400 | 10800 | 20PCG1800 |              |         |
| 2000 | 6000 | 12000 | 20PCG2000 |              |         |
| 1400 | 3500 | 7000  | 25PCG1400 | 240-<br>1200 | 6-30 Cy |
| 1600 | 4000 | 8000  | 25PCG1600 |              |         |
| 1800 | 4500 | 9000  | 25PCG1800 |              |         |
| 2000 | 5000 | 10000 | 25PCG2000 |              |         |
| 2500 | 6250 | 12500 | 25PCG2500 |              |         |
| 1600 | 3200 | 6400  | 30PCG1600 | 300-<br>1200 | 6-30 Cy |
| 1800 | 3600 | 7200  | 30PCG1800 |              |         |
| 2000 | 4000 | 8000  | 30PCG2000 |              |         |
| 2500 | 5000 | 10000 | 30PCG2500 |              |         |
| 3000 | 6000 | 12000 | 30PCG3000 |              |         |

① Ampere rating when used in magnetic only frames:  
PC2000=2000 Amps; PC2500=2500 Amps;  
PC3000=3000 Amps.

② Magnetic trip range of adjustable plug:  
PC2000=3 to 6 times Amp Setting.  
PC2500=2.5 to 5 times Amp Setting.

PC3000=2 to 4 times Amp Setting

③ Adjustable 70-100%.

④ Not UL Listed.

⑤ UL Listed for standard applications.

⑥ Two pole breakers are supplied in three pole frames  
with current carrying parts omitted from center pole.

Type PC and PCC  
circuit breakers are  
not defined in  
Federal Spec.  
W-C-375a.

UL Listed Except As Noted

UL Listed Interrupting Capacity RMS  
Symmetrical Amperes (Std. and Grd.  
Flt. Breakers)

| Breaker | Ac Volts |         |         |
|---------|----------|---------|---------|
|         | 240      | 480     | 600     |
| PC, PCC | 125,000  | 100,000 | 100,000 |

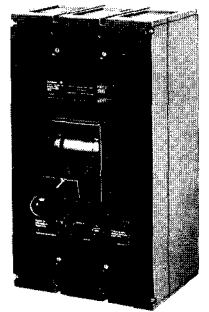
Factory Mounted Accessories and  
Modification: 43-52.

List Prices: See Price List 29-020 P WE A  
Discount Symbol: CB-2

⑦ These breakers are UL Listed for application at 100%  
of rating per NEC exceptions when used in a properly  
ventilated and listed enclosure.

⑧ Adjustable rating plug not available.

⑨ Available without external C.T. for neutral. Order by  
description and specify similar to above except no  
neutral C. T. or terminal connections for neutral C. T.  
Same price. Note: the standard ground fault unit  
listed above can also be used without the neutral C. T.





Type PC and PCC 2000, 2500 and 3000 Ampere SELTRONIC Circuit Breakers With Solid State Trip Units, 600 Volts Ac, 60 Hz

Molded Case Switches<sup>⑥⑦</sup>  
(Non-Automatic Breakers)

Rating plug not required. Order rear connectors separately (same as for standard breakers) except for PC 3000 and front connected units which include connectors with the frame.

| No. of Poles               | Breaker Catalog Number |                 |
|----------------------------|------------------------|-----------------|
|                            | Rear Connected         | Front Connected |
| <b>Type PC2000 Amperes</b> |                        |                 |
| 2                          | PC22000 NW             | PCF22000 N      |
| 3                          | PC32000 NW             | PCF32000 N      |
| <b>Type PC2500 Amperes</b> |                        |                 |
| 2                          | PC22500 NW             | PCF22500 N      |
| 3                          | PC32500 NW             | PCF32500 N      |
| <b>Type PC3000 Amperes</b> |                        |                 |
| 2                          | PC23000 N              | .....           |
| 3                          | PC33000 N              | .....           |

Field Mountable Attachments<sup>⑤⑧⑨</sup>

| Description                                                                                                                                    | Style Number |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Provision to trip flux transfer shunt trip from external 32 to 120 volt (Dc to 60 Hz) source <sup>⑧</sup> .....                                | 2609D12G10   |
| Provision to trip flux transfer shunt trip from external 32 to 120 volt (Dc to 60 Hz) source, plus a 1A-AB auxiliary switch <sup>⑧</sup> ..... | 2609D12G09   |
| 1A-1B Auxiliary Switch.....                                                                                                                    | 2609D12G03   |

Rear Bus Connectors

(Two required per pole. Fixed Mounting Breakers)

| Breaker Frame                               | Connector Style/Cat. No. |
|---------------------------------------------|--------------------------|
| PC2000 <sup>⑩</sup> , PCC2000 <sup>⑩⑥</sup> | BA2000PB                 |
| PC2500 <sup>⑩</sup> , PCC2500 <sup>⑩</sup>  | 315C910G03               |
| PC3000, PCC3000                             | Included in Frame        |

Fixed Mounting Breakers With Front Removable Mounting Frame, 3 Pole Only

List Price includes: Breaker Frame and front removable mounting frame complete. Order by description. Order required rating plug separately.<sup>⑦</sup>

| Type Operation | Standard Breakers    | Molded Case Switches <sup>⑥⑦</sup> |
|----------------|----------------------|------------------------------------|
| Manual         | PCC2000 <sup>③</sup> | PCC2000                            |
| Manual         | PCC2500 <sup>③</sup> | PCC2500                            |
| Manual         | PCC3000 <sup>③</sup> | PCC3000                            |

⑥ Changed since previous issue.

Drawout Mounting Breakers, 3 Pole Only

List Price includes: Breaker frame and complete drawout frame with safety tripping interlock. Order by description. Secondary contacts supplied as required at no extra charge. Order required rating plug separately.<sup>⑦</sup>

| Availability         |                                    |
|----------------------|------------------------------------|
| Standard Breakers    | Molded Case Switches <sup>⑥⑦</sup> |
| PCC2000 <sup>③</sup> | PCC2000                            |
| PCC2500 <sup>③</sup> | PCC2500                            |
| PCC3000 <sup>③</sup> | PCC3000                            |

Stationary Portion of Front Removable Mounting Frame, or Drawout Frame Only for Future Breaker Installations, 3 Pole Only. (Order by Description.)

| Availability                                                   |                                      |
|----------------------------------------------------------------|--------------------------------------|
| Stationary Portion Front Removable Mounting Frame <sup>④</sup> | Drawout Mounting Frame <sup>②④</sup> |
| PCC2000 <sup>③</sup>                                           | PCC2000 <sup>③</sup>                 |
| PCC2500 <sup>③</sup>                                           | PCC2500 <sup>③</sup>                 |
| PCC3000 <sup>③</sup>                                           | PCC3000 <sup>③</sup>                 |

Special Type PCC Breakers for SCR Power Supplies<sup>①</sup>

These drawout mounting breakers are designed with a 2 or 4 times magnetic trip adjustment and special time delay trip characteristics to specifically provide maximum protection and coordination with SCR power supplies on offshore drilling rigs. Suitable for application at 100% of rating.

List Price includes breaker frame and drawout frame complete with safety tripping interlock. Order by description. Secondary contacts supplied as required. Order standard rating plugs separately. Order other modifications as required from table above.

| Type Mounting | Availability-Offshore Breakers Standard Breakers |
|---------------|--------------------------------------------------|
| Drawout       | PCC2000                                          |
| Drawout       | PCC2500                                          |

- ① Not UL Listed.
- ② Secondary contacts, when required for motor operator or other attachment, must be specified and factory mounted on stationary frame when it is ordered separately.
- ③ UL Listed for application at 100% of rating when used in a properly ventilated and listed enclosure.
- ④ When ordering breaker with movable portion only for use with previously installed stationary portion, deduct the list price of stationary portion from list price of complete breaker with mounting frame, or drawout frame.

Options for Drawout Frames

Racking Crank: To engage or withdraw the moving portion of the drawout. A standard 1/2 inch hex socket with extension can be used for this purpose.

Style No. 765A767G01.

Cell Switches Mounted on Draw-out Frames, all Ratings

A maximum of four switches can be provided. Order by description. Each switch provides a NO and NC contact that transfers before reaching the test position when being withdrawn, and after the test position when being racked in.

Portable Test Kit:

Provides verification of performance of all frame sizes of SELTRONIC breakers while devices are still in service under varying load and/or phase unbalance. The tester operates on 120 volt 60 Hz and includes complete instructions and test times for testing the long time, instantaneous operation and optional ground fault operation of the breaker.

Style Number: 1255C48G01



- ⑤ For other possible combinations, refer to Westinghouse.
- ⑥ Molded case switches do not use standard SELTRONIC attachments and should be ordered by description.
- ⑦ Rating plug not required for molded case switches.
- ⑧ Does not void listing of UL Listed Breakers.
- ⑨ Rated 48 volts minimum for Ground Fault applications.
- ⑩ Not required for front connected frames.



October, 1975  
Supersedes Price List 29-120,  
pages 29-30, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type FB TRI-PAC® Breakers, 100 Amperes  
Type LA TRI-PAC Breakers, 100 Amperes

## AB DE-ION® Circuit Breakers

### Type FB TRI-PAC Thermal Magnetic/Current Limiting Breakers 15-100 Amperes, 600 Volts Ac, 250 Volts Dc Replaceable Current Limiters

| Continuous Ampere<br>Rating @ 40°C | Catalog Numbers (Current Limiters Include) |          |
|------------------------------------|--------------------------------------------|----------|
|                                    | 2-Poles                                    | 3-Poles  |
| 15                                 | FB2015PL                                   | FB3015PL |
| 20                                 | FB2020PL                                   | FB3020PL |
| 30                                 | FB2030PL                                   | FB3030PL |
| 40                                 | FB2040PL                                   | FB3040PL |
| 50                                 | FB2050PL                                   | FB3050PL |
| 70                                 | FB2070PL                                   | FB3070PL |
| 90                                 | FB2090PL                                   | FB3090PL |
| 100                                | FB2100PL                                   | FB3100PL |

Approx. Ship. Wt. 11½ Lbs.

### Replacement Current Limiters and Housing Assembly

**Current Limiters:** One required per pole;

| Catalog Number | Application                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------------------|
| 100FBP06       | Supplied as standard in Type FB TRI-PAC breakers rated 15-100 amperes.                                                 |
|                | Replaces 200 FBP03 formerly supplied on 15-40 ampere ratings, and 500FBP07 formerly supplied on 50-100 ampere ratings. |

Refer to Application Data 29-160 for complete application information.

### Special Calibrations③

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See application data 29-160 for information regarding special conditions.

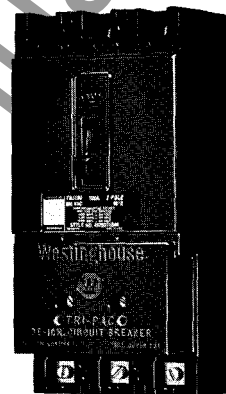
| Type of Calibration | 1-24 Identical Units                      | 25 or More Identical Units |
|---------------------|-------------------------------------------|----------------------------|
| Thermal             | Add 10% to List Price of Complete breaker | None                       |
| Magnetic            |                                           | None                       |
| Frequency           |                                           | None                       |

### Current Limiter Housing Assembly, complete with current limiters.

| Ampere Rating | Poles | Style Number |
|---------------|-------|--------------|
| 15-100        | 2     | 176C593G09   |
| 15-100        | 3     | 176C593G10   |

### 50°C Calibration③

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



TRI-PAC® FB Breakers meet the requirements for class 2e circuit breakers as defined in Federal Specification W-C-375a.

### Interrupting Ratings

**Underwriters' Laboratories Inc. Listed**  
600 Volts Ac Max.: 200,000 Amperes Sym.

**Based on NEMA Test Procedures**  
250 Volt Dc Max.: 100,000 Amps

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Terminals

Breakers listed include line and load terminals. Terminals are Underwriters' Laboratories, Inc. listed for wire sizes and types listed below. When used with aluminum cable, use joint compound. To order optional aluminum terminals, add suffix "Z" to breaker catalog number listed.

| Max. Breaker Amps                        | Wire Type | Wire Range |
|------------------------------------------|-----------|------------|
| <b>Standard Pressure Terminals</b>       |           |            |
| 100                                      | Al/Cu     | #14-1/0    |
| <b>Optional Al/Cu Pressure Terminals</b> |           |            |
| 50                                       | Al/Cu     | #14-#4     |
| 100                                      | Al/Cu     | #4-4/0     |

**Accessories and Modifications**  
Description: Pages 43-52

**List Prices:** See Price List 29-020 P WE A.  
**Discount Symbol:** CB-2

② 2 poles breakers are supplied in 3-pole frames with current carrying parts omitted from the center pole.  
③ Not listed with Underwriter's Laboratories, Inc.

**Type LA TRI-PAC® Thermal Magnetic Breakers**

70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip, Replaceable Current Limiters

| Contin-<br>uous<br>Ampere<br>Rating<br>@40°C           | Magnetic<br>Trip Setting<br>Amperes <sup>⑤</sup> |      | Complete Breaker<br>Includes Pressure Type<br>Copper Terminals <sup>⑥</sup> | Shipped as Frame, Trip Units, Limiters and Terminals <sup>⑥</sup> |                                        |                                                                |
|--------------------------------------------------------|--------------------------------------------------|------|-----------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------|
|                                                        | Low                                              | High | Catalog<br>Number                                                           | Frame Only<br>Catalog<br>Number                                   | Trip Unit<br>Only<br>Catalog<br>Number | Current Limiters<br>(1 Required per Pole)<br>Catalog<br>Number |
| <b>2 Poles, 600 Volts Ac, 250 Volts Dc<sup>③</sup></b> |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 70                                                     | 350                                              | 700  | LA2070PR                                                                    | LA2400PRF                                                         | LA2070PT                               | 200LAP08                                                       |
| 90                                                     | 450                                              | 900  | LA2090PR                                                                    | LA2400PRF                                                         | LA2090PT                               | 200LAP08                                                       |
| 100                                                    | 500                                              | 1000 | LA2100PR                                                                    | LA2400PRF                                                         | LA2100PT                               | 200LAP08                                                       |
| 125                                                    | 625                                              | 1250 | LA2125PR                                                                    | LA2400PRF                                                         | LA2125PT                               | 200LAP08                                                       |
| <br>                                                   |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 150                                                    | 750                                              | 1500 | LA2150PR                                                                    | LA2400PRF                                                         | LA2150PT                               | 200LAP08                                                       |
| 175                                                    | 875                                              | 1750 | LA2175PR                                                                    | LA2400PRF                                                         | LA2175PT                               | 200LAP08                                                       |
| 200                                                    | 1000                                             | 2000 | LA2200PR                                                                    | LA2400PRF                                                         | LA2200PT                               | 200LAP08                                                       |
| 225                                                    | 1125                                             | 2250 | LA2225PR                                                                    | LA2400PRF                                                         | LA2225PT                               | 400LAP10                                                       |
| <br>                                                   |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 250                                                    | 1250                                             | 2500 | LA2250PR                                                                    | LA2400PRF                                                         | LA2250PT                               | 400LAP10                                                       |
| 300                                                    | 1500                                             | 3000 | LA2300PR                                                                    | LA2400PRF                                                         | LA2300PT                               | 400LAP10                                                       |
| 350                                                    | 1750                                             | 3500 | LA2350PR                                                                    | LA2400PRF                                                         | LA2350PT                               | 400LAP10                                                       |
| 400                                                    | 2000                                             | 4000 | LA2400PR                                                                    | LA2400PRF                                                         | LA2400PT                               | 400LAP10                                                       |
|                                                        |                                                  |      | Approx. Ship.<br>Wt. 29% Lbs.                                               | Approx. Ship.<br>Wt. 23% Lbs.                                     | Approx. Ship.<br>Wt. 2% Lbs.           |                                                                |
| <b>3-Poles, 600 Volts Ac Only</b>                      |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 70                                                     | 350                                              | 700  | LA3070PR                                                                    | LA3400PRF                                                         | LA3070PT                               | 200LAP08                                                       |
| 90                                                     | 450                                              | 900  | LA3090PR                                                                    | LA3400PRF                                                         | LA3090PT                               | 200LAP08                                                       |
| 100                                                    | 500                                              | 1000 | LA3100PR                                                                    | LA3400PRF                                                         | LA3100PT                               | 200LAP08                                                       |
| 125                                                    | 625                                              | 1250 | LA3125PR                                                                    | LA3400PRF                                                         | LA3125PT                               | 200LAP08                                                       |
| <br>                                                   |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 150                                                    | 750                                              | 1500 | LA3150PR                                                                    | LA3400PRF                                                         | LA3150PT                               | 200LAP08                                                       |
| 175                                                    | 875                                              | 1750 | LA3175PR                                                                    | LA3400PRF                                                         | LA3175PT                               | 200LAP08                                                       |
| 200                                                    | 1000                                             | 2000 | LA3200PR                                                                    | LA3400PRF                                                         | LA3200PT                               | 200LAP08                                                       |
| 225                                                    | 1125                                             | 2250 | LA3225PR                                                                    | LA3400PRF                                                         | LA3225PT                               | 400LAP10                                                       |
| <br>                                                   |                                                  |      |                                                                             |                                                                   |                                        |                                                                |
| 250                                                    | 1250                                             | 2500 | LA3250PR                                                                    | LA3400PRF                                                         | LA3250PT                               | 400LAP10                                                       |
| 300                                                    | 1500                                             | 3000 | LA3300PR                                                                    | LA3400PRF                                                         | LA3300PT                               | 400LAP10                                                       |
| 350                                                    | 1750                                             | 3500 | LA3350PR                                                                    | LA3400PRF                                                         | LA3350PT                               | 400LAP10                                                       |
| 400                                                    | 2000                                             | 4000 | LA3400PR                                                                    | LA3400PRF                                                         | LA3400PT                               | 400LAP10                                                       |
|                                                        |                                                  |      | Approx. Ship.<br>Wt. 34 Lbs.                                                | Approx. Ship.<br>Wt. 25 Lbs.                                      | Approx. Ship.<br>Wt. 3 Lbs.            |                                                                |

**Current Limiters<sup>⑧</sup>**

Included with breaker, one required per pole.

| Cat. No.       | Application                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 200LAP08       | Supplied as standard on ratings through 200 amps.                                                                                                                                                                                                                                                                                                |
| 400LAP10       | Supplied as standard on 225 thru 400 amp ratings, optional on lower ratings when a higher "cross-over point" is desired.<br><br>(Above two limiters replace 800LAP12 formerly supplied as standard on all ratings. 600LAP09 optional on ratings thru 300 amps, 300LAP05 optional on ratings thru 150 amp, and special rating limiter 1000LAP14.) |
| 500LAP15<br>②④ | Special rating where a higher "cross-over point" is desired on 200 amp and higher ratings (Replaces limiter 1500LAP20)                                                                                                                                                                                                                           |

Refer to application data 29-160 for more complete application information.

**Special Calibration<sup>②</sup>**

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hz Ac circuits. See AD 29-160 for information regarding special conditions.

| Type of<br>Calibration          | 1-24<br>Identical Units                  | 25 or More<br>Identical Units |
|---------------------------------|------------------------------------------|-------------------------------|
| Thermal<br>Ambient<br>Frequency | Add 30% to<br>List Price of<br>Trip Unit | None<br>None<br>None          |

**50°C Calibration<sup>②</sup>**

Add suffix "V" to catalog number for complete breaker, or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



TRI-PAC LA breakers meet the requirements for class 3c and class 4a circuit breakers as defined in Federal Specification W-C-375a.

**Interrupting Ratings****Underwriters' Laboratories, Inc. Listed**  
600 Volts Ac, Max.: 200,000 Amperes Sym.**Based on NEMA Test Procedures**

250 Volts Dc Max.: 100,000 Amps.

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

**Terminals<sup>⑥</sup>**

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire size and type listed below. When used with aluminum conductors, use joint compound. To order optional aluminum terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Amps                              | Terminal<br>Catalog<br>Number | Wire Range, Type,<br>No. of Cables               |
|-------------------------------------------|-------------------------------|--------------------------------------------------|
| <b>Standard Copper Pressure Terminals</b> |                               |                                                  |
| 225                                       | T225LA                        | 1 # 6-350 MCM Cu                                 |
| 225⑦                                      | T225LBF                       | 1 # 6-250 MCM Cu                                 |
| 400                                       | T401LA                        | 1 # 4-250 MCM Cu, plus<br>1 3/0-600 MCM Cu       |
| <b>Optional Au/Cu Pressure Terminals</b>  |                               |                                                  |
| 225                                       | TA225LA1                      | 1 # 6-350 MCM Cu, or<br>1 # 4-350 MCM Al         |
| 400                                       | TA400LA1                      | 1 # 4-250 MCM Al/Cu, plus<br>1 3/0-600 MCM Al/Cu |
| 400                                       | TA401LA                       | 1 600-750 MCM Al                                 |

**Special Breakers**

Magnetic only TRI-PAC breakers are available on request. Refer to AD 29-160 for available trip ranges.

**Accessories and Modifications**

Description: Pages 43-52

**List Prices:** See Price List 29-020 P WE A.  
**Discount Symbol:** CB-2

② Not Underwriters' Laboratories, Inc. listed.  
③ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from the center pole.  
④ Protection based on 100,000 amp max fault.  
⑤ Set on high side, adjustable to lower limits.  
⑥ Terminals shipped separately from breakers.  
⑦ Optional terminal.  
⑧ New limiters suitable for replacement in existing breakers by using plug-in conductor from old limiter (instructions included with limiter).



January, 1976  
Supersedes Tech. Data 29-120 T WE A  
pages 31-32, dated October, 1975  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type NB TRI-PAC® Breakers, 800 Amperes  
Type PB TRI-PAC Breakers, 1600 Amperes

## AB DE-ION® Circuit Breakers

### Type NB TRI-PAC® Thermal Magnetic Breakers

300-800 Amperes, 600 Volts Ac, 250 Volts Dc<sup>②</sup>, 2, 3 Poles, Interchangeable Trip, Replaceable Current Limiters

| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40°C | Magnetic<br>Trip Setting,<br>Amperes |      | Complete Breaker                               | Shipped as Frame, Trip Unit, Limiters and Terminals |                   |                                                |
|-----------------------------------------------|--------------------------------------|------|------------------------------------------------|-----------------------------------------------------|-------------------|------------------------------------------------|
|                                               |                                      |      | Includes Pressure<br>Type Copper<br>Terminals⑤ | Frame Only                                          | Trip Unit Only    | Current Lim-<br>iter<br>1 Required<br>Per Pole |
|                                               | Low                                  | High | Catalog<br>Number                              | Catalog<br>Number                                   | Catalog<br>Number | Catalog<br>Number                              |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc②⑥</b>  |                                      |      |                                                |                                                     |                   |                                                |
| 300                                           | 1500                                 | 3000 | NB2300P                                        | NB2800PF                                            | NB2300PT          | 500NBP12                                       |
| 350                                           | 1750                                 | 3500 | NB2350P                                        | NB2800PF                                            | NB2350PT          | 500NBP12                                       |
| 400③                                          | 2000                                 | 4000 | NB2400P                                        | NB2800PF                                            | NB2400PT          | 500NBP12                                       |
| 500③                                          | 2500                                 | 5000 | NB2500P                                        | NB2800PF                                            | NB2500PT          | 500NBP12                                       |
| 600③                                          | 3000                                 | 6000 | NB2600P                                        | NB2800PF                                            | NB2600PT          | 800NBP20                                       |
| 700③                                          | 3000                                 | 6000 | NB2700P                                        | NB2800PF                                            | NB2700PT          | 800NBP20                                       |
| 800③                                          | 3000                                 | 6000 | NB2800P                                        | NB2800PF                                            | NB2800PT          | 800NBP20                                       |
| <b>3-Poles, 600 Volts Ac Only</b>             |                                      |      |                                                |                                                     |                   |                                                |
| 300                                           | 1500                                 | 3000 | NB3300P                                        | NB3800PF                                            | NB3300PT          | 500NBP12                                       |
| 350                                           | 1750                                 | 3500 | NB3350P                                        | NB3800PF                                            | NB3350PT          | 500NBP12                                       |
| 400③                                          | 2000                                 | 4000 | NB3400P                                        | NB3800PF                                            | NB3400PT          | 500NBP12                                       |
| 500③                                          | 2500                                 | 5000 | NB3500P                                        | NB3800PF                                            | NB3500PT          | 500NBP12                                       |
| 600③                                          | 3000                                 | 6000 | NB3600P                                        | NB3800PF                                            | NB3600PT          | 800NBP20                                       |
| 700③                                          | 3000                                 | 6000 | NB3700P                                        | NB3800PF                                            | NB3700PT          | 800NBP20                                       |
| 800③                                          | 3000                                 | 6000 | NB3800P                                        | NB3800PF                                            | NB3800PT          | 800NBP20                                       |
|                                               |                                      |      | Approx. Ship Wt.<br>75 Lbs.                    | Approx. Ship. Wt.<br>4 Lbs.                         |                   |                                                |

#### Current Limiters

Included with breaker, one required per pole.

| Catalog<br>Number | Application                                                                                                                                                                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 500NBP12          | Supplied as standard on ratings thru 500 amps.                                                                                                                                                                                                                                     |
| 800NBP20          | Supplied as standard on 600-800 amp ratings, or optional on lower ratings when a higher "cross-over point" is desired.<br><br>Above two limiters replace 1000NBP14 formerly supplied on ratings up to 600 amps, 1500NBP20 supplied on 700 amp, and 2500NBP25 supplied on 800 Amps. |

Refer to AD 29-160 for more complete application information.

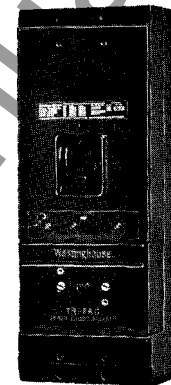
#### Special Calibration<sup>⑦</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C, or frequencies other than 60 Hertz Ac. (400-800 ampere ratings: 50 Hertz ac minimum, 60 Hertz ac maximum.) See AD 29-160 for additional information regarding special conditions.

| Type of<br>Calibration | 1-24<br>Identical Units               | 25 or More<br>Identical Units |
|------------------------|---------------------------------------|-------------------------------|
| Thermal<br>Magnetic    | Add 15% to List<br>Price of Trip Unit | None<br>None                  |

#### 50° Calibration<sup>⑦</sup>

Add suffix "V" to catalog number for complete breaker or trip unit only when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



TRI-PAC NB breakers meet the requirements for class 6 circuit breakers as defined in Federal Specification W-C-375a.

#### Interrupting Ratings

Underwriter's Laboratories, Inc. Listed  
600 Volts Ac Max.: 200,000 Amps. Sym.

Based on NEMA Test Procedures  
250 Volts Dc Max.<sup>②</sup>: 100,000 Amps.

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

#### Terminals<sup>⑤</sup>

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire size and type listed below. When used with aluminum conductors, use joint compound. To order optional aluminum terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Ampere<br>Rating                  | Terminal<br>Catalog | Wire Range, Type<br>No. of Cables |
|-------------------------------------------|---------------------|-----------------------------------|
| <b>Standard Copper Pressure Terminals</b> |                     |                                   |
| 350                                       | T350NB              | 1 #1-600 MCM Cu                   |
| 700                                       | T700NB1             | 2 2/0-500 MCM Cu                  |
| 800                                       | T1000NB1            | 3 3/0-500 MCM Cu                  |
| <b>Optional Al/Cu Pressure Terminals</b>  |                     |                                   |
| 700                                       | TA700NB1            | 2 #1-500 MCM Al/Cu                |
| 800                                       | TA1000NB1           | 3 3/0-400 MCM Al/Cu               |

#### Special Breakers

Magnetic only TRI-PAC breakers are available on request. Refer to AD 29-160 for available trip ranges.

Accessories and Modifications  
Description: Pages 43-52

List Prices: See Price List 29-020 P WE A.  
Discount Symbol: CB-2.

- ② 2-pole breakers or trips are supplied in 3-pole frames with current-carrying parts omitted from center pole.
- ③ 60 Hertz Ac only.
- ④ Frames, terminals, studs, mounting hardware, dimensions and shipping weights are same as standard thermal magnetic breakers.
- ⑤ Shipped separately from breaker.
- ⑥ Dc rating applies to 350 amperes maximum thermal or to magnetic only breakers.
- ⑦ Not UL Listed.



# **Type PB TRI-PAC® Thermal Magnetic/Current Limiting Breakers**

600-1600 Amperes, 600 Volts, 60 Hertz Ac<sup>②</sup>, 250 Volts Dc<sup>③</sup>, 2, 3 Poles Interchangeable Trip, Replaceable Current Limiters

| Continuous<br>Ampere<br>Rating<br>@<br>40°C | Ac Magnetic<br>Trip Setting<br>Amperes<br>(Set on High<br>Side, Adjust-<br>able to Lower<br>Limits) |      | Complete<br>Breaker                          | Shipped as Frame, Trip Unit Current Limiters and<br>Connectors |                   |                                         |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------|------|----------------------------------------------|----------------------------------------------------------------|-------------------|-----------------------------------------|
|                                             |                                                                                                     |      | Includes Rear<br>"T" Connectors <sup>⑤</sup> | Frame Only                                                     | Trip Unit Only    | Current Limiters<br>1 Required Per Pole |
|                                             | Low                                                                                                 | High | Catalog<br>Number                            | Catalog<br>Number                                              | Catalog<br>Number | Catalog<br>Number<br><sup>⑥</sup>       |

## **2-Pole, 600 Volts Ac<sup>④</sup>**

|                      |      |      |           |            |            |            |
|----------------------|------|------|-----------|------------|------------|------------|
| 600                  | 1500 | 5000 | PB2600PR  | PB21600PRF | PB2600PRT  | 1000PBPR20 |
| 700                  | 1500 | 5000 | PB2700PR  | PB21600PRF | PB2700PRT  | 1000PBPR20 |
| 800                  | 1500 | 5000 | PB2800PR  | PB21600PRF | PB2800PRT  | 1000PBPR20 |
| 900                  | 1500 | 5000 | PB2900PR  | PB21600PRF | PB2900PRT  | 1000PBPR20 |
| 1000                 | 1500 | 5000 | PB21000PR | PB21600PRF | PB21000PRT | 1000PBPR20 |
| 1200                 | 2000 | 6000 | PB21200PR | PB21600PRF | PB21200PRT | 1600PBPR30 |
| 1400                 | 2500 | 7000 | PB21400PR | PB21600PRF | PB21400PRT | 1600PBPR30 |
| 1600                 | 3000 | 8000 | PB21600PR | PB21600PRF | PB21600PRT | 1600PBPR30 |
| Approx. Ship.<br>Wt. |      |      | 148 lbs.  | 106 lbs.   | 18 lbs.    | 4 lbs.     |

## **3-Pole, 600 Volts Ac**

|                     |      |      |           |            |            |            |
|---------------------|------|------|-----------|------------|------------|------------|
| 600                 | 1500 | 5000 | PB3600PR  | PB31600PRF | PB3600PRT  | 1000PBPR20 |
| 700                 | 1500 | 5000 | PB3700PR  | PB31600PRF | PB3700PRT  | 1000PBPR20 |
| 800                 | 1500 | 5000 | PB3800PR  | PB31600PRF | PB3800PRT  | 1000PBPR20 |
| 900                 | 1500 | 5000 | PB3900PR  | PB31600PRF | PB3900PRT  | 1000PBPR20 |
| 1000                | 1500 | 5000 | PB31000PR | PB31600PRF | PB31000PRT | 1000PBPR20 |
| 1200                | 2000 | 6000 | PB31200PR | PB31600PRF | PB31200PRT | 1600PBPR30 |
| 1400                | 2500 | 7000 | PB31400PR | PB31600PRF | PB31400PRT | 1600PBPR30 |
| 1600                | 3000 | 8000 | PB31600PR | PB31600PRF | PB31600PRT | 1600PBPR30 |
| Approx. Ship<br>Wt. |      |      | 179 lbs.  | 120 lbs.   | 23 lbs.    | 4 lbs.     |

## **Current Limiters**

Included with breaker, one required per pole.

| Catalog<br>Number | Application                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1000PBPR20        | Supplied as standard on ratings thru 1000 amps. (Replaces limiter 1500PBPR30 formerly supplied on 600 and 700 amp ratings, and 3000PBPR27 supplied on 800-1000 amp ratings.)                                                                |
| 1600PBPR30        | Supplied as standard on 1200-1600 amp ratings. Optional on lower ratings where a higher "cross-over point is desired. (Replaces limiter 4000PBPR30 formerly supplied on 1200-1400 amp ratings, and 5000PBPR42 supplied on 1600 amp ratings. |

Refer to AD 29-160 for more complete application information.

- ② Higher frequency calibration not available. Minimum of 50 Hertz calibration available on special order.
- ③ 250 volts Dc rating applies only to magnetic only breakers.
- ④ 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ⑤ Shipped separately from breaker.
- ⑥ Not Underwriter's Laboratories Inc. listed.
- ⑦ Changed since previous issue.

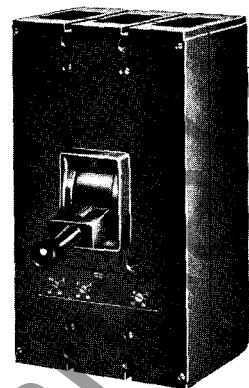
## **Special Calibrations<sup>⑦</sup>**

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. See Application Data 29-160 for information regarding special conditions.

| Type of<br>Calibration | 1-24<br>Identical Units            | 25 or More<br>Identical Units |
|------------------------|------------------------------------|-------------------------------|
| Thermal<br>Ambient     | Add 15% of Trip<br>Unit List Price | None<br>None                  |

## **50°C Calibration<sup>⑦</sup>**

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



## **Interrupting Ratings**

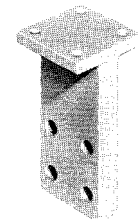
Underwriter's Laboratories, Inc. Listed  
600 Volts Ac Max.: 200,000 Amps. Sym.

Based on NEMA Test Procedure  
250 Volts Dc @ : 100,000 Amps.

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

## **Bus Bar Connectors<sup>⑤</sup> "T" Connector**

Two required per pole. For rear bus connection. Accepts up to four bus bolts. May be rotated 90°. Catalog Number BA2000PB



## **Cable Connector (Optional)**

For T Connector. Accepts four 600 MCM copper cables. Style Number 505C706G04  
**Discount Symbol CB-11**



## **Special Breakers<sup>⑥</sup>**

**Magnetic Only Type TRI-PACS:** Available on request. Refer to Application Data 29-160 for available trip ranges.

**List Prices:** See Price List 29-020 PWEA  
**Discount Symbol: CB-2**

**Westinghouse Electric Corporation**  
Low Voltage Breaker Division  
Beaver, Pennsylvania 15009



October, 1975  
Supersedes Price List 29-120,  
pages 33-34, all previous issues.  
E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Replacement Breakers  
Type JA 225 Amperes  
Type KA 225 Amperes  
MARK 75® Type HKA 225 Amperes

## AB DE-ION® Circuit Breakers

### Type JA Thermal Magnetic, Saf-T-Vue® Breakers

70-225 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Fixed Trip

| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip<br>Setting, Amperes<br>(Set on High<br>Side, Adjustable<br>to Lower Limits) |      | Complete Breaker<br>Includes Pressure Type Copper<br>Terminals④ |                           | Breaker Without Terminals |                           |  |
|-----------------------------------------------|-------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------|---------------------------|---------------------------|---------------------------|--|
|                                               | Low                                                                                       | High | Catalog Number                                                  |                           | Catalog Number            |                           |  |
|                                               |                                                                                           |      | Standard                                                        | Saf-T-Vue②                | Standard                  | Saf-T-Vue②                |  |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc③</b>   |                                                                                           |      |                                                                 |                           |                           |                           |  |
| 70                                            | 350                                                                                       | 700  | JA2070                                                          | JA2070S                   | JA2070W                   | JA2070SW                  |  |
| 90                                            | 450                                                                                       | 900  | JA2090                                                          | JA2090S                   | JA2090W                   | JA2090SW                  |  |
| 100                                           | 500                                                                                       | 1000 | JA2100                                                          | JA2100S                   | JA2100W                   | JA2100SW                  |  |
| 125                                           | 625                                                                                       | 1250 | JA2125                                                          | JA2125S                   | JA2125W                   | JA2125SW                  |  |
| 150                                           | 750                                                                                       | 1500 | JA2150                                                          | JA2150S                   | JA2150W                   | JA2150SW                  |  |
| 175                                           | 875                                                                                       | 1750 | JA2175                                                          | JA2175S                   | JA2175W                   | JA2175SW                  |  |
| 200                                           | 1000                                                                                      | 2000 | JA2200                                                          | JA2200S                   | JA2200W                   | JA2200SW                  |  |
| 225                                           | 1125                                                                                      | 2250 | JA2225                                                          | JA2225S                   | JA2225W                   | JA2225SW                  |  |
| 225MCS                                        | Non-automatic                                                                             |      | JA2225N                                                         | JA2225SN                  | JA2225NW                  | JA2225SNW                 |  |
|                                               |                                                                                           |      |                                                                 | Approx. Ship. Wt. 12 lbs. |                           | Approx. Ship. Wt. 12 Lbs. |  |
| <b>3 Poles, 600 Volts Ac Only</b>             |                                                                                           |      |                                                                 |                           |                           |                           |  |
| 70                                            | 350                                                                                       | 700  | JA3070                                                          | JA3070S                   | JA3070W                   | JA3070SW                  |  |
| 90                                            | 450                                                                                       | 900  | JA3090                                                          | JA3090S                   | JA3090W                   | JA3090SW                  |  |
| 100                                           | 500                                                                                       | 1000 | JA3100                                                          | JA3100S                   | JA3100W                   | JA3100SW                  |  |
| 125                                           | 625                                                                                       | 1250 | JA3125                                                          | JA3125S                   | JA3125W                   | JA3125SW                  |  |
| 150                                           | 750                                                                                       | 1500 | JA3150                                                          | JA3150S                   | JA3150W                   | JA3150SW                  |  |
| 175                                           | 875                                                                                       | 1750 | JA3175                                                          | JA3175S                   | JA3175W                   | JA3175SW                  |  |
| 200                                           | 1000                                                                                      | 2000 | JA3200                                                          | JA3200S                   | JA3200W                   | JA3200SW                  |  |
| 225                                           | 1125                                                                                      | 2250 | JA3225                                                          | JA3225S                   | JA3225W                   | JA3225SW                  |  |
| 225MCS                                        | Non-automatic                                                                             |      | JA3225N                                                         | JA3225SN                  | JA3225NW                  | JA3225SNW                 |  |
|                                               |                                                                                           |      |                                                                 | Approx. Ship. Wt. 14 Lbs. |                           | Approx. Ship. Wt. 12 Lbs. |  |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Special Breakers<sup>②</sup>

| Continuous<br>Ampere<br>Rating<br>@ 40°C                                | Magnetic Trip<br>Setting, Amperes<br>(Set on High<br>Side, Adjustable<br>to Lower Limits) |      | Breaker Catalog Number |            | 3-Poles   |            |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------|------------------------|------------|-----------|------------|
|                                                                         | Low                                                                                       | High | 2-Poles <sup>③</sup>   |            | Standard  | Saf-T-Vue  |
|                                                                         |                                                                                           |      | Standard               | Saf-T-Vue  |           |            |
| Magnetic Only Breakers, Front Adjustable-Without Terminals <sup>⑥</sup> |                                                                                           |      |                        |            |           |            |
| 225                                                                     | 350                                                                                       | 700  | JA2700MW               | JA2700SMW  | JA3700MW  | JA3700SMW  |
| 225                                                                     | 625                                                                                       | 1250 | JA21250MW              | JA21250SMW | JA31250MW | JA31250SMW |
| 225                                                                     | 750                                                                                       | 1500 | JA21500MW              | JA21500SMW | JA31500MW | JA31500SMW |
| 225                                                                     | 875                                                                                       | 1750 | JA21750MW              | JA21750SMW | JA31750MW | JA31750SMW |
| 225                                                                     | 1125                                                                                      | 2250 | JA22250MW              | JA22250SMW | JA32250MW | JA32250SMW |
| Ambient Compensating Breakers                                           |                                                                                           |      |                        |            |           |            |
| 70                                                                      | 350                                                                                       | 700  | JA2070A                | .....      | JA3070A   | .....      |
| 100                                                                     | 500                                                                                       | 1000 | JA2100A                | .....      | JA3100A   | .....      |
| 125                                                                     | 625                                                                                       | 1250 | JA2125A                | .....      | JA3125A   | .....      |
| 150                                                                     | 750                                                                                       | 1500 | JA2150A                | .....      | JA3150A   | .....      |
| 175                                                                     | 875                                                                                       | 1750 | JA2175A                | .....      | JA3175A   | .....      |
| 200                                                                     | 1000                                                                                      | 2000 | JA2200A                | .....      | JA3200A   | .....      |
| 225                                                                     | 1125                                                                                      | 2250 | JA2225A                | .....      | JA3225A   | .....      |

### Special Calibrations<sup>②</sup>

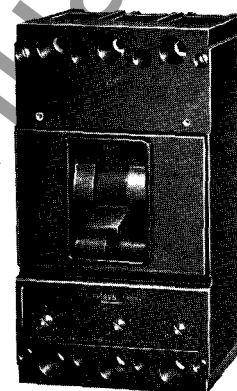
Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also Price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions.

- ② Not listed with Underwriters' Laboratories, Inc.  
③ 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.  
④ Terminals are shipped separately from breaker frame.  
⑤ Optional terminal.  
⑥ Select desired terminal from table and order as separate item.

| Type of<br>Calibration           | 1-24<br>Identical Units                         | 25 or More<br>Identical Units |
|----------------------------------|-------------------------------------------------|-------------------------------|
| Thermal<br>Magnetic<br>Frequency | Add 10% to<br>List Price of<br>Complete Breaker | None<br>None<br>None          |

### 50°C Calibration<sup>②</sup>

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type JA breakers meet requirements of Class 3A and 3B circuit breakers as defined by Federal Specification W-C-375a.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 30,000 Asym., 25,000 Sym. |
| 480 Ac     | 25,000 Asym., 22,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 10,000                    |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Terminals<sup>④</sup>

Two terminals are required per pole.

Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional aluminum copper terminals, add suffix "Z" to complete breaker catalog number.

| Breaker<br>Rating,<br>Amps.                      | Catalog<br>Number | Wire Range, Type<br>No. of Cables      |
|--------------------------------------------------|-------------------|----------------------------------------|
| <b>Standard Pressure Terminals (Copper Only)</b> |                   |                                        |
| 70-225                                           | T225LA            | 1 #6-350 MCM                           |
| 70-225 <sup>⑤</sup>                              | T225LBF           | 1 #6-250 MCM                           |
| <b>Optional Al/Cu Pressure Terminals</b>         |                   |                                        |
| 70-225                                           | TA225LA1          | 1 #6-350 MCM Cu, or<br>1 #4-350 MCM Al |

### Magnetic Only and Ambient Compensating Breakers.

For description, refer to DB 29-150 and AD 29-160. To order, select catalog number from table at left.

**Accessories and Modifications**  
Descriptions: Pages 43-52.

**List Prices:** See Price List 29-020 PWEA  
**Discount Symbol:** CB-2

**Type KA Thermal Magnetic, Saf-T-Vue® and MARK® Breakers**  
70-225 Amperes, 600 Volts Ac, 250 Volts Dc, 2 and 3 Poles, Interchangeable Trip

| Continuous<br>Ampere<br>Rating<br>@<br>40°C            | Magnetic Trip Setting Amperes <sup>⑤</sup> |      | Complete Breaker                                     |                        |         | Shipped as Frame, Trip Unit and Terminals |                        |          |                                |  |
|--------------------------------------------------------|--------------------------------------------|------|------------------------------------------------------|------------------------|---------|-------------------------------------------|------------------------|----------|--------------------------------|--|
|                                                        | Low                                        | High | Includes Pressure Type Copper Terminals <sup>④</sup> |                        |         | Frame Only                                |                        |          | Trip Unit Only                 |  |
|                                                        |                                            |      | Catalog Number                                       |                        |         | Catalog Number                            |                        |          | Catalog Number                 |  |
|                                                        |                                            |      | Standard                                             | Saf-T-Vue <sup>②</sup> | MARK 75 | Standard                                  | Saf-T-Vue <sup>②</sup> | MARK 75  | Standard, MARK 75 or Saf-T-Vue |  |
|                                                        |                                            |      |                                                      |                        |         |                                           |                        |          |                                |  |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc<sup>③</sup></b> |                                            |      |                                                      |                        |         |                                           |                        |          |                                |  |
| 70                                                     | 350                                        | 700  | KA2070                                               | KA2070S                | HKA2070 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2070T                       |  |
| 90                                                     | 450                                        | 900  | KA2090                                               | KA2090S                | HKA2090 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2090T                       |  |
| 100                                                    | 500                                        | 1000 | KA2100                                               | KA2100S                | HKA2100 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2100T                       |  |
| 125                                                    | 625                                        | 1250 | KA2125                                               | KA2125S                | HKA2125 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2125T                       |  |
| 150                                                    | 750                                        | 1500 | KA2150                                               | KA2150S                | HKA2150 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2150T                       |  |
| 175                                                    | 875                                        | 1750 | KA2175                                               | KA2175S                | HKA2175 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2175T                       |  |
| 200                                                    | 1000                                       | 2000 | KA2200                                               | KA2200S                | HKA2200 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2200T                       |  |
| 225                                                    | 1125                                       | 2250 | KA2225                                               | KA2225S                | HKA2225 | KA2225F                                   | KA2225FS               | HKA2225F | HKA2225T                       |  |
| 225                                                    | MCS                                        |      | KA2225N                                              | KA2225SN               |         | KA2225NW                                  | KA2225SNW              |          | Incl. in Frame                 |  |
|                                                        |                                            |      | Approx. Ship. Wt. 12 Lbs.                            |                        |         | Approx. Ship. Wt. 9½ Lbs.                 |                        |          | Approx. Ship. Wt. 2 Lbs.       |  |
| <b>3 Poles, 600 Volts Ac Only</b>                      |                                            |      |                                                      |                        |         |                                           |                        |          |                                |  |
| 70                                                     | 350                                        | 700  | KA3070                                               | KA3070S                | HKA3070 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3070T                       |  |
| 90                                                     | 450                                        | 900  | KA3090                                               | KA3090S                | HKA3090 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3090T                       |  |
| 100                                                    | 500                                        | 1000 | KA3100                                               | KA3100S                | HKA3100 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3100T                       |  |
| 125                                                    | 625                                        | 1250 | KA3125                                               | KA3125S                | HKA3125 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3125T                       |  |
| 150                                                    | 750                                        | 1500 | KA3150                                               | KA3150S                | HKA3150 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3150T                       |  |
| 175                                                    | 875                                        | 1750 | KA3175                                               | KA3175S                | HKA3175 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3175T                       |  |
| 200                                                    | 1000                                       | 2000 | KA3200                                               | KA3200S                | HKA3200 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3200T                       |  |
| 225                                                    | 1125                                       | 2250 | KA3225                                               | KA3225S                | HKA3225 | KA3225F                                   | KA3225FS               | HKA3225F | HKA3225T                       |  |
| 225                                                    | MCS                                        |      | KA3225N                                              | KA3225SN               |         | KA3225NW                                  | KA3225SNW              |          | Incl. in Frame                 |  |
|                                                        |                                            |      | Approx. Ship. Wt. 14 Lbs.                            |                        |         | Approx. Ship. Wt. 11 Lbs.                 |                        |          | Approx. Ship. Wt. 2½ Lbs.      |  |

For Panelboard and Switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

**Trip Units Only For Magnetic Only and Ambient Compensating Breakers<sup>②</sup>**

| Contin-<br>uous<br>Ampere<br>Rating | Magnetic<br>Trip Setting<br>Amperes <sup>⑤</sup><br>Low High | Catalog Numbers      |         |
|-------------------------------------|--------------------------------------------------------------|----------------------|---------|
|                                     |                                                              | 2 Poles <sup>③</sup> | 3 Poles |
|                                     |                                                              |                      |         |

|                                                 |      |      |            |            |
|-------------------------------------------------|------|------|------------|------------|
| <b>Magnetic Only, Front Adjustable Breakers</b> |      |      |            |            |
| 225                                             | 350  | 700  | HKA2700TM  | HKA3700TM  |
| 225                                             | 625  | 1250 | HKA21250TM | HKA31250TM |
| 225                                             | 750  | 1500 | HKA21500TM | HKA31500TM |
| 225                                             | 875  | 1750 | HKA21750TM | HKA31750TM |
| 225                                             | 1125 | 2250 | HKA22250TM | HKA32250TM |

|                                      |      |      |           |           |
|--------------------------------------|------|------|-----------|-----------|
| <b>Ambient Compensating Breakers</b> |      |      |           |           |
| 70                                   | 350  | 700  | HKA2070TA | HKA3070TA |
| 100                                  | 500  | 1000 | HKA2100TA | HKA3100TA |
| 125                                  | 625  | 1250 | HKA2125TA | HKA3125TA |
| 150                                  | 750  | 1500 | HKA2150TA | HKA3150TA |
| 175                                  | 875  | 1750 | HKA2175TA | HKA3175TA |
| 200                                  | 1000 | 2000 | HKA2200TA | HKA3200TA |
| 225                                  | 1125 | 2250 | HKA2225TA | HKA3225TA |

**Special Calibration<sup>②</sup>**

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C, also price additions apply to specific calibrations for frequencies other than 0-60 Hertz ac circuits. See AD 29-160 for information regarding special conditions.

| Type<br>Calibration | 1-24<br>Identical Units                  | 25 or More<br>Identical Units |
|---------------------|------------------------------------------|-------------------------------|
| Thermal             | Add 30% to<br>List Price of<br>Trip Unit | None                          |
| Magnetic            |                                          | None                          |
| Frequency           |                                          | None                          |

**50°C Calibration<sup>②</sup>**

Add suffix "V" to catalog number for complete breaker, listed above, when ordering listed ampere ratings to be used in 50°C ambients. Same price as standard 40°C breakers.

**Terminals<sup>④</sup>**

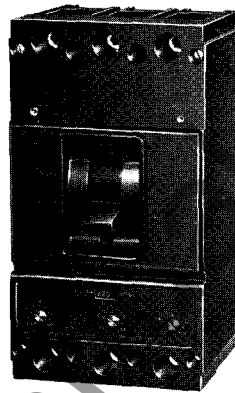
Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Amps | Catalog<br>Number | Wire Range, Type<br>No. of Cables |
|--------------|-------------------|-----------------------------------|
|--------------|-------------------|-----------------------------------|

|                                           |         |                  |
|-------------------------------------------|---------|------------------|
| <b>Standard Copper Pressure Terminals</b> |         |                  |
| 225                                       | T225LA  | 1 # 6-350 MCM Cu |
| 225 <sup>⑥</sup>                          | T225LBF | 1 # 6-250 MCM Cu |

|                                          |          |                                         |
|------------------------------------------|----------|-----------------------------------------|
| <b>Optional Al/Cu Pressure Terminals</b> |          |                                         |
| 225                                      | TA225LA1 | 1 # 6-350 MCM Cu or<br>1 # 4-350 MCM Al |

- ② Not listed with Underwriters' Laboratories, Inc.
- ③ 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ④ Terminals shipped separately from breaker frame.
- ⑤ Set on high side, adjustable to lower limit.
- ⑥ Optional terminal.
- ⑦ Ratings above 10,000 amps not UL Listed.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type KA breakers meet the requirements for class 3a and 3b circuit breakers, and Type HKA meet requirements for class 3d as defined by Federal Specification W-C-375a.

**Underwriters' Laboratories, Inc. Listed Interrupting Ratings**

| Max. Volts               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 30,000 Asym., 25,000 Sym. |
| 480 Ac                   | 25,000 Asym., 22,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc                   | 10,000                    |

**Mark 75 Breakers**

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |
| 250 Dc | 20,000 <sup>⑦</sup>       |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

**Magnetic Only and Ambient Compensating Breakers**

For description, refer to DB 29-150 and AD 29-160. To order these breakers, select frame, trip unit and terminals.

**Accessories and Modifications**

Description: Pages 43-52

List Prices: See Price List 29-020 PWEA  
Discount Symbol: CB-2



October, 1975  
Supersedes Price List 29-120,  
pages 35-36, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Replacement Breakers  
Type LAB400 Amperes  
Type LA400 Amperes  
Mark 75 Type HLA 400 Amperes

## AB DE-ION® Circuit Breakers

### Type LAB Thermal Magnetic, Saf-T-Vue® Breakers

125-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Fixed Trip

| Contin-<br>uous<br>Ampere<br>Rating<br>@<br>40°C | Magnetic Trip<br>Setting, Amperes<br>⑤ |      | Complete Breaker<br>Includes Pressure Type Copper<br>Terminals④ |            | Breaker Without Terminals  |            |
|--------------------------------------------------|----------------------------------------|------|-----------------------------------------------------------------|------------|----------------------------|------------|
|                                                  |                                        |      | Catalog Number                                                  |            | Catalog Number             |            |
|                                                  | Low                                    | High | Standard                                                        | Saf-T-Vue② | Standard                   | Saf-T-Vue② |
| <b>2-Poles, 600 Volts Ac, 250 Volts Dc③</b>      |                                        |      |                                                                 |            |                            |            |
| 125                                              | 625                                    | 1250 | LAB2125                                                         | LAB2125S   | LAB2125W                   | LAB2125SW  |
| 150                                              | 750                                    | 1500 | LAB2150                                                         | LAB2150S   | LAB2150W                   | LAB2150SW  |
| 175                                              | 875                                    | 1750 | LAB2175                                                         | LAB2175S   | LAB2175W                   | LAB2175SW  |
| 200                                              | 1000                                   | 2000 | LAB2200                                                         | LAB2200S   | LAB2200W                   | LAB2200SW  |
| 225                                              | 1125                                   | 2250 | LAB2225                                                         | LAB2225S   | LAB2225W                   | LAB2225SW  |
| 250                                              | 1250                                   | 2500 | LAB2250                                                         | LAB2250S   | LAB2250W                   | LAB2250SW  |
| 300                                              | 1500                                   | 3000 | LAB2300                                                         | LAB2300S   | LAB2300W                   | LAB2300SW  |
| 350                                              | 1750                                   | 3500 | LAB2350                                                         | LAB2350S   | LAB2350W                   | LAB2350SW  |
| 400                                              | 2000                                   | 4000 | LAB2400                                                         | LAB2400S   | LAB2400W                   | LAB2400SW  |
| 400 MCS                                          | Non-automatic                          |      | LAB2400N                                                        | LAB2400SN  | LAB2400NW                  | LAB2400SNW |
|                                                  |                                        |      | Approx. Ship. Wt. 22 Lbs.                                       |            | Approx. Ship. Wt. 22 Lbs.  |            |
| <b>3-Poles, 600 Volts Ac Only</b>                |                                        |      |                                                                 |            |                            |            |
| 125                                              | 625                                    | 1250 | LAB3125                                                         | LAB3125S   | LAB3125W                   | LAB3125SW  |
| 150                                              | 750                                    | 1500 | LAB3150                                                         | LAB3150S   | LAB3150W                   | LAB3150SW  |
| 175                                              | 875                                    | 1750 | LAB3175                                                         | LAB3175S   | LAB3175W                   | LAB3175SW  |
| 200                                              | 1000                                   | 2000 | LAB3200                                                         | LAB3200S   | LAB3200W                   | LAB3200SW  |
| 225                                              | 1125                                   | 2250 | LAB3225                                                         | LAB3225S   | LAB3225W                   | LAB3225SW  |
| 250                                              | 1250                                   | 2500 | LAB3250                                                         | LAB3250S   | LAB3250W                   | LAB3250SW  |
| 300                                              | 1500                                   | 3000 | LAB3300                                                         | LAB3300S   | LAB3300W                   | LAB3300SW  |
| 350                                              | 1750                                   | 3500 | LAB3350                                                         | LAB3350S   | LAB3350W                   | LAB3350SW  |
| 400                                              | 2000                                   | 4000 | LAB3400                                                         | LAB3400S   | LAB3400W                   | LAB3400SW  |
| 400 MCS                                          | Non-automatic                          |      | LAB3400N                                                        | LAB3400SN  | LAB3400NW                  | LAB3400SNW |
|                                                  |                                        |      | Approx. Ship. Wt. 24½ Lbs.                                      |            | Approx. Ship. Wt. 24½ Lbs. |            |

For panelboard or switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

### Special Breakers②

| Contin-<br>uous<br>Ampere<br>Rating                                | Magnetic<br>Trip Setting,<br>Amperes⑤ |      | Breaker Catalog Number |             |            |             |
|--------------------------------------------------------------------|---------------------------------------|------|------------------------|-------------|------------|-------------|
|                                                                    |                                       |      | 2-Poles③               |             | 3-Poles    |             |
|                                                                    | Low                                   | High | Standard               | Saf-T-Vue   | Standard   | Saf-T-Vue   |
| <b>Magnetic Only Breakers, Front Adjustable-Without Terminals⑦</b> |                                       |      |                        |             |            |             |
| 400                                                                | 350                                   | 700  | LAB2700MW              | LAB2700SMW  | LAB3700MW  | LAB3700SMW  |
| 400                                                                | 625                                   | 1250 | LAB21250MW             | LAB21250SMW | LAB31250MW | LAB31250SMW |
| 400                                                                | 750                                   | 1500 | LAB21500MW             | LAB21500SMW | LAB31500MW | LAB31500SMW |
| 400                                                                | 875                                   | 1750 | LAB21750MW             | LAB21750SMW | LAB31750MW | LAB31750SMW |
| 400                                                                | 1125                                  | 2250 | LAB22250MW             | LAB22250SMW | LAB32250MW | LAB32250SMW |
| 400                                                                | 1500                                  | 3000 | LAB23000MW             | LAB23000SMW | LAB33000MW | LAB33000SMW |
| 400                                                                | 2000                                  | 4000 | LAB24000MW             | LAB24000SMW | LAB34000MW | LAB34000SMW |
| <b>Ambient Compensating Breakers-Includes Terminals</b>            |                                       |      |                        |             |            |             |
| 125                                                                | 625                                   | 1250 | LAB2125A               | .....       | LAB3125A   | .....       |
| 150                                                                | 750                                   | 1500 | LAB2150A               | .....       | LAB3150A   | .....       |
| 175                                                                | 875                                   | 1750 | LAB2175A               | .....       | LAB3175A   | .....       |
| 200                                                                | 1000                                  | 2000 | LAB2200A               | .....       | LAB3200A   | .....       |
| 225                                                                | 1125                                  | 2250 | LAB2225A               | .....       | LAB3225A   | .....       |
| 250                                                                | 1250                                  | 2500 | LAB2250A               | .....       | LAB3250A   | .....       |
| 300                                                                | 1500                                  | 3000 | LAB2300A               | .....       | LAB3300A   | .....       |
| 350                                                                | 1750                                  | 3500 | LAB2350A               | .....       | LAB3350A   | .....       |
| 400                                                                | 2000                                  | 4000 | LAB2400A               | .....       | LAB3400A   | .....       |

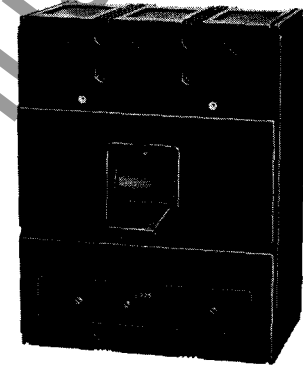
### Special Calibrations②

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See AD 29-160 for information regarding special conditions. Maximum calibration for 400 Hz is 300 amps.

| Type of<br>Calibration | 1-24<br>Identical Units                         | 25 or More<br>Identical Units |
|------------------------|-------------------------------------------------|-------------------------------|
| Thermal                | Add 10% to<br>List Price of<br>Complete Breaker | None                          |
| Magnetic               |                                                 | None                          |
| Frequency              |                                                 | None                          |

### 50° Calibration②

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LAB breakers meet requirements for class 4b circuit breakers, as defined by Federal Specification W-C-375a.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 50,000 Asym., 42,000 Sym. |
| 480 Ac     | 35,000 Asym., 30,000 Sym. |
| 600 Ac     | 25,000 Asym., 22,000 Sym. |
| 250 Dc     | 20,000⑧                   |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Terminals④

Two required per pole. Select from table on page 36.

### Magnetic Only and Ambient Compensating Breakers

For description, refer to DB 29-150 and AD 29-160. To order, select catalog number from table at left.

### Accessories and Modifications

Description: Pages 43-52

List Prices: See Price List 29-020 P WE A.  
Discount Symbol: CB-2

- ② Not listed with Underwriters' Laboratories, Inc.  
③ 2-Pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.  
④ Terminals shipped separately from breaker.  
⑤ Set on high side, adjustable to lower limits.  
⑥ Optional terminal.  
⑦ Select desired terminals from page 36 and order as separate item.  
⑧ Ratings above 10,000 amps not UL listed.



Type LA and MARK 75 Type HLA

70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip

| Continuous<br>Setting<br>Amperes<br>⑥<br>Rating<br>Low High<br>@<br>40°C | Complete Breakers                           |                |         |  | Shipped as Frame, Trip Unit and Terminals⑦ |                |         |                                    |
|--------------------------------------------------------------------------|---------------------------------------------|----------------|---------|--|--------------------------------------------|----------------|---------|------------------------------------|
|                                                                          | Includes Pressure Type<br>Copper Terminals⑦ |                |         |  | Frame Only                                 |                |         | Trip Unit<br>Only                  |
|                                                                          | Catalog Number                              |                |         |  | Catalog Number                             |                |         | Catalog<br>Number                  |
|                                                                          | Standard                                    | Saf-T-Vue<br>② | MARK 75 |  | Standard                                   | Saf-T-Vue<br>② | MARK 75 | Standard,<br>Saf-T-Vue,<br>MARK 75 |
|                                                                          |                                             |                |         |  |                                            |                |         |                                    |

400 Ampere Frame Breakers⑤

2 Poles, 600 Volts Ac, 250 Volts Dc③

|      |      |      |                            |          |         |                            |           |          |                              |
|------|------|------|----------------------------|----------|---------|----------------------------|-----------|----------|------------------------------|
| 70④  | 350  | 700  | LA2070                     | LA2070S  | .....   | LA2400F                    | LA2400FS  | .....    | HLA2070T                     |
| 90④  | 450  | 900  | LA2090                     | LA2090S  | .....   | LA2400F                    | LA2400FS  | .....    | HLA2090T                     |
| 100④ | 500  | 1000 | LA2100                     | LA2100S  | .....   | LA2400F                    | LA2400FS  | .....    | HLA2100T                     |
| 125  | 625  | 1250 | LA2125                     | LA2125S  | HLA2125 | LA2400F                    | LA2400FS  | HLA2400F | HLA2125T                     |
| 150  | 750  | 1500 | LA2150                     | LA2150S  | HLA2150 | LA2400F                    | LA2400FS  | HLA2400F | HLA2150T                     |
| 175  | 875  | 1750 | LA2175                     | LA2175S  | HLA2175 | LA2400F                    | LA2400FS  | HLA2400F | HLA2175T                     |
| 200  | 1000 | 2000 | LA2200                     | LA2200S  | HLA2200 | LA2400F                    | LA2400FS  | HLA2400F | HLA2200T                     |
| 225  | 1125 | 2250 | LA2225                     | LA2225S  | HLA2225 | LA2400F                    | LA2400FS  | HLA2400F | HLA2225T                     |
| 250  | 1250 | 2500 | LA2250                     | LA2250S  | HLA2250 | LA2400F                    | LA2400FS  | HLA2400F | HLA2250T                     |
| 300  | 1500 | 3000 | LA2300                     | LA2300S  | HLA2300 | LA2400F                    | LA2400FS  | HLA2400F | HLA2300T                     |
| 350  | 1750 | 3500 | LA2350                     | LA2350S  | HLA2350 | LA2400F                    | LA2400FS  | HLA2400F | HLA2350T                     |
| 400  | 2000 | 4000 | LA2400                     | LA2400S  | HLA2400 | LA2400F                    | LA2400FS  | HLA2400F | HLA2400T                     |
| 400  | MCS  |      | LA2400N                    | LA2400SN | .....   | LA2400NW                   | LA2400SNW | .....    | Incl. in Frame               |
|      |      |      | Approx. Ship. Wt. 21½ Lbs. |          |         | Approx. Ship. Wt. 17½ Lbs. |           |          | Approx. Ship.<br>Wt. 2½ Lbs. |

3 Poles, 600 Volts Ac Only

|      |      |      |                            |          |         |                           |           |          |                             |
|------|------|------|----------------------------|----------|---------|---------------------------|-----------|----------|-----------------------------|
| 70④  | 350  | 700  | LA3070                     | LA3070S  | .....   | LA3400F                   | LA3400FS  | .....    | HLA3070T                    |
| 90④  | 450  | 900  | LA3090                     | LA3090S  | .....   | LA3400F                   | LA3400FS  | .....    | HLA3090T                    |
| 100④ | 500  | 1000 | LA3100                     | LA3100S  | .....   | LA3400F                   | LA3400FS  | .....    | HLA3100T                    |
| 125  | 625  | 1250 | LA3125                     | LA3125S  | HLA3125 | LA3400F                   | LA3400FS  | HLA3400F | HLA3125T                    |
| 150  | 750  | 1500 | LA3150                     | LA3150S  | HLA3150 | LA3400F                   | LA3400FS  | HLA3400F | HLA3150T                    |
| 175  | 875  | 1750 | LA3175                     | LA3175S  | HLA3175 | LA3400F                   | LA3400FS  | HLA3400F | HLA3175T                    |
| 200  | 1000 | 2000 | LA3200                     | LA3200S  | HLA3200 | LA3400F                   | LA3400FS  | HLA3400F | HLA3200T                    |
| 225  | 1125 | 2250 | LA3225                     | LA3225S  | HLA3225 | LA3400F                   | LA3400FS  | HLA3400F | HLA3225T                    |
| 250  | 1250 | 2500 | LA3250                     | LA3250S  | HLA3250 | LA3400F                   | LA3400FS  | HLA3400F | HLA3250T                    |
| 300  | 1500 | 3000 | LA3300                     | LA3300S  | HLA3300 | LA3400F                   | LA3400FS  | HLA3400F | HLA3300T                    |
| 350  | 1750 | 3500 | LA3350                     | LA3350S  | HLA3350 | LA3400F                   | LA3400FS  | HLA3400F | HLA3350T                    |
| 400  | 2000 | 4000 | LA3400                     | LA3400S  | HLA3400 | LA3400F                   | LA3400FS  | HLA3400F | HLA3400T                    |
| 400  | MCS  |      | LA3400N                    | LA3400SN | .....   | LA3400NW                  | LA3400SNW | .....    | Incl. in Frame              |
|      |      |      | Approx. Ship. Wt. 24½ Lbs. |          |         | Approx. Ship. Wt. 19 Lbs. |           |          | Approx. Ship.<br>Wt. 3 Lbs. |

For Panelboard and switchboard applications where only line side or load side terminals are required, add suffix "X" to complete breaker catalog number.

Terminals⑤⑦

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used aluminum cable, use joint compound. To order optional aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

- ② Not listed with Underwriters' Laboratories, Inc.
- ③ 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ④ These ratings have interrupting capacities reduced to 25,000 amps sym. at 240 volts, 20,000 amps sym. at 480 volts, and 15,000 amps sym. at 600 volts.
- ⑤ Terminals, trip units and accessories are not interchangeable between 400 and 600 ampere frames.
- ⑥ Set on high side, adjustable to lower limits.
- ⑦ Terminals shipped separately from breaker.
- ⑧ 400 amp frame only.
- ⑨ Optional terminal.
- ⑩ Ratings above 10,000 amps not UL Listed.

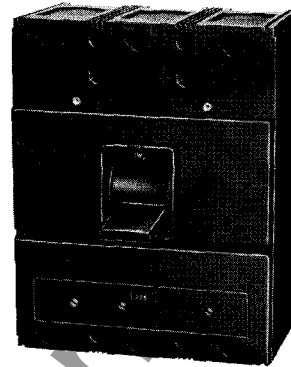
| Max.<br>Amps | Terminal<br>Catalog<br>Number | Wire Range, Type,<br>No. of Cables |
|--------------|-------------------------------|------------------------------------|
|--------------|-------------------------------|------------------------------------|

Standard Copper Pressure Terminals

|       |         |                                               |
|-------|---------|-----------------------------------------------|
| 225⑥  | T225LA  | 1 # 6-350 MCM Cu                              |
| 225⑥⑨ | T225LBF | 1 # 6-250 MCM Cu                              |
| 400⑥  | T401LA  | 1 # 4-250-MCM Cu,<br>plus<br>1 3/0-600 MCM Cu |

Optional Al/Cu Pressure Terminals

|      |          |                                                     |
|------|----------|-----------------------------------------------------|
| 225⑥ | TA225LA1 | 1 # 6-350 MCM Cu, or<br>1 # 4-350 MCM Al            |
| 400⑥ | TA400LA1 | 1 # 4-250 MCM Al/Cu,<br>plus<br>1 3/0-600 MCM Al/Cu |
| 400⑥ | TA401LA  | 1 600-750 MCM Al                                    |



Listed with Underwriters' Laboratories, Inc. except as noted.

Type LA breakers meet requirements for class 4b circuit breakers, and Type HLA meet requirements for class 4c as defined by Federal Specification W-C-375a.

Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Volts Max.               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 50,000 Asym., 42,000 Sym. |
| 480 Ac                   | 35,000 Asym., 30,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc                   | 20,000⑩                   |

Mark 75 Breakers

|        |                           |
|--------|---------------------------|
| 240 Ac | 75,000 Asym., 65,000 Sym. |
| 480 Ac | 40,000 Asym., 35,000 Sym. |
| 600 Ac | 30,000 Asym., 25,000 Sym. |
| 250 Dc | 20,000⑩                   |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

Accessories and Modifications  
Description: Pages 43-52

List Prices: See Price List 29-020 P WE A  
Discount Symbol: CB-2



October, 1975  
Supersedes Price List 29-120,  
pages 37-38, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Type LA400 Amperes  
Type MA800 Amperes

## AB DE-ION® Circuit Breakers

### Type LA Breakers

70-400 Amperes, 600 Volts Ac, 250 Volts Dc, 2, 3 Poles, Interchangeable Trip

#### Special Breakers<sup>⑤</sup> Trip Units Only

| Contin-<br>uous<br>Amperes<br>Rating | Magnetic<br>Trip Setting,<br>Amperes <sup>⑥</sup><br>Low High | Catalog Number       |         |
|--------------------------------------|---------------------------------------------------------------|----------------------|---------|
|                                      |                                                               | 2-Poles <sup>②</sup> | 3-Poles |

#### Magnetic Only Breakers, Front Adjustable 400 Ampere Frame Breakers<sup>④</sup>

|     |      |      |            |            |
|-----|------|------|------------|------------|
| 400 | 350  | 700  | HLA2700TM  | HLA3700TM  |
| 400 | 625  | 1250 | HLA21250TM | HLA31250TM |
| 400 | 750  | 1500 | HLA21500TM | HLA31500TM |
| 400 | 875  | 1750 | HLA21750TM | HLA31750TM |
| 400 | 1125 | 2250 | HLA22250TM | HLA32250TM |
| 400 | 1500 | 3000 | HLA23000TM | HLA33000TM |
| 400 | 2000 | 4000 | HLA24000TM | HLA34000TM |

#### Ambient Compensating Breakers 400 Ampere Frame Breakers Only<sup>④</sup>

|                  |      |      |           |           |
|------------------|------|------|-----------|-----------|
| 70 <sup>③</sup>  | 350  | 700  | HLA2070TA | HLA3070TA |
| 90 <sup>③</sup>  | 450  | 900  | HLA2090TA | HLA3090TA |
| 100 <sup>③</sup> | 500  | 1000 | HLA2100TA | HLA3100TA |
| 125              | 625  | 1250 | HLA2125TA | HLA3125TA |
| 150              | 750  | 1500 | HLA2150TA | HLA3150TA |
| 175              | 875  | 1750 | HLA2175TA | HLA3175TA |
| 200              | 1000 | 2000 | HLA2200TA | HLA3200TA |
| 225              | 1125 | 2250 | HLA2225TA | HLA3225TA |
| 250              | 1250 | 2500 | HLA2250TA | HLA3250TA |
| 300              | 1500 | 3000 | HLA2300TA | HLA3300TA |
| 350              | 1750 | 3500 | HLA2350TA | HLA3350TA |
| 400              | 2000 | 4000 | HLA2400TA | HLA3400TA |

#### Magnetic Only and Ambient Compensating Breakers<sup>⑤</sup>

For description, refer to DB 29-150 and AD 29-160. To order, select trip unit from table at left, frame and terminals from page 36.

#### Special Calibrations<sup>⑤</sup>

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. Also price additions apply to specific calibrations for frequencies other than 0-60 Hertz Ac circuits. See application data 29-160 for information regarding special conditions. Maximum 400 Hz calibration: 400 amp frame, 300 amps.

| Type of Calibration  | 1-24<br>Identical Units                  | 25 or More<br>Identical Units |
|----------------------|------------------------------------------|-------------------------------|
| Thermal              | Add 30% of<br>List Price of<br>Trip Unit | None                          |
| Ambient<br>Frequency |                                          | None                          |

#### 50°C Calibration<sup>⑤</sup>

Add suffix "V" to catalog number for complete breaker or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

**List Prices:** See Price List 29-020 P WE A.  
**Discount Symbol:** CB-2

② Two-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from center pole.

③ These ratings have lower interrupting capacities. See note 4, page 36.

④ Terminals, trip units and accessories are not interchangeable between 400 and 600 ampere frames.

⑤ Not listed with Underwriters' Laboratories, Inc.

⑥ Set on high side, adjustable to lower limits.

# Type MA Breakers

125-800 Amperes, 600 Volts Ac, 250 Volts Dc<sup>⑧</sup>, 2, 3 Poles, Interchangeable Trip

| Con-<br>tin-<br>uous<br>Am-<br>pere<br>Rating<br>⑤<br>Low High<br>@<br>40°C | Magnetic<br>Trip<br>Setting,<br>Amperes<br>⑤ | Complete Breaker                                        |                |         | Shipped as Frame, Trip Unit and Terminals <sup>⑥</sup> |                |                                    |
|-----------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------|----------------|---------|--------------------------------------------------------|----------------|------------------------------------|
|                                                                             |                                              | Includes Pressure Type<br>Copper Terminals <sup>⑥</sup> |                |         | Frame Only                                             |                |                                    |
|                                                                             |                                              | Catalog Number                                          |                |         | Catalog Number                                         |                |                                    |
|                                                                             |                                              | Standard                                                | Saf-T-Vue<br>② | MARK 75 | Standard                                               | Saf-T-Vue<br>② | MARK 75                            |
|                                                                             |                                              |                                                         |                |         |                                                        |                | Standard,<br>Saf-T-Vue,<br>MARK 75 |

## 2 Poles, 600 Volts Ac, 250 Volts Dc<sup>⑧</sup>

|     |      |      |                           |          |                           |          |           |          |                                                |
|-----|------|------|---------------------------|----------|---------------------------|----------|-----------|----------|------------------------------------------------|
| 125 | 625  | 1250 | MA2125                    | MA2125S  | HMA2125                   | MA2800F  | MA2800FS  | HMA2800F | HMA2125T                                       |
| 150 | 750  | 1500 | MA2150                    | MA2150S  | HMA2150                   | MA2800F  | MA2800FS  | HMA2800F | HMA2150T                                       |
| 175 | 875  | 1750 | MA2175                    | MA2175S  | HMA2175                   | MA2800F  | MA2800FS  | HMA2800F | HMA2175T                                       |
| 200 | 1000 | 2000 | MA2200                    | MA2200S  | HMA2200                   | MA2800F  | MA2800FS  | HMA2800F | HMA2200T                                       |
| 225 | 1125 | 2250 | MA2225                    | MA2225S  | HMA2225                   | MA2800F  | MA2800FS  | HMA2800F | HMA2225T                                       |
| 250 | 1250 | 2500 | MA2250                    | MA2250S  | HMA2250                   | MA2800F  | MA2800FS  | HMA2800F | HMA2250T                                       |
| 300 | 1500 | 3000 | MA2300                    | MA2300S  | HMA2300                   | MA2800F  | MA2800FS  | HMA2800F | HMA2300T                                       |
| 350 | 1750 | 3500 | MA2350                    | MA2350S  | HMA2350                   | MA2800F  | MA2800FS  | HMA2800F | HMA2350T                                       |
| 400 | 2000 | 4000 | MA2400                    | MA2400S  | HMA2400                   | MA2800F  | MA2800FS  | HMA2800F | HMA2400T                                       |
| 500 | 2500 | 5000 | MA2500                    | MA2500S  | HMA2500                   | MA2800F  | MA2800FS  | HMA2800F | HMA2500T                                       |
| 600 | 3000 | 6000 | MA2600                    | MA2600S  | HMA2600                   | MA2800F  | MA2800FS  | HMA2800F | HMA2600T                                       |
| 700 | 3000 | 6000 | MA2700 <sup>④</sup>       | MA2700S  | HMA2700                   | MA2800F  | MA2800FS  | HMA2800F | HMA2700T <sup>④</sup>                          |
| 800 | 3000 | 6000 | MA2800 <sup>④</sup>       | MA2800S  | HMA2800                   | MA2800F  | MA2800FS  | HMA2800F | HMA2800T <sup>④</sup>                          |
| 800 | MCS  |      | MA2800N                   | MA2800SN |                           | MA2800NW | MA2800SNW |          | Incl. in Frame<br>Approx. Ship. Wt. 3 1/2 Lbs. |
|     |      |      | Approx. Ship. Wt. 37 Lbs. |          | Approx. Ship. Wt. 24 Lbs. |          |           |          |                                                |

## 3 Poles, 600 Volts Ac Only

|     |      |      |                           |          |                           |          |           |          |                                            |
|-----|------|------|---------------------------|----------|---------------------------|----------|-----------|----------|--------------------------------------------|
| 125 | 625  | 1250 | MA3125                    | MA3125S  | HMA3125                   | MA3800F  | MA3800FS  | HMA3800F | HMA3125T                                   |
| 150 | 750  | 1500 | MA3150                    | MA3150S  | HMA3150                   | MA3800F  | MA3800FS  | HMA3800F | HMA3150T                                   |
| 175 | 875  | 1750 | MA3175                    | MA3175S  | HMA3175                   | MA3800F  | MA3800FS  | HMA3800F | HMA3175T                                   |
| 200 | 1000 | 2000 | MA3200                    | MA3200S  | HMA3200                   | MA3800F  | MA3800FS  | HMA3800F | HMA3200T                                   |
| 225 | 1125 | 2250 | MA3225                    | MA3225S  | HMA3225                   | MA3800F  | MA3800FS  | HMA3800F | HMA3225T                                   |
| 250 | 1250 | 2500 | MA3250                    | MA3250S  | HMA3250                   | MA3800F  | MA3800FS  | HMA3800F | HMA3250T                                   |
| 300 | 1500 | 3000 | MA3300                    | MA3300S  | HMA3300                   | MA3800F  | MA3800FS  | HMA3800F | HMA3300T                                   |
| 350 | 1750 | 3500 | MA3350                    | MA3350S  | HMA3350                   | MA3800F  | MA3800FS  | HMA3800F | HMA3350T                                   |
| 400 | 2000 | 4000 | MA3400                    | MA3400S  | HMA3400                   | MA3800F  | MA3800FS  | HMA3800F | HMA3400T                                   |
| 500 | 2500 | 5000 | MA3500                    | MA3500S  | HMA3500                   | MA3800F  | MA3800FS  | HMA3800F | HMA3500T                                   |
| 600 | 3000 | 6000 | MA3600                    | MA3600S  | HMA3600                   | MA3800F  | MA3800FS  | HMA3800F | HMA3600T                                   |
| 700 | 3000 | 6000 | MA3700 <sup>④</sup>       | MA3700S  | HMA3700                   | MA3800F  | MA3800FS  | HMA3800F | HMA3700T <sup>④</sup>                      |
| 800 | 3000 | 6000 | MA3800 <sup>④</sup>       | MA3800S  | HMA3800                   | MA3800F  | MA3800FS  | HMA3800F | HMA3800T <sup>④</sup>                      |
| 800 | MCS  |      | MA3800N                   | MA3800SN |                           | MA3800NW | MA3800SNW |          | Incl. in Frame<br>Approx. Ship. Wt. 4 Lbs. |
|     |      |      | Approx. Ship. Wt. 44 Lbs. |          | Approx. Ship. Wt. 28 Lbs. |          |           |          |                                            |

## Magnetic Only Breakers, Front Adj.

| Contin-<br>uous<br>Ampere<br>Rating | Magnetic<br>Trip Range<br>⑤<br>Low High | Cat. Number, Trip Unit Only |                       |
|-------------------------------------|-----------------------------------------|-----------------------------|-----------------------|
|                                     |                                         | 2 Poles <sup>③</sup>        | 3 Poles               |
|                                     |                                         |                             |                       |
| 800                                 | 625                                     | 1250                        | HMA21250TM HMA31250TM |
| 800                                 | 1000                                    | 2000                        | HMA22000TM HMA32000TM |
| 800                                 | 1500                                    | 3000                        | HMA23000TM HMA33000TM |
| 800                                 | 2000                                    | 4000                        | HMA24000TM HMA34000TM |
| 800                                 | 3000                                    | 6000                        | HMA26000TM HMA36000TM |
| 800                                 | 4000                                    | 8000                        | HMA28000TM HMA38000TM |

- ② Not listed with Underwriters' Laboratories, Inc.  
 ③ 2-pole breakers supplied in 3-pole frames with current carrying parts omitted from center pole.  
 ④ 60 Hertz Ac only.  
 ⑤ Set on high side, adjustable to lower limit.  
 ⑥ Terminals shipped separate from breaker.  
 ⑦ Fits only breakers with three piece covers manufactured after late 1973.  
 ⑧ Above 600 amps., Dc rating applies to magnetic only breakers.  
 ⑨ Ratings above 10,000 amps not UL Listed.

## Ambient Compensating Breakers

| Contin-<br>uous<br>Ampere<br>Range | Magnetic<br>Trip Range<br>⑤<br>Low High | Cat. Number Trip Unit Only |                     |
|------------------------------------|-----------------------------------------|----------------------------|---------------------|
|                                    |                                         | 2-Poles                    | 3-Poles             |
|                                    |                                         |                            |                     |
| 125                                | 625                                     | 1250                       | HMA2125TA HMA3125TA |
| 150                                | 750                                     | 1500                       | HMA2150TA HMA3150TA |
| 175                                | 875                                     | 1750                       | HMA2175TA HMA3175TA |
| 200                                | 1000                                    | 2000                       | HMA2200TA HMA3200TA |
| 225                                | 1125                                    | 2250                       | HMA2225TA HMA3225TA |
| 250                                | 1250                                    | 2500                       | HMA2250TA HMA3250TA |
| 300                                | 1500                                    | 3000                       | HMA2300TA HMA3300TA |
| 350                                | 1750                                    | 3500                       | HMA2350TA HMA3350TA |
| 400                                | 2000                                    | 4000                       | HMA2400TA HMA3400TA |
| 500                                | 2500                                    | 5000                       | HMA2500TA HMA3500TA |
| 600                                | 3000                                    | 6000                       | HMA2600TA HMA3600TA |
| 700                                | 3000                                    | 6000                       | HMA2700TA HMA3700TA |
| 800                                | 3000                                    | 6000                       | HMA2800TA HMA3800TA |

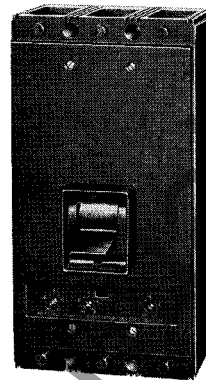
Special Calibrations See Page 39

## Accessories and Modifications

Description: Pages 43-52

List Prices: See Price List 29-020 P WE A.

Discount Symbol: CB-2



Listed with Underwriters' Laboratories, Inc. except as noted.

Type MA breakers meet requirements for class 5a circuit breakers, and Type HMA meet requirements for class 5b, as defined by Federal Specification W-C-375a.

## Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts               | Amperes                   |
|--------------------------|---------------------------|
| <b>Standard Breakers</b> |                           |
| 240 Ac                   | 50,000 Asym., 42,000 Sym. |
| 480 Ac                   | 35,000 Asym., 30,000 Sym. |
| 600 Ac                   | 25,000 Asym., 22,000 Sym. |
| 250 Dc <sup>⑧</sup>      | 20,000 <sup>⑨</sup>       |
| <b>Mark 75 Breakers</b>  |                           |
| 240 Ac                   | 75,000 Asym., 65,000 Sym. |
| 480 Ac                   | 40,000 Asym., 35,000 Sym. |
| 600 Ac                   | 30,000 Asym., 25,000 Sym. |
| 250 Dc <sup>⑧</sup>      | 20,000 <sup>⑨</sup>       |

On all 3 phase Delta, Grounded B phase applications, refer to Westinghouse.

## Terminals<sup>⑥</sup>

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

| Max. Amps.                                | Terminal Cat. No. | Wire Range, Type No. of Cables |
|-------------------------------------------|-------------------|--------------------------------|
| <b>Standard Copper Pressure Terminals</b> |                   |                                |
| 350                                       | T350MA            | 1 # -600 MCM Cu                |
| 600                                       | T600MA1           | 2 2/0-500 MCM Cu               |
| 800                                       | T800MA1           | 3 3/0-300 MCM Cu               |
| <b>Optional Al/Cu Pressure Terminals</b>  |                   |                                |
| 600                                       | TA700MA1          | 2 # 1-500 MCM Al/Cu            |
| 800                                       | TA800MA2          | 3 3/0-400 MCM Al/Cu            |
| 800 <sup>⑦</sup>                          | TA801MA           | 2 500-750 MCM Al/Cu            |

## Magnetic Only and Ambient Compensating Breakers

For description, refer to DB 29-150 or AD 29-160. To order a complete breaker, select trip unit plus frame and terminals.



Westinghouse Electric Corporation  
Low Voltage Breaker Division  
Beaver, Pennsylvania 15009

29-120 T WE A  
Technical Data

Page 39

October, 1975  
Supersedes Price List 29-120,  
pages 39-40, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Replacement Breakers  
Type NB 1200 Amperes

## AB DE-ION® Circuit Breakers

### Type NB Breakers

700-1200 Amperes, 600 Volts, 60 Hertz Ac<sup>②</sup>, 250 Volts Dc<sup>④</sup>, 2, 3 Poles, Interchangeable Trip

| Con-<br>tin-<br>uous<br>Am-<br>pere<br>Rating<br>@<br>40°C | Magnetic<br>Trip<br>Setting,<br>Amperes <sup>⑦</sup><br>Low High | Complete Breaker                                        |                |         | Shipped as Frame, Trip Unit and Terminals <sup>⑥</sup> |                |         |
|------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------|----------------|---------|--------------------------------------------------------|----------------|---------|
|                                                            |                                                                  | Includes Pressure Type Copper<br>Terminals <sup>⑥</sup> |                |         | Frame Only                                             |                |         |
|                                                            |                                                                  | Catalog Number                                          |                |         | Catalog Number                                         |                |         |
|                                                            |                                                                  | Standard                                                | Saf-T-Vue<br>⑧ | MARK 75 | Standard                                               | Saf-T-Vue<br>⑧ | MARK 75 |

#### 2 Poles, 600 Volts Ac, 250 Volts Dc<sup>③④</sup>

|      |      |      |                           |           |          |                           |           |           |                           |
|------|------|------|---------------------------|-----------|----------|---------------------------|-----------|-----------|---------------------------|
| 700  | 3000 | 6000 | NB2700                    | NB2700S   | HNB2700  | NB21200F                  | NB21200FS | HNB21200F | HNB2700T                  |
| 800  | 3000 | 6000 | NB2800                    | NB2800S   | HNB2800  | NB21200F                  | NB21200FS | HNB21200F | HNB2800T                  |
| 900  | 4000 | 8000 | NB2900                    | NB2900S   | HNB2900  | NB21200F                  | NB21200FS | HNB21200F | HNB2900T                  |
| 1000 | 4000 | 8000 | NB21000                   | NB21000S  | HNB21000 | NB21200F                  | NB21200FS | HNB21200F | HNB21000T                 |
| 1200 | 4000 | 8000 | NB21200                   | NB21200S  | HNB21200 | NB21200F                  | NB21200FS | HNB21200F | HNB21200T                 |
| 1200 | MCS  |      | NB21200N                  | NB21200SN |          | NB21200F                  | NB21200FS |           | HNB21200TN                |
|      |      |      | Approx. Ship. Wt. 43 Lbs. |           |          | Approx. Ship. Wt. 29 Lbs. |           |           | Approx. Ship. Wt. 3½ Lbs. |

#### 3-Poles, 600 Volts Ac Only

|      |      |      |                           |           |          |                           |           |           |                          |
|------|------|------|---------------------------|-----------|----------|---------------------------|-----------|-----------|--------------------------|
| 700  | 3000 | 6000 | NB3700                    | NB3700S   | HNB3700  | NB31200F                  | NB31200FS | HNB31200F | HNB3700T                 |
| 800  | 3000 | 6000 | NB3800                    | NB3800S   | HNB3800  | NB31200F                  | NB31200FS | HNB31200F | HNB3800T                 |
| 900  | 4000 | 8000 | NB3900                    | NB3900S   | HNB3900  | NB31200F                  | NB31200FS | HNB31200F | HNB3900T                 |
| 1000 | 4000 | 8000 | NB31000                   | NB31000S  | HNB31000 | NB31200F                  | NB31200FS | HNB31200F | HNB31000T                |
| 1200 | 4000 | 8000 | NB31200                   | NB31200S  | HNB31200 | NB31200F                  | NB31200FS | HNB31200F | HNB31200T                |
| 1200 | MCS  |      | NB31200N                  | NB31200SN |          | NB31200F                  | NB31200FS |           | HNB31200TN               |
|      |      |      | Approx. Ship. Wt. 51 Lbs. |           |          | Approx. Ship. Wt. 32 Lbs. |           |           | Approx. Ship. Wt. 4 Lbs. |

### Magnetic Only Breakers, Front Adjustable<sup>⑤⑧</sup>

| Con-<br>tin-<br>uous<br>Am-<br>pere<br>Rating | Magnetic<br>Trip Range⑦ |       | Trip Unit Only    |                   |
|-----------------------------------------------|-------------------------|-------|-------------------|-------------------|
|                                               | Low                     | High  | 2-Poles③          | 3-Poles           |
|                                               |                         |       | Catalog<br>Number | Catalog<br>Number |
|                                               |                         |       |                   |                   |
| 1200                                          | 3000                    | 6000  | HNB26000TM        | HNB36000TM        |
| 1200                                          | 4000                    | 8000  | HNB28000TM        | HNB38000TM        |
| 1200                                          | 5000                    | 10000 | HNB210000TM       | HNB310000TM       |
| 1200                                          | 6000                    | 12000 | HNB212000TM       | HNB312000TM       |

② Higher frequency calibration not available. Minimum of 50 cycle calibration available on special order.

③ 2-pole breakers supplied in 3-pole frames with current carrying parts omitted from center pole.

④ 250 volt Dc rating applied only to magnetic only type breakers.

⑤ Frames, terminals, studs, mounting hardware, dimensions and shipping weights are same as standard thermal magnetic breakers.

⑥ Terminals shipped separately from breaker.

⑦ Set on high side, adjustable to lower limits.

⑧ Not listed with Underwriters' Laboratories, Inc.

⑨ Ratings above 10,000 amps not UL Listed.

### Magnetic Only Breakers<sup>⑨</sup>

For description, refer to DB 29-150 or AD 29-160. To order a complete breaker, select trip unit, plus frame and terminals.

### Special Calibrations<sup>⑨</sup>

Special calibration price additions apply to ampere ratings not listed as standard, ambients other than 40°C or 50°C, or frequencies other than 60 Hertz Ac (50 Hertz Ac minimum – 60 Hertz Ac maximum for ratings of 700 amps and above). See AD 29-160 for additional information regarding special conditions. Maximum 400 Hz calibration for type MA is 475 amps.

| Type of<br>Calibration | 1-24<br>Identical Units | 25 or<br>More<br>Ident.<br>Units |
|------------------------|-------------------------|----------------------------------|
|                        | Type<br>MA, HMA         | Type<br>NB, HNB                  |

| Thermal<br>Ambient<br>Frequency | Add 20% of<br>Trip Unit<br>List Price | Add 15% of<br>Trip Unit<br>List Price | None<br>None<br>None |
|---------------------------------|---------------------------------------|---------------------------------------|----------------------|
|---------------------------------|---------------------------------------|---------------------------------------|----------------------|

### 50°C Calibration<sup>⑨</sup>

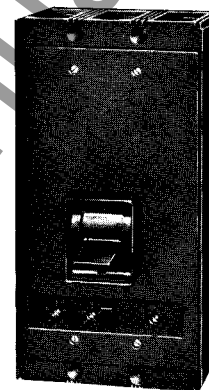
Add suffix "V" to catalog number for complete breaker or trip unit only, when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.

### Accessories and Modifications

Descriptions: Pages 43-52.

List Prices: See Price List 29-020 P WE A.

Discount Symbol: CB-2



Listed with Underwriters' Laboratories, Inc. except as noted.

Type NB breakers meet requirements for class 5a circuit breakers, and Type NHB meet requirements for class 5b, as defined by Federal Specification W-C-375a.

### Underwriters' Laboratories, Inc. listed Interrupting Ratings:

Max. Volts      Amperes

#### Standard Breakers

|                     |                           |
|---------------------|---------------------------|
| 240 Ac              | 50,000 Asym., 42,000 Sym. |
| 480 Ac              | 35,000 Asym., 30,000 Sym. |
| 600 Ac              | 25,000 Asym., 22,000 Sym. |
| 250 Dc <sup>④</sup> | 20,000 <sup>⑨</sup>       |

#### Mark 75 Breakers

|                     |                           |
|---------------------|---------------------------|
| 240 Ac              | 75,000 Asym., 65,000 Sym. |
| 480 Ac              | 40,000 Asym., 35,000 Sym. |
| 600 Ac              | 30,000 Asym., 25,000 Sym. |
| 250 Dc <sup>④</sup> | 20,000 <sup>⑨</sup>       |

On all 3 phase Delta, Ground B phase applications, refer to Westinghouse.

### Terminals<sup>⑥</sup>

Two terminals are required per pole. Terminals are Underwriters' Laboratories, Inc. listed for wire type and range listed below. When used with aluminum conductors, use joint compound. To order optional-aluminum-copper terminals, add suffix "Z" to complete breaker catalog number.

| Max.<br>Ampere<br>Ratings | Terminal<br>Catalog<br>Number | Wire Range, Type,<br>No. of Cables |
|---------------------------|-------------------------------|------------------------------------|
|---------------------------|-------------------------------|------------------------------------|

#### Standard Copper Pressure Terminals

|      |          |                  |
|------|----------|------------------|
| 1000 | T1000NB1 | 3 3/0-500 MCM Cu |
| 1200 | T1200NB1 | 4 3/0-400 MCM Cu |

#### Alternate Al/Cu Pressure Terminals

|      |           |                     |
|------|-----------|---------------------|
| 1000 | TA1000NB1 | 3 3/0-400 MCM Al/Cu |
| 1200 | TA1200NB1 | 4 4/0-500 MCM Al/Cu |
| 1200 | TA1201NB1 | 3 500-750 MCM Al/Cu |





October, 1975  
Supersedes Price List 29-120,  
pages 41-42, all previous issues.  
Mailed to: E, D, C/1901, 1903, 1928/PL;  
E, D/2430

Replacement Breakers  
Type PB 3000 Amperes

## AB DE-ION® Circuit Breakers

### Type PB Breakers

600-3000 Amperes, 600 Volts, 60 Cycle Ac<sup>⑤</sup>, 250 Volts Dc<sup>⑦</sup>, 2, 3 Poles, Interchange-  
able Trip

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip<br>Setting, Amperes |       | Complete Breaker                | Shipped as Frame, Trip Unit and Terminals |                |
|------------------------------------------|-----------------------------------|-------|---------------------------------|-------------------------------------------|----------------|
|                                          | ⑥⑨                                |       | Includes Bus Bar<br>Connectors⑩ | Frame Only                                | Trip Unit Only |
|                                          | Low                               | High  | Catalog Number                  | Catalog Number                            | Catalog Number |
| 2-Poles, 600 Volts Ac Only④              |                                   |       |                                 |                                           |                |
| 600                                      | 1500                              | 5000  | PB2600                          | PB22500F                                  | PB2600T        |
| 700                                      | 1500                              | 5000  | PB2700                          | PB22500F                                  | PB2700T        |
| 800                                      | 1500                              | 5000  | PB2800                          | PB22500F                                  | PB2800T        |
| 900                                      | 1500                              | 5000  | PB2900                          | PB22500F                                  | PB2900T        |
| 1000                                     | 1500                              | 5000  | PB21000                         | PB22500F                                  | PB21000T       |
| 1200                                     | 2000                              | 6000  | PB21200                         | PB22500F                                  | PB21200T       |
| 1400                                     | 2500                              | 7000  | PB21400                         | PB22500F                                  | PB21400T       |
| 1600                                     | 3000                              | 8000  | PB21600                         | PB22500F                                  | PB21600T       |
| 1800                                     | 3000                              | 8000  | PB21800                         | PB22500F                                  | PB21800T       |
| 2000                                     | 3000                              | 8000  | PB22000                         | PB22500F                                  | PB22000T       |
| 2000 MCS                                 | Non-automatic                     |       | PB22000N                        | PB22500F                                  | PB22000TN      |
|                                          | Approx. Ship. Wt.                 |       | 132 Lbs.                        | 98 Lbs.                                   | 18 Lbs.        |
| 2500                                     | 3000                              | 8000  | PB22500                         | PB22500F                                  | PB22500T       |
| 2500 MCS                                 | Non-automatic                     |       | PB22500N                        | PB22500F                                  | PB22500TN      |
|                                          | Approx. Ship. Wt.                 |       | 144 Lbs.                        | 98 Lbs.                                   | 18 Lbs.        |
| 3000                                     | 4000                              | 12000 | PB23000                         | PB23000F                                  | PB23000T       |
| 3000 MCS                                 | Non-automatic                     |       | PB23000N                        | PB23000F                                  | PB23000TN      |
|                                          | Approx. Ship. Wt.                 |       | 200 Lbs.                        | 100 Lbs.                                  | 20 Lbs.        |
| 3-Poles, 600 Volts Ac Only               |                                   |       |                                 |                                           |                |
| 600                                      | 1500                              | 5000  | PB3600                          | PB32500F                                  | PB3600T        |
| 700                                      | 1500                              | 5000  | PB3700                          | PB32500F                                  | PB3700T        |
| 800                                      | 1500                              | 5000  | PB3800                          | PB32500F                                  | PB3800T        |
| 900                                      | 1500                              | 5000  | PB3900                          | PB32500F                                  | PB3900T        |
| 1000                                     | 1500                              | 5000  | PB31000                         | PB32500F                                  | PB31000T       |
| 1200                                     | 2000                              | 6000  | PB31200                         | PB32500F                                  | PB31200T       |
| 1400                                     | 2500                              | 7000  | PB31400                         | PB32500F                                  | PB31400T       |
| 1600                                     | 3000                              | 8000  | PB31600                         | PB32500F                                  | PB31600T       |
| 1800                                     | 3000                              | 8000  | PB31800                         | PB32500F                                  | PB31800T       |
| 2000                                     | 3000                              | 8000  | PB32000                         | PB32500F                                  | PB32000T       |
| 2000 MCS                                 | Non-automatic                     |       | PB32000N                        | PB32500F                                  | PB32000TN      |
|                                          | Approx. Ship. Wt.                 |       | 155 Lbs.                        | 108 Lbs.                                  | 23 Lbs.        |
| 2500                                     | 3000                              | 8000  | PB32500                         | PB32500F                                  | PB32500T       |
| 2500 MCS                                 | Non-automatic                     |       | PB32500N                        | PB32500F                                  | PB32500TN      |
|                                          | Approx. Ship. Wt.                 |       | 173 Lbs.                        | 108 Lbs.                                  | 23 Lbs.        |
| 3000                                     | 4000                              | 12000 | PB33000                         | PB33000F                                  | PB33000T       |
| 3000 MCS                                 | Non-automatic                     |       | PB33000N                        | PB33000F                                  | PB33000TN      |
|                                          | Approx. Ship. Wt.                 |       | 255 Lbs.                        | 110 Lbs.                                  | 25 Lbs.        |

### Special Breakers<sup>②</sup> (See page 42 also) Magnetic Only Breakers, Front Ad- justable<sup>③</sup> Trip Unit Only

| Contin-<br>uous<br>Ampere<br>Rating | Magnetic<br>Trip Range,<br>Amperes <sup>⑨</sup> | 2-Poles <sup>④</sup> |      | 3-Poles |
|-------------------------------------|-------------------------------------------------|----------------------|------|---------|
|                                     |                                                 | Low                  | High |         |

#### For Rear Connected Type PB Breakers

|      |      |       |            |            |
|------|------|-------|------------|------------|
| 2000 | 1500 | 5000  | PB25000TM  | PB35000TM  |
| 2000 | 2000 | 6000  | PB26000TM  | PB36000TM  |
| 2000 | 2500 | 7000  | PB27000TM  | PB37000TM  |
| 2000 | 3000 | 8000  | PB28000TM  | PB38000TM  |
| 2000 | 3500 | 10000 | PB210000TM | PB310000TM |
| 2000 | 4000 | 12000 | PB212000TM | PB312000TM |
| 2500 | 4000 | 12000 | 373D488G08 | 373D488G09 |
| 3000 | 4000 | 12000 | 5686D44G01 | 5686D44G02 |

#### For Front Connected Type PBF Breakers

|      |      |       |             |             |
|------|------|-------|-------------|-------------|
| 2000 | 1500 | 5000  | PBF25000TM  | PBF35000TM  |
| 2000 | 2000 | 6000  | PBF26000TM  | PBF36000TM  |
| 2000 | 2500 | 7000  | PBF27000TM  | PBF37000TM  |
| 2000 | 3000 | 8000  | PBF28000TM  | PBF38000TM  |
| 2000 | 3500 | 10000 | PBF210000TM | PBF310000TM |
| 2000 | 4000 | 12000 | PBF212000TM | PBF312000TM |

### Magnetic Only Breakers<sup>②</sup>

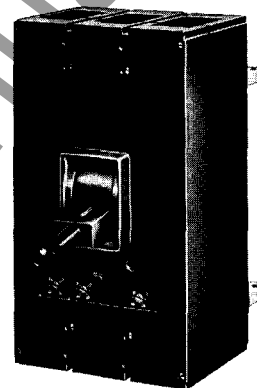
For description, refer to DB 29-150 and AD 29-160. To order a complete breaker, select trip unit, plus frame and connectors.

### Accessories and Modifications

Description: Pages 43-52

List Prices: See Price List 29-020 P WE A.  
Discount Symbol: CB-2

- ② Not listed with Underwriters' Laboratories, Inc.
- ③ Frames, connectors, dimensions and shipping weights are same as thermal magnetic breakers.
- ④ 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.
- ⑤ Higher frequency calibration not available. Minimum of 50 Hertz calibration available on special order.
- ⑥ Higher magnetic trip settings are available as special calibration. Refer to magnetic only breakers for specific trip ranges.
- ⑦ Available only on magnetic only breakers.
- ⑧ Based on NEMA test procedure.
- ⑨ Set on high side, adjustable to lower limits.
- ⑩ Shipped separately from breaker.



PB Rear Connected Breaker

Listed with Underwriters' Laboratories, Inc. except as noted.

### Underwriters' Laboratories, Inc. Listed Interrupting Ratings

| Max. Volts          | Amperes                     |
|---------------------|-----------------------------|
| 240 Ac              | 150,000 Asym., 125,000 Sym. |
| 480 Ac              | 115,000 Asym., 100,000 Sym. |
| 600 Ac              | 115,000 Asym., 100,000 Sym. |
| 250 Dc <sup>⑦</sup> | 75,000 Amperes <sup>⑧</sup> |

On all 3 phase Delta, Grounded B phase appli-  
cations, refer to Westinghouse.

### Bus Bar Connectors<sup>⑩</sup> "T" Connector

Two required per pole. For  
rear bus connection of break-  
ers thru 2000 amps. Accepts  
up to four bus bolts. May  
be rotated 90°.

Catalog Number BA2000PB

### "C" Connector

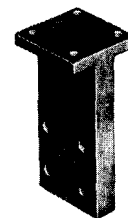
Two required per pole. For  
rear bus connection of 2500  
and 3000 amp breakers.

| Breaker Amps. | Cat. No. |
|---------------|----------|
| 2500          | BA2500PB |
| 3000          | BA3000PB |

### Cable Connector

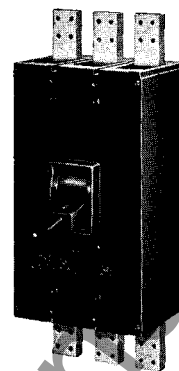
Fits "T" Connector and 2000  
amp front connected break-  
ers. Accepts four 600 MCM  
copper cables.

Style Number 505C706G04  
Discount Symbol CB-11



**Type PB Breakers, Continued**  
**Type PBF Front Connected Breakers**

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic Trip<br>Setting, Amperes<br>(Set on High<br>Side, Adjustable<br>to Lower Limits) |      | Complete Breaker                | Shipped As:                                   |                |
|------------------------------------------|-------------------------------------------------------------------------------------------|------|---------------------------------|-----------------------------------------------|----------------|
|                                          | Low                                                                                       | High | Includes Bus Bar<br>Connectors⑥ | Frame Only<br>Includes Bus Bar<br>Connectors⑥ | Trip Unit Only |
|                                          |                                                                                           |      | Catalog Number                  | Catalog Number                                | Catalog Number |
| <b>2-Pole, 600 Volts Ac③</b>             |                                                                                           |      |                                 |                                               |                |
| 600                                      | 1500                                                                                      | 5000 | PBF2600                         | PBF22000F                                     | PBF2600T       |
| 700                                      | 1500                                                                                      | 5000 | PBF2700                         | PBF22000F                                     | PBF2700T       |
| 800                                      | 1500                                                                                      | 5000 | PBF2800                         | PBF22000F                                     | PBF2800T       |
| 900                                      | 1500                                                                                      | 5000 | PBF2900                         | PBF22000F                                     | PBF2900T       |
| 1000                                     | 1500                                                                                      | 5000 | PBF21000                        | PBF22000F                                     | PBF21000T      |
| 1200                                     | 2000                                                                                      | 6000 | PBF21200                        | PBF22000F                                     | PBF21200T      |
| 1400                                     | 2500                                                                                      | 7000 | PBF21400                        | PBF22000F                                     | PBF21400T      |
| 1600                                     | 3000                                                                                      | 8000 | PBF21600                        | PBF22000F                                     | PBF21600T      |
| 1800                                     | 3000                                                                                      | 8000 | PBF21800                        | PBF22000F                                     | PBF21800T      |
| 2000                                     | 3000                                                                                      | 8000 | PBF22000                        | PBF22000F                                     | PBF22000T      |
| 2000MCS                                  | Non-automatic                                                                             |      | PBF22000N                       | PBF22000F                                     | PBF22000TN     |
| <b>3-Pole, 600 Volts Ac</b>              |                                                                                           |      |                                 |                                               |                |
| 600                                      | 1500                                                                                      | 5000 | PBF3600                         | PBF32000F                                     | PBF3600T       |
| 700                                      | 1500                                                                                      | 5000 | PBF3700                         | PBF32000F                                     | PBF3700T       |
| 800                                      | 1500                                                                                      | 5000 | PBF3800                         | PBF32000F                                     | PBF3800T       |
| 900                                      | 1500                                                                                      | 5000 | PBF3900                         | PBF32000F                                     | PBF3900T       |
| 1000                                     | 1500                                                                                      | 5000 | PBF31000                        | PBF32000F                                     | PBF31000T      |
| 1200                                     | 2000                                                                                      | 6000 | PBF31200                        | PBF32000F                                     | PBF31200T      |
| 1400                                     | 2500                                                                                      | 7000 | PBF31400                        | PBF32000F                                     | PBF31400T      |
| 1600                                     | 3000                                                                                      | 8000 | PBF31600                        | PBF32000F                                     | PBF31600T      |
| 1800                                     | 3000                                                                                      | 8000 | PBF31800                        | PBF32000F                                     | PBF31800T      |
| 2000                                     | 3000                                                                                      | 8000 | PBF32000                        | PBF32000F                                     | PBF32000T      |
| 2000MCS                                  | Non-automatic                                                                             |      | PBF32000N                       | PBF32000F                                     | PBF32000TN     |



PBF Front Connected

**Short Time Delay Breakers<sup>②</sup>**

For description and application, refer to AD 29-160. For complete breaker, order trip unit, plus frame and connectors. For front connected breakers, order complete breaker by description.

Specify magnetic trip setting desired, if other than standards listed in table. See Special Calibrations for list price additions.

**Short Time Delay Breakers<sup>②⑤</sup> (Delayed Instantaneous) Trip Unit Only**  
**Thermal Magnetic Breakers (For Rear Connected Breakers Only)**

| Continuous<br>Ampere<br>Rating<br>@ 40°C | Magnetic<br>Trip<br>Setting | Cat. Numbers, Trip Unit Only |            |            |            |
|------------------------------------------|-----------------------------|------------------------------|------------|------------|------------|
|                                          |                             | 2-Poles <sup>③</sup>         |            | 3-Poles    |            |
|                                          |                             | Min. Delay                   | Max. Delay | Min. Delay | Max. Delay |
| 600                                      | 5000                        | PB2600TX1                    | PB2600TX2  | PB3600TX1  | PB3600TX2  |
| 700                                      | 5000                        | PB2700TX1                    | PB2700TX2  | PB3700TX1  | PB3700TX2  |
| 800                                      | 5000                        | PB2800TX1                    | PB2800TX2  | PB3800TX1  | PB3800TX2  |
| 900                                      | 5000                        | PB2900TX1                    | PB2900TX2  | PB3900TX1  | PB3900TX2  |
| 1000                                     | 5000                        | PB21000TX1                   | PB21000TX2 | PB31000TX1 | PB31000TX2 |
| 1200                                     | 6000                        | PB21200TX1                   | PB21200TX2 | PB31200TX1 | PB31200TX2 |
| 1400                                     | 7000                        | PB21400TX1                   | PB21400TX2 | PB31400TX1 | PB31400TX2 |
| 1600                                     | 8000                        | PB21600TX1                   | PB21600TX2 | PB31600TX1 | PB31600TX2 |
| 1800                                     | 8000                        | PB21800TX1                   | PB21800TX2 | PB31800TX1 | PB31800TX2 |
| 2000                                     | 8000                        | PB22000TX1                   | PB22000TX2 | PB32000TX1 | PB32000TX2 |
| 2500                                     | 8000                        | PB22500TX1                   | PB22500TX2 | PB32500TX1 | PB32500TX2 |
| 3000                                     | 12000                       | PB23000TX1                   | PB23000TX2 | PB33000TX1 | PB33000TX2 |

② Not listed with Underwriters' Laboratories, Inc.

③ 2-pole breakers supplied in 3-pole frames with current carrying parts omitted from center pole.

④ 50°C or higher calibration not available for 2500 or 3000 ampere trip units.

⑤ Frames, connectors, dimensions, and shipping weights are same as thermal magnetic breakers.

⑥ Included with frame.

**Interrupting Capacity for Short Time Delay Breakers<sup>②</sup>**

| Max. Volts | Amperes                   |
|------------|---------------------------|
| 240 Ac     | 75,000 Asym., 65,000 Sym. |
| 480 Ac     | 75,000 Asym., 65,000 Sym. |
| 600 Ac     | 75,000 Asym., 65,000 Sym. |

**Special Calibrations<sup>②</sup>**

Special calibration price additions apply to ampere ratings not listed as standard, or for ambients other than 40°C or 50°C. See AD 29-160 for information regarding special conditions.

| Type of Calibration  | 1-24 Identical Units                | 25 or More Identical Units |
|----------------------|-------------------------------------|----------------------------|
| Thermal <sup>④</sup> | {Add 15% to List Price of Trip Unit | None                       |
| Magnetic             |                                     | None                       |

**50° Calibration<sup>②④</sup>**

Add suffix "V" to catalog number for complete breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. Same price as standard 40°C breakers.



October, 1975  
Supersedes Price List 29-120,  
pages 43-44, all previous issues.  
Mailed to: E,D,C/1901, 1903, 1928/PL;  
E,D/2430

## Accessories

# AB DE-ION® Circuit Breakers

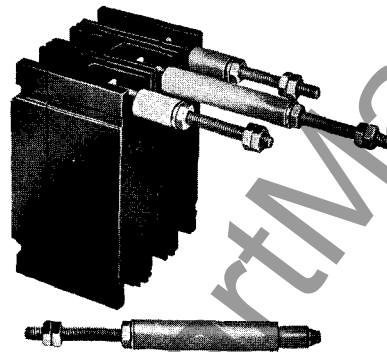
## Accessories

List Prices: See Price List 29-020 PWE A.  
Discount Symbol: CB-2

### Rear Connected Studs®

For DA, EB, EHB, FB, JA, KA, JB, KB, LAB,  
LA, LB, LBB, MA, HFB, HKA, HKB, HLA,  
HLB, HMA, HNB, TRI-PAC® FB, TRI-PAC  
LA and TRI-PAC NB Breakers

For complete stud assembly, order a stud and  
appropriate tube based on thickness of cus-  
tomer's mounting panel. A short stud must  
be assembled adjacent to a long stud to main-  
tain clearances required by Underwriters'  
Laboratories, Inc.®. Two studs are required  
per pole. Refer to DS 29-170 for stud sizes  
and extensions behind breaker.



For LAB, LA, MA, HLA, HMA, HNB,  
TRI-PAC LA and TRI-PAC NB Breakers  
For insulated panels only; 2 required per pole.

### For DA, EB, EHB, FB, JA, KA, JB, KB, LB, LBB, HFB, HKA, HKB, HLB, TRI-PAC FB Breakers

| Mounting<br>Panel<br>Thickness,<br>Inches | Stud<br>Length<br>Style<br>Number | Tube®<br>Length Style<br>Number |
|-------------------------------------------|-----------------------------------|---------------------------------|
|-------------------------------------------|-----------------------------------|---------------------------------|

#### DA, LB, LBB, HLB Breakers

|       |       |            |       |            |
|-------|-------|------------|-------|------------|
| ¾ - 1 | Short | 656D565G03 | 27/32 | 313C909H17 |
|       | Long  | 656D565G04 | 35/32 | 313C909H20 |
| ¾ - ¾ | Short | 656D565G03 | 13/32 | 313C909H18 |
|       | Long  | 656D565G04 | 41/32 | 313C909H21 |
| ¾ - ½ | Short | 656D565G03 | 11/32 | 313C909H19 |
|       | Long  | 656D565G04 | 43/32 | 313C909H22 |

#### EB, EHB, FB, HFB, TRI-PAC FB (100 Amperes Max.)

|                 |       |            |        |            |
|-----------------|-------|------------|--------|------------|
| 1               | Short | 451D874G01 | 11/16  | 32B9446H20 |
|                 | Long  | 451D874G02 | 31/16  | 32B9446H24 |
| 1 1/16 - 1 5/16 | Short | 451D874G01 | 1      | 32B9446H21 |
|                 | Long  | 451D874G02 | 3      | 32B9446H25 |
| ¾ - ¾           | Short | 451D874G01 | 1 1/16 | 32B9446H22 |
|                 | Long  | 451D874G02 | 4 1/16 | 32B9446H26 |
| ¾ - ½           | Short | 451D874G01 | 2      | 32B9446H23 |
|                 | Long  | 451D874G02 | 4      | 32B9446H27 |

#### FB, HFB 150 Amp Breakers

|                 |       |            |        |            |
|-----------------|-------|------------|--------|------------|
| 1               | Short | 374D883G01 | 1 1/16 | 374D883H06 |
|                 | Long  | 374D883G02 | 4 1/16 | 374D883H10 |
| 1 1/16 - 1 5/16 | Short | 374D883G01 | 1 3/8  | 374D883H07 |
|                 | Long  | 374D883G02 | 4 3/8  | 374D883H11 |
| ¾ - ¾           | Short | 374D883G01 | 1 1/16 | 374D883H08 |
|                 | Long  | 374D883G02 | 4 1/16 | 374D883H12 |
| ¾ - ½           | Short | 374D883G01 | 2      | 374D883H09 |
|                 | Long  | 374D883G02 | 5 1/4  | 374D883H13 |

#### JA, KA, HKA Breakers

|       |       |            |       |            |
|-------|-------|------------|-------|------------|
| ¾ - 1 | Short | 656D565G01 | 27/32 | 456D983H05 |
|       | Long  | 656D565G02 | 35/32 | 456D983H08 |
| ¾ - ¾ | Short | 656D565G01 | 13/32 | 456D983H06 |
|       | Long  | 656D565G02 | 41/32 | 456D983H09 |
| ¾ - ½ | Short | 656D565G01 | 11/32 | 456D983H07 |
|       | Long  | 656D565G02 | 43/32 | 456D983H10 |

#### JB, KB, HKB Breakers

|       |       |            |       |            |
|-------|-------|------------|-------|------------|
| ¾ - 1 | Short | 5010D23G01 | 27/32 | 456D983H05 |
|       | Long  | 5010D23G02 | 35/32 | 5010D23H05 |
| ¾ - ¾ | Short | 5010D23G01 | 13/32 | 456D983H06 |
|       | Long  | 5010D23G02 | 41/32 | 5010D23H06 |
| ¾ - ½ | Short | 5010D23G01 | 11/32 | 456D983H07 |
|       | Long  | 5010D23G02 | 43/32 | 5010D23H07 |

| Stud<br>Ampere<br>Rating | Diameter,<br>Inches<br>and Thread | Extension<br>Back of<br>Breaker,<br>Inches | Stud<br>Style<br>Number |
|--------------------------|-----------------------------------|--------------------------------------------|-------------------------|
|--------------------------|-----------------------------------|--------------------------------------------|-------------------------|

#### LAB, LA, HLA, TRI-PAC LA Breakers

|         |       |          |            |
|---------|-------|----------|------------|
| 225 ①   | ½-13  | 3 3/32   | 1241 345   |
| 225 ①   | ½-13  | 6 3/32   | 1241 346   |
| 225 ② ③ | ½-13  | 4 31/32  | 1241 392   |
| 400 ③   | ¾-16  | 5 15/32  | 05B7383G15 |
| 400 ③   | ¾-16  | 7 31/32  | 05B7383G16 |
| 400 ③   | ¾-16  | 10 15/32 | 05B7383G17 |
| 600     | 1 -12 | 5 29/32  | 314C960G07 |
| 600     | 1 -12 | 8 13/32  | 314C960G08 |
| 600     | 1 -12 | 10 29/32 | 314C960G09 |

#### MA, HMA, MC, HMC Breakers

|     |          |          |            |
|-----|----------|----------|------------|
| 225 | ½-13     | 3 21/32  | 314C960G01 |
| 400 | ¾-16     | 5 29/32  | 314C960G04 |
| 400 | ¾-16     | 8 13/32  | 314C960G05 |
| 400 | ¾-16     | 10 29/32 | 314C960G06 |
| 600 | 1 -12    | 5 29/32  | 314C960G07 |
| 600 | 1 -12    | 8 13/32  | 314C960G08 |
| 600 | 1 -12    | 10 29/32 | 314C960G09 |
| 800 | 1 1/8-12 | 5 29/32  | 314C960G10 |
| 800 | 1 1/8-12 | 8 13/32  | 314C960G11 |
| 800 | 1 1/8-12 | 10 29/32 | 314C960G12 |

#### NB, HNB, NC, HNC Breakers

|      |          |        |            |
|------|----------|--------|------------|
| 800  | 1 1/8-12 | 5 1/2  | 623B222G01 |
| 800  | 1 1/8-12 | 8      | 623B222G02 |
| 800  | 1 1/8-12 | 10 1/2 | 623B222G03 |
| 1200 | 1 1/4-12 | 5 1/2  | 373B375G04 |
| 1200 | 1 1/4-12 | 10 1/2 | 373B375G03 |

#### TRI-PAC NB Breakers

|     |          |        |            |
|-----|----------|--------|------------|
| 450 | 1 1/8-12 | 5 1/2  | 623B222G01 |
| 450 | 1 1/8-12 | 8      | 623B222G02 |
| 450 | 1 1/8-12 | 10 1/2 | 623B222G03 |
| 800 | 1 1/4-12 | 5 1/2  | 373B375G04 |
| 800 | 1 1/4-12 | 10 1/2 | 373B375G03 |

② This is a special stud which includes six contact nuts  
for use where bus contact nuts must be used.

③ 400 ampere frame only.

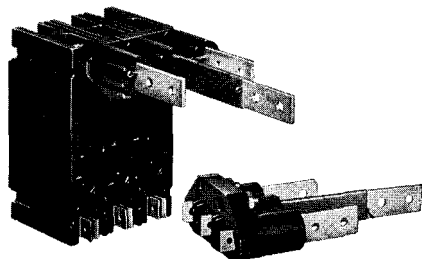
④ 400 ampere LA studs of the same length have suffi-  
cient clearance; however, customer connections may  
make it necessary to use a short stud adjacent to a long  
stud.

⑤ Not Underwriters' Laboratories, Inc. listed.

⑥ Included at No Charge when ordered with stud.

**Accessories, Continued**  
**Plug-in Adapter Kits<sup>③</sup>**

For rear connected applications such as switchboards. Facilitates ease of installation



For EB, EHB, FB and HFB

| Description | Style Number |
|-------------|--------------|
|-------------|--------------|

**DA LB, LBB, HLB Breakers**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 313C644G45 |
| 3-Pole                           | 313C644G46 |

1 Mounting Block, Line or Load

|        |            |
|--------|------------|
| 2-Pole | 314C932G03 |
| 3-Pole | 314C932G04 |

**EB, EHB, FB Thermal Magnetic Breakers<sup>④</sup>**

|                                |            |
|--------------------------------|------------|
| 1 Mounting Block, Line or Load |            |
| 2-Pole, 100 Ampere             | 507C036G01 |
| 2-Pole, 150 Ampere             | 507C036G02 |
| 3-Pole, 100 Ampere             | 507C036G03 |
| 3-Pole, 150 Ampere             | 507C036G04 |

**FB and HFB Magnetic Only, HFB Thermal**

|                                                  |            |
|--------------------------------------------------|------------|
| <b>Magnetic, FB TRI-PAC Breakers<sup>④</sup></b> |            |
| 1 Mounting Block, Line or Load                   |            |
| 2-Pole, 100 Ampere                               | 507C036G05 |
| 2-Pole, 150 Ampere                               | 507C036G06 |
| 3-Pole, 100 Ampere                               | 507C036G03 |
| 3-Pole, 150 Ampere                               | 507C036G04 |

**JA, KA, HKA Breakers**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 313C644G29 |
| 3-Pole                           | 313C644G30 |

1 Mounting Block, Line or Load

|        |            |
|--------|------------|
| 2-Pole | 314C932G01 |
| 3-Pole | 314C932G02 |

**LAB, LA, HLA (400 Ampere Breakers)**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 313C644G25 |
| 3-Pole                           | 313C644G26 |

1 Mounting Block, Line or Load

|        |            |
|--------|------------|
| 2-Pole | 450D010G15 |
| 3-Pole | 450D010G16 |

**LA, HLA (600 Ampere Breakers)**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 313C644G50 |
| 3-Pole                           | 313C644G51 |

1 Mounting Block, Line or Load

|        |            |
|--------|------------|
| 2-Pole | 506C059G01 |
| 3-Pole | 506C059G02 |

**JB, KB, HKB Breakers<sup>④</sup>**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 506C144G17 |
| 3-Pole                           | 506C144G18 |

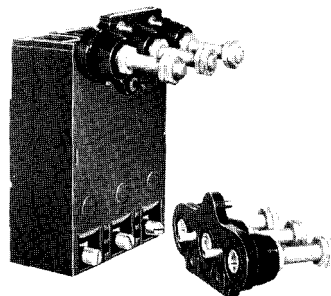
1 Mounting Block, Line Only

|        |            |
|--------|------------|
| 2-Pole | 1260C86G01 |
| 3-Pole | 1260C86G02 |

1 Mounting Block, Load Only

|        |            |
|--------|------------|
| 2-Pole | 1260C86G03 |
| 3-Pole | 1260C86G04 |

and front removal of breaker. Includes male studs for mounting on breaker, plug-in mounting blocks with tulip receptacles, rear studs and mounting hardware. Order 2 mounting blocks style number when line and load are required; order 1 mounting block style number when either line or load is required.



For All Other Breakers Listed

| Description | Style Number |
|-------------|--------------|
|-------------|--------------|

**MA, HMA, MC, HMC Breakers**

|                                  |                         |
|----------------------------------|-------------------------|
| 2 Mounting Blocks, Line and Load |                         |
| 2-Pole, 125-600 Ampere           | 313C644G27              |
| 2-Pole, 700-800 Ampere           | 176C544G01 <sup>②</sup> |
| 3-Pole, 125-600 Ampere           | 313C644G28              |
| 3-Pole, 700-800 Ampere           | 176C544G02 <sup>②</sup> |

1 Mounting Block, Line or Load

|                        |                         |
|------------------------|-------------------------|
| 2-Pole, 125-600 Ampere | 313C370G03              |
| 2-Pole, 700-800 Ampere | 507C049G01 <sup>②</sup> |
| 3-Pole, 125-600 Ampere | 313C370G04              |
| 3-Pole, 700-800 Ampere | 507C049G02 <sup>②</sup> |

**TRI-PAC LA Breakers**

|                                  |            |
|----------------------------------|------------|
| 2 Mounting Blocks, Line and Load |            |
| 2-Pole                           | 313C644G41 |
| 3-Pole                           | 313C644G42 |

1 Mounting Block, Line Only

|        |            |
|--------|------------|
| 2-Pole | 450D010G17 |
| 3-Pole | 450D010G19 |

1 Mounting Block, Load Only

|        |            |
|--------|------------|
| 2-Pole | 450D010G18 |
| 3-Pole | 450D010G20 |

**Mounting Block for Type NB, HNB, NC, HNC and NB TRI-PAC Breakers**

An insulated base having front-removable bolted connections for mounting and connecting the breaker and bus connectors extending from the rear of the base. One block required per breaker. (See DS 29-170, pages 20 and 28 for details.)

| Ampere Rating | No. of Poles | Style Number |
|---------------|--------------|--------------|
|---------------|--------------|--------------|

**NB, HNB, NC, HNC Breakers**

|      |   |            |
|------|---|------------|
| 1200 | 2 | 4990D16G02 |
| 1200 | 3 | 4990D16G01 |

**NB TRI-PAC**

|     |   |            |
|-----|---|------------|
| 800 | 2 | 4990D16G04 |
| 800 | 3 | 4990D16G03 |

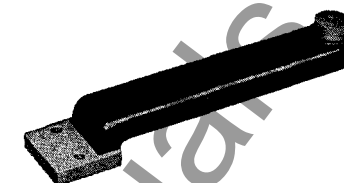
<sup>②</sup> 700-800 amp adapter kit is front removable, bolt-on design — not plug-in type.

<sup>③</sup> Not Underwriters' Laboratories, Inc. listed.

<sup>④</sup> These plug-in adapter kits are UL Listed as recognized components.

**Panelboard Connecting Straps<sup>③</sup>**

For connecting line end of breakers to panel-board bus.



| Ampere Rating | Connector Type | Style Number |
|---------------|----------------|--------------|
|---------------|----------------|--------------|

**CA Breaker****Power Panelboards (Convertible)**

|                         |         |            |
|-------------------------|---------|------------|
| Bus Spacing 3½"         |         |            |
| 225                     | Center  | 1253C74G01 |
| 225                     | Outside | 1253C74G02 |
| 3-Pole Mounting Bracket |         | 624B624H01 |
| 2-Pole Mounting Bracket |         | 624B624H02 |

**EB, EHB, FB, HFB, TRI-PAC FB Breakers****Narrow Distribution Panelboards**

|                                                  |         |            |
|--------------------------------------------------|---------|------------|
| Bus Spacing 2¼" in Box 5¼" Deep (240 Volts Max.) |         |            |
| 50                                               | Center  | 673B142G07 |
| 50                                               | Outside | 673B142G06 |
| Bus Spacing 2¼" in Box 5¼" Deep (600 Volts Max.) |         |            |
| 50                                               | Center  | 673B142G02 |
| 50                                               | Outside | 673B142G05 |
| 100                                              | Center  | 673B142G02 |
| 100                                              | Outside | 673B142G01 |
| 150                                              | Center  | 673B142G04 |
| 150                                              | Outside | 673B142G03 |

**Power Panelboards (Convertible)**

|                         |         |            |
|-------------------------|---------|------------|
| Bus Spacing 3½"         |         |            |
| 50                      | Center  | 1253C72G01 |
| 50                      | Outside | 1253C72G02 |
| 100                     | Center  | 1253C73G03 |
| 100                     | Outside | 1253C73G04 |
| 150                     | Center  | 1253C73G01 |
| 150                     | Outside | 1253C73G02 |
| 3-Pole Mounting Bracket |         | 624B600H01 |
| 2-Pole Mounting Bracket |         | 624B600H02 |

**DA, LB, LBB, HLB Breaker Bus Spacing 3½"**

|                        |         |            |
|------------------------|---------|------------|
| 400                    | Center  | 314C940G04 |
| 400                    | Outside | 505C680G01 |
| Mtg. Bracket (1 Req'd) |         | 208B264H01 |

**JA, KA, HKA Breakers Bus Spacing 3½"**

|                        |         |            |
|------------------------|---------|------------|
| 225                    | Center  | 314C940G03 |
| 225                    | Outside | 180C074G01 |
| Mtg. Bracket (1 Req'd) |         | 208B264H01 |

**JB, KB, HKB Breakers Bus Spacing 3½"**

|                        |         |            |
|------------------------|---------|------------|
| 250                    | Center  | 2600D26G01 |
| 250                    | Outside | 2600D26G02 |
| Mtg. Bracket (1 Req'd) |         | 1576 707   |

**LAB, LA, HLA 400 Ampere Breakers**

|                        |         |            |
|------------------------|---------|------------|
| Bus Spacing 3½"        |         |            |
| 400                    | Center  | 3284570G02 |
| 400                    | Outside | 314C541G01 |
| Mtg. Bracket (2 Req'd) |         | 208B297H01 |

**LA, HLA 600 Ampere Breakers Bus Spacing 3½"**

|                        |         |            |
|------------------------|---------|------------|
| 600                    | Center  | 624B609G01 |
| 600                    | Outside | 506C052G01 |
| Mtg. Bracket (2 Req'd) |         | 208B297H01 |

**MA, HMA, MC, HMC Breakers Bus Spacing 3½"**

|                        |        |            |
|------------------------|--------|------------|
| 800                    | Short  | 314C996G01 |
| 800                    | Medium | 314C996G02 |
| 800                    | Long   | 314C996G03 |
| Mtg. Bracket (4 Req'd) |        | 315C270H01 |

**NB, HNB, NC, HNC Breakers Bus Spacing 3½"**

|                        |        |            |
|------------------------|--------|------------|
| 1200                   | Short  | 505C606G04 |
| 1200                   | Medium | 505C606G05 |
| 1200                   | Long   | 505C606G06 |
| Mtg. Bracket (4 Req'd) |        | 315C270H01 |

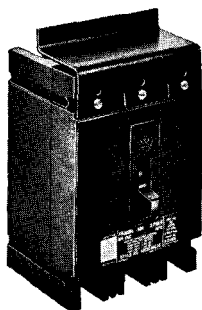


October, 1975  
Supersedes Price List 29-120,  
pages 45-46, all previous issues.  
Mailed to: E,D,C/1901, 1903, 1928/PL;  
E,D/2430

Accessories, Modifications

## AB DE-ION® Circuit Breakers

### Accessories, Continued Extended Line Terminal Shields②



For shielding line side terminal connections.  
One shield required per breaker. Order separately when needed. Sold only in lots of 10, including hardware.

| Breaker Frame                                   | Style Number |
|-------------------------------------------------|--------------|
| DA                                              | 314C420G06   |
| JA, KA, LB, LBB (Saf-T-Vue)                     | 314C420G04   |
| JA, KA, HKA, LB, LBB, HLB<br>(Standard Breaker) | 314C420G06   |
| LAB, LA, HLA, TRI-PAC LA                        | 314C420G05   |
| LAB, LA, (Saf-T-Vue)                            | 314C420G02   |
| MA, HMA, MC, HMC                                | 208B966G01   |
| NB, HNB, TRI-PAC® NB, NC, HNC                   | 208B966G02   |
| EB, EHB, FB, HFB, TRI-PAC FB                    | 625B229G01   |

### Base Mounting Hardware

No charge when ordered with breaker.  
Order separately when needed.

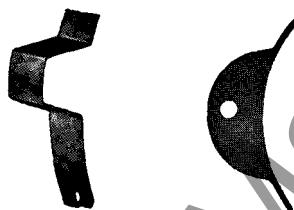
| Breaker Frame                                     | Style Number |
|---------------------------------------------------|--------------|
| <b>1-Pole Breakers</b>                            |              |
| EB, EHB, FB, HFB③                                 | 624B375G01   |
| EB, EHB, FB, HFB④                                 | 624B375G02   |
| <b>2-Pole Breakers</b>                            |              |
| CA                                                | 21C6782G28   |
| <b>2- and 3-Pole Breakers</b>                     |              |
| DA, JA, KA, HKA, LB, LBB, HLB                     | 21C6782G22   |
| EB, EHB, FB, HFB, TRI-PAC FB                      | 21C6782G18   |
| LAB, LA, HLA, TRI-PAC LA                          | 1614 613     |
| MA, NB, HMA, HNB, TRI-PAC NB,<br>MC, HMC, NC, HNC | 1091 716     |
| PB, TRI-PAC PB, PC, PCC                           | 624B375G22   |
| JB, KB, HKB                                       | 624B375G14   |
| <b>3-Pole Breakers</b>                            |              |
| CA                                                | 21C6782G29   |

### Non-Automatic Lock

For KA, KB, LA400, LA600, LB and MA breakers.

| Breaker Frame | Style Numbers |            |
|---------------|---------------|------------|
|               | 2-Poles       | 3-Poles    |
| KB            | 4974D52G25    | 4974D52G26 |
| KA            | 177C981G05    | 177C981G06 |
| LA 400        | 505C709G03    | 505C709G04 |
| LA 600        | 505C709G05    | 505C709G06 |
| MA            | 504C500G01    | 504C500G02 |
| LB            | 177C981G09    | 177C981G10 |

### Handle Locks②



#### Non-Padlockable

For prevention of unintentional operation of breaker. Fits over breaker handle and may be removed.

#### Padlockable

For prevention of unauthorized operation of breaker. Is non-removable once installed on breaker. Meets Underwriters' Laboratories, Inc. and California Code requirements. Note: All breakers are trip free and will trip with handle locks attached.

| Breaker Frame                                                                  | Style Number |
|--------------------------------------------------------------------------------|--------------|
| <b>Non-Padlockable</b>                                                         |              |
| EB, EHB, FB, HFB, TRI-PAC FB, CA                                               | 1720 360     |
| DA, JA, KA, HKA, LB, LBB, HLB                                                  | 29B2721H04   |
| LAB, LA, MA, NB, HLA, HMA, HNB,<br>TRI-PAC LA, TRI-PAC NB,<br>MC, HMC, NC, HNC | 1720 101     |
| <b>Padlockable</b>                                                             |              |
| CA⑤                                                                            | 506C438G01   |
| EB, EHB, FB, HFB, TRI-PAC FB, CA                                               | 765A754G01   |
| DA, JA, KA, LB, LBB, HKA, HLB                                                  | 673B796G02   |
| LA, LAB, MA, NB, HLA, HMA, HNB,<br>TRI-PAC LA, TRI-PAC NB,<br>MC, HMC, NC, HNC | 373B591G02   |
| JB, KB, HKB                                                                    | 673B796G01   |

### Handle Extension②

For use in convertible power panelboards.  
Must be ordered separately. Style number 372B399G01 for LAB, LA, HLA breakers; no charge when ordered with breaker.

### Molded Type Handle Extension②

For MA, HMA, MC, HMC breakers. Style Number 1251C65601

### For NB, HNB, NC, HNC and TRI-PAC NB Breakers

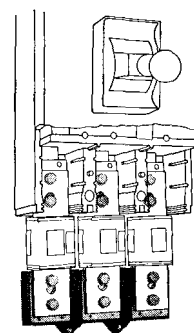
Style Number 1251C65G01, included with frame at no charge if ordered separately.

### For PB, PC, PCC, TRI-PAC PB Breakers

Style Number 315C882G01  
Included with frame at no charge; if ordered separately.

### Fuse Mounting Base for PB Breakers ②⑦

For 2000 amp non-automatic breakers only.



Catalog Number: FMB2000PB

For use with non-automatic, 3-pole circuit breaker. Includes fuse mounting base and hardware to mount standard class L current limiting fuses, 801 to 2000 amps (fuses not included).

For complete installation, order:

1. Standard rear connected PB non-automatic breaker.⑥
2. Fuse mounting base.
3. Fuses (from distributor).

### Cable Connectors⑦

The fuse mounting base will accept the following terminals for front cable connection (omit "T" connectors from rear connected breakers).

| Style Number | Wire Range, Type<br>No. of Cables |
|--------------|-----------------------------------|
| 506C281G03   | 3 3/0-400 MCM Cu                  |
| 504C856G02   | 4 400-500 MCM Cu                  |

### Single Phase Protector②

An attachment for use with non-automatic PB breakers and fuse mounting block that will trip the breaker when a fuse blows preventing single phasing.

| Mounting   | Ac Volts | Style Number |
|------------|----------|--------------|
| Right-Hand | 240      | 177C576G01   |
| Right-Hand | 480-600  | 177C576G02   |
| Left-Hand  | 240      | 177C576G03   |
| Left-Hand  | 480-600  | 177C576G04   |

② Not Underwriters' Laboratories, Inc. listed.

③ Individually mounted.

④ Group mounted.

⑤ Designed for use with load centers.

⑥ Front connected non-automatic PB may also be used. Order similar to standard front connected except omit load conductor extensions.

⑦ Interrupters used with fuse mounting base will accept all standard PB accessories. See DS 29-170, page 23 for mounting details.



## Modifications<sup>②</sup>

List Prices: See Price List 29-020 PWEA.

### Discount Symbol: CB-2

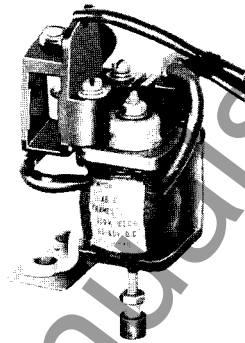
Only two internally mounted modifications – shunt trip, under voltage release, auxiliary switch, alarm switch – may be mounted in DA, JA thru PB, HKA thru HNB and thermal magnetic EB, EHB, FB and HFB breakers. Only one of these modifications may be mounted in FB or HFB magnetic only, 2 pole EB, EHB, FB and FB TRI-PAC<sup>®</sup> and SELTRONIC<sup>™</sup> breakers. None are available in 1-pole breakers except alarm switch in EB, EHB and HFB. Refer to Westinghouse for possible

special combinations of the following modifications not in tabulations.

### Shunt Trip

For tripping breaker from a remote point. A solenoid device mounts within breaker case. Breaker trips when coil is energized.

A cut-off switch breaks the circuit to the momentary rated coil when breaker opens (except CA). Available for control voltages up to 250 volts Dc or 600 volts Ac. Voltage and frequency must be specified. Standard leads extend 18" out side of breaker. Longer leads may be specified.



### Shunt Trip for Field Mounting<sup>⑤⑥⑦⑧</sup>

| Voltage/<br>Hertz          | Breaker Type <sup>⑦</sup>                                |             |                                     |              |            |                        |                   |
|----------------------------|----------------------------------------------------------|-------------|-------------------------------------|--------------|------------|------------------------|-------------------|
|                            | EB, EHB, FB, HFB <sup>⑤</sup><br>(Thermal Magnetic only) | JB, KB, HKB | JA, KA, HKA,<br>DA, LB, LBB,<br>HLB | LA, LAB, HLA | MA, HMA    | NB, HNB,<br>NB TRI-PAC | PB,<br>PB TRI-PAC |
| <b>Right Hand Mounting</b> |                                                          |             |                                     |              |            |                        |                   |
| 600/50-60 Hz               | 2609D39G15                                               | 2609D42G15  | 2605D15G15                          | 2606D56G15   | 2606D57G15 | 2606D58G15             | 2606D59G15        |
| 480/50-60 Hz               | 2609D39G16                                               | 2609D42G16  | 2605D15G16                          | 2606D56G16   | 2606D57G16 | 2606D58G16             | 2606D59G16        |
| 240/50-60 Hz               | 2609D39G17                                               | 2609D42G17  | 2605D15G17                          | 2606D56G17   | 2606D57G17 | 2606D58G17             | 2606D59G17        |
| 208/50-60 Hz               | 2609D39G18                                               | 2609D42G18  | 2605D15G18                          | 2606D56G18   | 2606D57G18 | 2606D58G18             | 2606D59G18        |
| 120/50-60 Hz               | 2609D39G19                                               | 2609D42G19  | 2605D15G19                          | 2606D56G19   | 2606D57G19 | 2606D58G19             | 2606D59G19        |
| 60/50-60 Hz                | 2609D39G20                                               | 2609D42G20  | 2605D15G20                          | 2606D56G20   | 2606D57G20 | 2606D58G20             | 2606D59G20        |
| 48/50-60 Hz                | 2609D39G21                                               | 2609D42G21  | 2605D15G21                          | 2606D56G21   | 2606D57G21 | 2606D58G21             | 2606D59G21        |
| 24/50-60 Hz                | 2609D39G22                                               | 2609D42G22  | 2605D15G22                          | 2606D56G22   | 2606D57G22 | 2606D58G22             | 2606D59G22        |
| 250 Dc                     | 2609D39G23                                               | 2609D42G23  | 2605D15G23                          | 2606D56G23   | 2606D57G23 | 2606D58G23             | 2606D59G23        |
| 125 Dc                     | 2609D39G24                                               | 2609D42G24  | 2605D15G24                          | 2606D56G24   | 2606D57G24 | 2606D58G24             | 2606D59G24        |
| 60 Dc                      | 2609D39G25                                               | 2609D42G25  | 2605D15G25                          | 2606D56G25   | 2606D57G25 | 2606D58G25             | 2606D59G25        |
| 48 Dc                      | 2609D39G26                                               | 2609D42G26  | 2605D15G26                          | 2606D56G26   | 2606D57G26 | 2606D58G26             | 2606D59G26        |
| 24 Dc                      | 2609D39G27                                               | 2609D42G27  | 2605D15G27                          | 2606D56G27   | 2606D57G27 | 2606D58G27             | 2606D59G27        |
| 12 Dc                      | 2609D39G28                                               | 2609D42G28  | 2605D15G28                          | 2606D56G28   | 2606D57G28 | 2606D58G28             | 2606D59G28        |
| <b>Left Hand Mounting</b>  |                                                          |             |                                     |              |            |                        |                   |
| 600/50-60 Hz               | 2609D39G01                                               | 2609D42G01  | 2605D15G01                          | 2606D56G01   | 2606D57G01 | 2606D58G01             | 2606D59G01        |
| 480/50-60 Hz               | 2609D39G02                                               | 2609D42G02  | 2605D15G02                          | 2606D56G02   | 2606D57G02 | 2606D58G02             | 2606D59G02        |
| 240/50-60 Hz               | 2609D39G03                                               | 2609D42G03  | 2605D15G03                          | 2606D56G03   | 2606D57G03 | 2606D58G03             | 2606D59G03        |
| 208/50-60 Hz               | 2609D39G04                                               | 2609D42G04  | 2605D15G04                          | 2606D56G04   | 2606D57G04 | 2606D58G04             | 2606D59G04        |
| 120/50-60 Hz               | 2609D39G05                                               | 2609D42G05  | 2605D15G05                          | 2606D56G05   | 2606D57G05 | 2606D58G05             | 2606D59G05        |
| 60/50-60 Hz                | 2609D39G06                                               | 2609D42G06  | 2605D15G06                          | 2606D56G06   | 2606D57G06 | 2606D58G06             | 2606D59G06        |
| 48/50-60 Hz                | 2609D39G07                                               | 2609D42G07  | 2605D15G07                          | 2606D56G07   | 2606D57G07 | 2606D58G07             | 2606D59G07        |
| 24/50-60 Hz                | 2609D39G08                                               | 2609D42G08  | 2605D15G08                          | 2606D56G08   | 2606D57G08 | 2606D58G08             | 2606D59G08        |
| 250 Dc                     | 2609D39G09                                               | 2609D42G09  | 2605D15G09                          | 2606D56G09   | 2606D57G09 | 2606D58G09             | 2606D59G09        |
| 125 Dc                     | 2609D39G10                                               | 2609D42G10  | 2605D15G10                          | 2606D56G10   | 2606D57G10 | 2606D58G10             | 2606D59G10        |
| 60 Dc                      | 2609D39G11                                               | 2609D42G11  | 2605D15G11                          | 2606D56G11   | 2606D57G11 | 2606D58G11             | 2606D59G11        |
| 48 Dc                      | 2609D39G12                                               | 2609D42G12  | 2605D15G12                          | 2606D56G12   | 2606D57G12 | 2606D58G12             | 2606D59G12        |
| 24 Dc                      | 2609D39G13                                               | 2609D42G13  | 2605D15G13                          | 2606D56G13   | 2606D57G13 | 2606D58G13             | 2606D59G13        |
| 12 Dc                      | 2609D39G14                                               | 2609D42G14  | 2605D15G14                          | 2606D56G14   | 2606D57G14 | 2606D58G14             | 2606D59G14        |

### Left Hand Mounting Kits for SELTRONIC Breakers

|                          |                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------|
| MC, HMC Style 2609D10G10 | Provision to trip flux transfer shunt trip from external 32 to 120 volt (Dc to 60 Hz) source. <sup>④</sup> |
| NC, HNC Style 2609D11G10 |                                                                                                            |
| PC, PCC Style 2609D12G10 |                                                                                                            |
| LC, HLC Style 2609D30G10 |                                                                                                            |
|                          |                                                                                                            |

### Shunt Trip Coil Data

| Shunt Trip<br>Voltage<br>Rating | For All Breakers Listed Above<br>Except CA and SELTRONIC<br>Coil Inrush |              | Type CA |              | SELTRONIC |              |
|---------------------------------|-------------------------------------------------------------------------|--------------|---------|--------------|-----------|--------------|
|                                 | Amperes                                                                 | Volt-Amperes | Amperes | Volt-Amperes | Amperes   | Volt-Amperes |
|                                 |                                                                         |              |         |              |           |              |
| 600 AC                          | 0.105                                                                   | 63.0         | ..      | ..           | ...       | ..           |
| 480 AC                          | 0.085                                                                   | 40.8         | ..      | ..           | ...       | ..           |
| 240 AC                          | 1.7                                                                     | 408.0        | .73     | 175.         | ...       | ..           |
| 208 AC                          | 1.4                                                                     | 291.2        | ..      | ..           | ...       | ..           |
| 120 AC                          | 0.88                                                                    | 105.6        | 1.66    | 189.         | .15       | 18           |
| 60 AC                           | 9.10                                                                    | 546.0        | ..      | ..           | ...       | ..           |
| 48 AC                           | 7.50                                                                    | 360.0        | ..      | ..           | ...       | ..           |
| 24 AC                           | 3.95                                                                    | 94.8         | ..      | ..           | ...       | ..           |
| 250 DC                          | 0.10                                                                    | 25.0         | .26     | 65.          | ...       | ..           |
| 125 DC                          | 0.975                                                                   | 121.9        | .54     | 67.          | ...       | ..           |
| 60 DC                           | 0.525                                                                   | 31.5         | 1.02    | 61.          | ...       | ..           |
| 48 DC                           | 8.                                                                      | 384.         | 1.28    | 48.          | ...       | ..           |
| 24 DC                           | 8.                                                                      | 192.         | 2.63    | 63.          | ...       | ..           |
| 12 DC                           | 6.                                                                      | 72.          | 6.52    | 78.          | ...       | ..           |

① Righthand mounting considered standard unless specified otherwise.

② Righthand mounting only.

③ Available similar to this except "Leads out the load end – (not UL listed). Order by description.

④ Not UL listed.

### Factory Mounted Shunt Trips<sup>⑤⑥</sup>

All of the above shunt trips can be specified for factory mounting at the same price as listed for the kit. These shunt trips have the leads out the side and are UL listed when factory mounted, unless other non-UL Listed modifications are used.

Factory mounted shunt trips only can be supplied for the following breakers:

CA<sup>⑤</sup>, FB magnetic only<sup>⑥⑦</sup>, HFB magnetic only<sup>⑥⑦</sup>, FB Tri-Pac<sup>⑥⑦</sup> and LA TRI-PAC

Price same as similar kit except price CA from accessory section of 29-020 PWEA.

⑤ 120 volt Ac ratings suitable for 55% pickup for ground fault applications.

⑥ Not field mountable on non-automatic breakers.

⑦ For SELTRONIC breakers see pages 25-28.

⑧ Rated 48 volts minimum for ground fault applications.

⑨ Field mounting voids breakers' UL listing except on KB, HKB, KA, HKA, LB, HLB, LA, HLA, MA, HMA, NB, HNB, NB TRI-PAC, PB, PB TRI-PAC and SELTRONIC breakers.



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Mailed to: E, D, C/1901, 1903, 1928/PL;  
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#### Accessories

## AB DE-ION® Circuit Breakers

### Alarm Switch<sup>②</sup>

**Availability:** DA thru HNB, TRI-PAC NB, TRI-PAC PB Frames. For light or alarm indication when breaker trips. Does not function with manual operation. Automatically resets when breaker is relatched. Standard leads extend 18" out side of breaker. Longer leads may be specified. Not field mountable.

| Breaker Frame                                                                     | Normal Pole Mtg.       | Contact Operation (Specify Type Desired) |
|-----------------------------------------------------------------------------------|------------------------|------------------------------------------|
| DA                                                                                |                        |                                          |
| EB, EHB, FB, HFB <sup>③④</sup>                                                    | Left Center            | Make or Break<br>Make when Breaker Trips |
| JA, KA, LAB, LA, LB, LBB, MA, NB, HKA, HLA, HLB, HMA, HNB, TRI-PAC LA, TRI-PAC NB | Left                   | Make or Break                            |
| JB, KB, HKB                                                                       | Left                   | Make or Break                            |
| PB, TRI-PAC PB                                                                    | Left                   | Make or Break                            |
| MC, HMC                                                                           | Left only <sup>⑤</sup> | Make or Break                            |
| NC, HNC                                                                           | Left only <sup>⑤</sup> | Make or Break                            |
| PC, PCC                                                                           | Left <sup>⑥⑦</sup>     | Make or Break                            |
| LC, HLC                                                                           | Left <sup>⑥</sup>      | Make or Break                            |

### Alarm Switch Contact Rating (Non Inductive)

EB, EHB, FB, HFB:

5 amp, 120 volt Ac.

MC, HMC, LA, LAB, HLA, LC, HLC, LA Tri-Pac:

10 amps, 120 volt Ac; 5A, 240 volt Ac.

All other breakers:

10 amps, 120-480 volt Ac.

### Auxiliary Switch

For auxiliary control circuits. Miniature switches mount within breaker. Commonly used for remote indication of open or closed breaker and electrically interlocking component control circuits. "A" contacts are closed when breaker is closed. "B" contacts are open when breaker is closed. Standard leads extend 18" out side of breaker. Longer leads may be specified.

### Auxiliary Switch Attachment Kits for Field Mounting<sup>①⑦⑩</sup>

| Breaker Type                  | For Right Hand Mounting |                         | For Left Hand Mounting  |                         | Max Ac Voltage Rating <sup>④</sup> | Max. Non-Inductive Amps. |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------------|--------------------------|
|                               | 1A-1B                   | 2A-2B                   | 1A-1B                   | 2A-2B                   |                                    |                          |
| EB, EHB, FB, HFB <sup>⑤</sup> | 4979D06G03              | 4979D06G08              | 4979D06G03              | 4979D06G09              | 240                                | 5                        |
| JA, KA, DA, HKA, 458D067G08   | 458D067G08              | 458D067G03              | 458D067G03              | 458D067G09              | 480                                | 10                       |
| LB, LBB, HLB                  | 656D527G09 <sup>③</sup> | 656D527G01 <sup>③</sup> | 656D527G01 <sup>③</sup> | 656D527G03 <sup>③</sup> | 240                                | 5                        |
| LA, LAB, HLA                  | 655D555G05              | 655D555G06              | 655D555G12              | 655D555G13              | 480                                | 10                       |
| MA, HMA                       | 458D013G05              | 458D013G06              | 458D013G12              | 458D013G13              | 480                                | 10                       |
| NB, HNB, NB TRI-PAC           | 4980D16G05              | 4980D16G06              | 4980D16G12              | 4980D16G13              | 480                                | 10                       |
| PB, PB TRI-PAC                | 2602D32G14              | 2602D32G15              | 2602D32G11              | 2602D32G12              | 480                                | 10                       |
| JB, KB, HKB                   | 2600D97G08              | 2600D97G03              | 2600D97G03              | 2600D97G09              | 480                                | 10                       |
| JB, KB, HKB                   | 2609D45G08 <sup>③</sup> | 2609D45G03 <sup>③</sup> | 2609D45G03 <sup>③</sup> | 2609D45G09 <sup>③</sup> | 240                                | 5                        |
| MC, HMC, MCG                  | 2609D10G03              | 2609D10G06              | 2609D10G03              | 2609D10G06              | 480                                | 10                       |
| NC, HNC, NCG                  | 2609D11G03              | 2609D11G06              | 2609D11G03              | 2609D11G06              | 480                                | 10                       |
| PC, PCC, PCG, PCCG            | 2609D12G03              | 2609D12G06              | 2609D12G03              | 2609D12G06              | 480                                | 10                       |
| LC, HLC                       | 2609D30G03              | 2609D30G06              | 2609D30G03              | 2609D30G06              | 480                                | 10                       |

### Factory Mounted Auxiliary Switches<sup>②</sup>

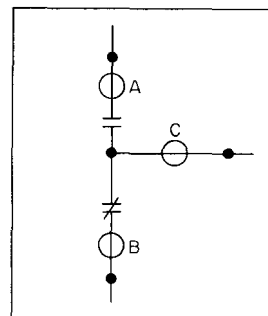
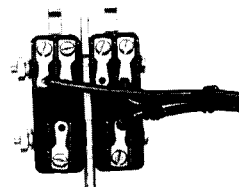
All of the above auxiliary switches can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side of the breaker and are U L listed when factory mounted unless other non U L listed modifications are used (except as noted).

Factory mounted switches only can be supplied for the following breakers:

CA<sup>③</sup>, FB<sup>③⑥</sup> and HFB magnetic only<sup>③⑥</sup>, FB Tri-Pac<sup>⑥</sup>, LA Tri-Pac.

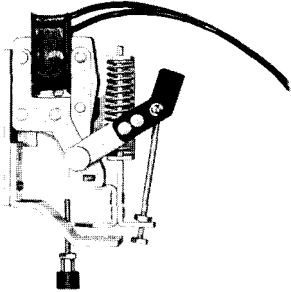
Price same as a similar kit except price CA from accessory section of 29-020 P WE A.

- ① Not for use on non-automatic breakers. (Molded case switches).
- ② Righthand mounting standard for CA, EB, EHB, FB, HFB, JB, KB, HKB. All others are lefthand mounting as standard unless otherwise specified.
- ③ Not UL listed.
- ④ For Dc applications refer to factory.
- ⑤ Thermal magnetic only.
- ⑥ Righthand mounting only.
- ⑦ All switches are multiples of 1A-1B with a common electrical connection (See diagram below).
- ⑧ Except when other attachments are used, must be mounted in right pole.
- ⑨ When alarm switch is used in conjunction with auxiliary switch, the auxiliary switch is rated 250 volts max., 5 amps. max.
- ⑩ Not available for Magnetic Only, Ambient Compensating or TRI-PAC breakers.
- ⑪ Field mounting voids UL listing of breaker except on KB, HKB, KA, HKA, LB, HLB, LA, HLA, MA, HMA, NB, HNB, PB, PB TRI-PAC and SELTRONIC breakers.





## Standard Undervoltage Release②



For undervoltage protection. A solenoid device mounts within breaker case. Coil must be energized before closing breaker. Trips breaker when voltage drops below 40 to 60% of coil rating. Picks up and seals in at 80% of coil rating. For line voltages up to 250 volts Dc or 600 volts Ac. Externally mounted resistors are supplied for certain ratings. Standard leads extend 18" outside of breaker. Longer leads may be specified.

## Factory Mounted Undervoltage Releases.③

All of the above undervoltage releases can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side and are U L listed when factory mounted unless other non-U L listed modifications are used.

Factory mounted undervoltage releases only can be supplied for the following breakers:

EB ④, EHB ④, FB ④, HFB ④, FB Tri-Pac ④, FB ④② and HFB magnetic only ④②, JB, KB, HKB, LA Tri-Pac.

SELTRONIC Breakers (120 V Ac 60 Hz only standard)

MC, HMC ⑥;  
NC, HNC ⑥;  
PC-PCC

SELTRONIC Breakers With Remote Trip

Provisions

MC, HMC ⑥⑦;  
NC, HNC ⑥⑦;  
PC, PCC ⑦.

Price same as similar kits except SELTRONIC attachments are priced from attachment section of 29-020 PWE A.

- ① Righthand mounting only.
- ② Not U L listed.
- ③ Righthand mounting considered standard unless specified otherwise except JA, KA, DA, HKA, LB, LBB, HLB and seltronic available for lefthand only, and JB, KB, HKB lefthand is standard.
- ④ Not available on ambient compensating breakers.
- ⑤ Not field mountable on non automatic breakers. (Molded case switches)
- ⑥ Cannot be used with other attachments except a small 1A-1B auxiliary switch rated 250 volts can be supplied in righthand pole.
- ⑦ Provided with two leads for use with a remote normally open contact (pushbutton etc.) to trip the breaker. No external power required.
- ⑧ Field mounting voids UL listing of breaker except on KA, HKA, LB, HLB, LA, HLA, MA, HMA, NB, HNB, PB or PB TRI-PAC.

## Undervoltage Release Attachment Kits for Field Mounting⑤⑧

| Attachment<br>Voltage,<br>Hertz | Breaker Type                     |            | LA, LAB, HLA | MA, HMA    | NB, HNB, NB<br>TRI PAC | PB, PB<br>TRI PAC |
|---------------------------------|----------------------------------|------------|--------------|------------|------------------------|-------------------|
|                                 | JA, KA, DA, HKA,<br>LB, LBB, HLB |            |              |            |                        |                   |
| For Right Hand Mounting         |                                  |            |              |            |                        |                   |
| 24 60                           | .....                            | 60A9355G17 | .....        |            |                        |                   |
| 48 60                           | .....                            | 60A9355G08 | .....        |            |                        | 5674D29G16        |
| 120 60                          | .....                            | 1318529    | .....        | 457D727G01 | 373D632G01             | 5674D29G09        |
| 208 60                          | .....                            | 1318530    | .....        | 457D727G19 | 373D632G19             | 5674D29G10        |
| 240 60                          | .....                            | 1318531    | .....        | 457D727G02 | 373D632G02             | 5674D29G11        |
| 480 60                          | .....                            | 1318533    | .....        | 457D727G03 | 373D632G03             | 5674D29G13        |
| 600 60                          | .....                            | 1318534    | .....        | 457D727G04 | 373D632G04             | 5674D29G14        |
| 12 DC                           | .....                            | 458D020G01 | .....        | 457D727G09 | 372D032G01             | 4976D85G01        |
| 24 DC                           | .....                            | 458D020G02 | .....        | 457D727G10 | 372D032G02             | 4976D85G02        |
| 48 DC                           | .....                            | 458D020G03 | .....        | 457D727G11 | 372D032G03             | 4976D85G03        |
| 60 DC                           | .....                            | 458D020G04 | .....        | 457D727G21 | .....                  | 4976D85G04        |
| 125 DC                          | .....                            | 458D020G07 | .....        | 457D727G12 | 372D032G04             | 4976D85G07        |
| 250 DC                          | .....                            | 458D020G08 | .....        | 457D727G13 | 372D032G05             | 4976D85G08        |

## For Left Hand Mounting

|        |            |            |       |            |            |            |
|--------|------------|------------|-------|------------|------------|------------|
| 24 60  | .....      | 60A9355G16 | ..... | .....      | .....      | 5674D29G08 |
| 48 60  | .....      | 60A9355G09 | ..... | 457D727G05 | 373D632G05 | 5674D29G01 |
| 120 60 | 458D070G01 | 60A9355G10 | ..... | 457D727G20 | 373D632G20 | 5674D29G02 |
| 208 60 | 458D070G05 | 60A9355G11 | ..... | 457D727G06 | 373D632G06 | 5674D29G03 |
| 240 60 | 458D070G02 | 60A9355G13 | ..... | 457D727G07 | 373D632G07 | 5674D29G05 |
| 480 60 | 458D070G03 | 60A9355G14 | ..... | 457D727G08 | 373D632G08 | 5674D29G06 |
| 600 60 | 458D070G04 | 458D020G11 | ..... | 457D727G14 | 372D032G06 | 4976D85G11 |
| 12 DC  | 458D070G09 | 458D020G12 | ..... | 457D727G15 | 372D032G07 | 4976D85G12 |
| 24 DC  | 458D070G10 | 458D020G13 | ..... | 457D727G16 | 372D032G08 | 4976D85G13 |
| 48 DC  | 458D070G11 | 458D020G14 | ..... | 457D727G22 | .....      | 4976D85G14 |
| 60 DC  | .....      | 458D020G17 | ..... | 457D727G17 | 372D032G09 | 4976D85G17 |
| 125 DC | 458D070G12 | 458D020G18 | ..... | 457D727G18 | 372D032G10 | 4976D85G18 |
| 250 DC | 458D070G13 | .....      | ..... | .....      | .....      | .....      |

## Undervoltage Release Coil Data

| Voltage Rating, Hertz | Breaker Type |                          |          | JA, KA, HKA, DA, LB, LBB, HLB, MA & HMA |                                   |          | MC, HMC, NC, HNC, PC, PCC |          |
|-----------------------|--------------|--------------------------|----------|-----------------------------------------|-----------------------------------|----------|---------------------------|----------|
|                       | Coil Amperes | Series Resistance (Ohms) | Total VA | Coil Amperes                            | External Series Resistance (Ohms) | Total VA | Coil Amperes              | Total VA |
| 600 AC                | 0.020        | 25,000                   | 12.0     | 0.012                                   | 50,000                            | 7.2      | ..                        | ..       |
| 480 AC                | 0.016        | 25,000                   | 7.7      | 0.013                                   | 30,000                            | 6.3      | ..                        | ..       |
| 240 AC                | 0.021        | 6,000                    | 5.1      | 0.013                                   | .....                             | 3.2      | ..                        | ..       |
| 208 AC                | 0.019        | 6,000                    | 4.0      | 0.018                                   | .....                             | 3.8      | ..                        | ..       |
| 120 AC                | 0.023        | .....                    | 2.8      | 0.023                                   | .....                             | 2.8      | .05                       | 6        |
| 60 AC                 | 0.203        | 250                      | 12.2     | .....                                   | .....                             | .....    | .....                     | .....    |
| 48 AC                 | 0.245        | 150                      | 11.8     | .....                                   | .....                             | .....    | .....                     | .....    |
| 24 AC                 | 0.250        | 50                       | 6.0      | .....                                   | .....                             | .....    | .....                     | .....    |
| 250 DC                | 0.026        | 5,000                    | 6.5      | 0.013                                   | 16,500                            | 3.3      | ..                        | ..       |
| 125 DC                | 0.026        | .....                    | 3.3      | 0.013                                   | 6,500                             | 1.7      | ..                        | ..       |
| 60 DC                 | 0.248        | 200                      | 14.9     | 0.013                                   | 1,500                             | 0.8      | ..                        | ..       |
| 48 DC                 | 0.260        | 150                      | 12.5     | 0.012                                   | 600                               | 0.6      | ..                        | ..       |
| 24 DC                 | 0.141        | .....                    | 3.4      | 0.023                                   | .....                             | 0.6      | ..                        | ..       |
| 12 DC                 | 0.286        | .....                    | 3.5      | 0.048                                   | .....                             | 0.6      | ..                        | ..       |

| Voltage Rating, Hertz | Breaker Type                             |                                   |          | NB, HNB & NB TRI-PAC |                                   |          |
|-----------------------|------------------------------------------|-----------------------------------|----------|----------------------|-----------------------------------|----------|
|                       | LA, LAB, HLA, LA TRI-PAC, PB, PB TRI-PAC | External Series Resistance (Ohms) | Total VA | Coil Amperes         | External Series Resistance (Ohms) | Total VA |
| 600 AC                | 0.029                                    | 20,000                            | 17.4     | 0.016                | 35,000                            | 9.6      |
| 480 AC                | 0.014                                    | .....                             | 6.8      | 0.013                | 30,000                            | 6.3      |
| 240 AC                | 0.036                                    | .....                             | 8.7      | 0.013                | .....                             | 3.2      |
| 208 AC                | 0.036                                    | .....                             | 7.5      | 0.018                | .....                             | 3.8      |
| 120 AC                | 0.073                                    | .....                             | 8.8      | 0.023                | .....                             | 2.8      |
| 48 AC                 | 0.152                                    | .....                             | 7.3      | .....                | .....                             | .....    |
| 250 DC                | 0.035                                    | 5,000                             | 8.8      | 0.013                | 16,500                            | 3.3      |
| 125 DC                | 0.039                                    | 1,500                             | 4.9      | 0.013                | 6,500                             | 1.7      |
| 60 DC                 | 0.034                                    | .....                             | 2.1      | .....                | .....                             | .....    |
| 48 DC                 | 0.040                                    | .....                             | 2.0      | 0.012                | 600                               | 0.6      |
| 24 DC                 | 0.069                                    | .....                             | 1.7      | 0.023                | .....                             | 0.6      |
| 12 DC                 | 0.136                                    | .....                             | 1.7      | 0.048                | .....                             | 0.6      |



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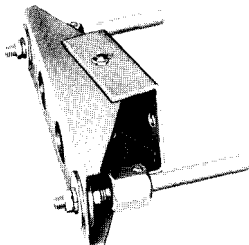
#### Modifications

## AB DE-ION® Circuit Breakers

### Mechanical Interlocks<sup>②</sup>

For mechanically interlocking a pair of breakers so that only one may be closed at one time, but both may be open simultaneously.

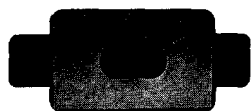
### Walking Beam Type<sup>②③⑤</sup>



**Availability:** DA thru TRI-PAC® PB

Mounts on panel (not included) at rear of breaker. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5¾" center to center; LAB, LA, LC, HLC, MA, MC, NB, NC, HLA, HMA, HMC, HNB, HNC, TRI-PAC LA, TRI-PAC NB: 8½" center to center; EB, EHB, FB, JB, KB, HFB, HKB, TRI-PAC FB: 4¾" center to center; PB, PC, PCC, TRI-PAC PB: 12¼" center to center. Order as a set of two special factory drilled breakers and 1 walking beam interlock. Specify breaker type, panel thickness and center-to-center dimension of breakers.

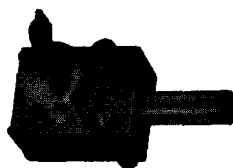
### Sliding Bar Type (Field Mountable)<sup>②④</sup>



**Availability:** DA thru TRI-PAC NB

Mounts on panel (not included) fitting over front of breakers. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5¾" center to center; LAB, LA, LC, HLC, MA, MC, NB, NC, HLA, HMA, HMC, HNB, HNC, TRI-PAC LA, TRI-PAC NB: 8½"; EB, EHB, FB, HFB, TRI-PAC FB: 4¾" center to center; JB, KB, HKB: 4¾" center to center.

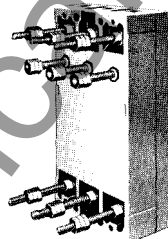
### Kirk Key Interlock<sup>④</sup>



**Availability:** 100 Amp Frames (EB) thru 3000 Amp Frames

Permits interlocking of two breakers or one breaker with other devices. Before breaker can be closed, key must be inserted and turned in breaker interlock. Breaker must be opened before key can be removed. It can then be inserted in interlock or other devices to permit their closure. Requests and orders should completely outline interlocking scheme, ultimate user and his address.

### Center Studs<sup>②</sup>



**Availability:** 100 Amp Frames (EB) thru 1200 Amp Frames except SELTRONIC

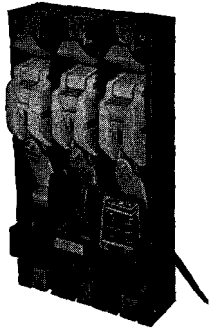
Provides connections for dual voltage generators, so that same trip unit can be used for protection at both voltages. At higher voltage, the trip unit carries full load current. At lower voltage, half the current by-passes the trip unit through the center studs. Trip rating cannot exceed 50% of frame rating.

- ② Not UL Listed.
- ③ 2000 amp maximum for PB breaker.
- ④ Not available on motor operated breakers.
- ⑤ Not available on draw-out breakers.



**Modifications, Continued**  
**Ground Current Limiter<sup>①</sup>**

**Availability:** DA, JA, KA, JB, KB, HKA  
Instantaneous magnetic type for use in Dc systems only. For mining applications. Trips breaker when ground currents become excessive. Standard leads extend 18" out side of breaker; longer leads or leads out rear of base may be specified.



| Breaker Frame   | Amp. Ratings Available | Normal Pole Mtg. |
|-----------------|------------------------|------------------|
| DA, JA, KA, HKA | 3, 5, 10, 20           | Left             |
| JB, KB, HKB     | 5, 10, 20              | Left             |

**Paralleling Straps<sup>①</sup>**

**Availability:** CA thru LB, HFB through HLB (thermal magnetic breakers, 400 Amps. Max.)

To parallel 2-pole breakers for high current single pole operation. Consists of straps at both line and load ends, as well as inside ahead of trip unit to equalize current division. Review paralleling applications with Westinghouse.

**Moisture-Fungus-Corrosion Treatment<sup>①</sup>**

**Availability:** CA thru TRI-PAC<sup>®</sup> PB

Treatment can be provided to meet customer's specific atmospheric conditions. Moisture-fungus treating material used meets JAN-T-152; treatment meets MIL-V-173a. Requests and orders should specify government specifications or conditions to be met.

**Field Discharge Breakers, 250 Volts Dc, 400 Amps. Max.<sup>①</sup>**

Field discharge breakers are composed of 3-pole frames having two outside, non-automatic poles and a center pole field discharge contact arranged to close as the outside contacts open and vice versa. The discharge contact is not designed for load interruption. If automatic tripping for outside poles is desired, specify and give rating; no extra charge.

| Breaker Frame | Ampere Rating |
|---------------|---------------|
| FB            | 100           |
| FB            | 150           |
| KA            | 225           |
| KB            | 250           |
| LA            | 400           |

<sup>①</sup> Not Underwriters' Laboratories, Inc. listed.



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E, D/2430

## Motor Operators Drawout Frames

## AB DE-ION® Circuit Breakers

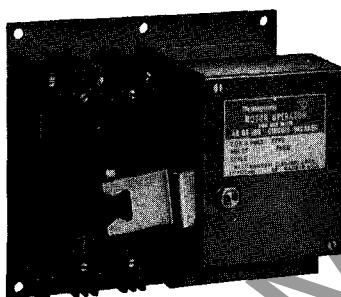
### Accessories, Continued Motor Operators<sup>②</sup>

Motor operators provide complete remote control by means of a pushbutton or similar pilot device<sup>③</sup>. Positive switching action is accomplished by use of an operating arm engaging the breaker handle. The unit is energized momentarily to actuate the lever arm moving it to either the "ON" or "OFF" position. The control is broken by an internal cut-off switch. Means for emergency manual operation is provided.

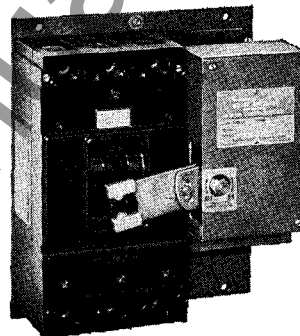
Motor operators are available with motors rated 120 volts Ac, 208 volts Ac, and 240 volts Ac.<sup>④</sup>

The 480 volt operators utilize a 120 volt Ac motor in conjunction with a 480/240 to 120 volt dual voltage transformer. (On LA and larger operators, the transformer is supplied for separate mounting by the customer.)

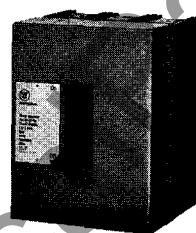
Note: The motor operator is intended only for infrequent operation in line with Underwriters' Laboratories, Inc. endurance standards for AB molded case breakers.



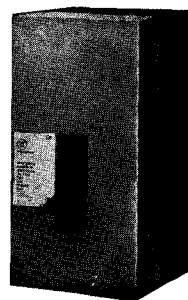
For EB, EHB, FB, HFB and  
FB TRI-PAC Breakers



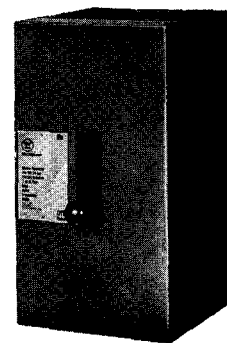
For DA, JA, KA, JB, KB, LB, LBB, HKA,  
HKB and HLB Breakers



For LAB, LA, HLA  
Breakers



For MA, HMA, NB,  
HNB Breakers



For PB Breakers

### Motor Operator Selection

| Type<br>Breaker               | Ac Voltage   |              |              |              | Dc Voltage   |              |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                               | 120          | 208          | 240          | 480          | 125          | 24           |
|                               | Style Number | Style Number | Style Number | Style Number | Style Number | Style Number |
| EB, EHB, FB, HFB, FB TRI-PAC  | 656D148G01   | 656D148G04   | 656D148G02   | 656D148G03   | .....        | .....        |
| DA, JA, KA, HKA, LB, LBB, HLB | 657D819G07   | 657D819G10   | 657D819G08   | 657D819G09   | .....        | .....        |
| JB, KB, HKB                   | 2600D28G01   | 2600D28G04   | 2600D28G02   | 2600D28G03   | .....        | .....        |
| LAB, LA, HLA, LC, HLC         | 2607D97G01   | 2607D97G04   | 2607D97G02   | 2607D97G03   | 2607D97G05   | 2607D97G06   |
| MA, HMA, MC, HMC              | 5664D54G05   | 5664D54G08   | 5664D54G06   | 5664D54G07   | 5664D54G10   | 5664D54G11   |
| NB, HNB, NC, HNC              | 5664D54G01   | 5664D54G04   | 5664D54G02   | 5664D54G03   | 5664D54G09   | 5664D54G12   |
| PB, PC, PCC, PB TRI-PAC       | 5661D52G01   | 5661D52G04   | 5661D52G02   | 5661D52G03   | 5661D52G14   | 5661D52G16   |
| LA TRI-PAC                    | 626B900G01   | 626B900G02   | 626B900G03   | 626B900G04   | 626B900G09   | .....        |
| NB TRI-PAC                    | 626B900G05   | 626B900G06   | 626B900G07   | 626B900G08   | 626B900G10   | .....        |

### Back Mounting Plates

| Type<br>Breaker  | 120, 208, 240, 480 Volts Ac |
|------------------|-----------------------------|
|                  | Style Number                |
| EB, EHB, FB, HFB | 503C707G01                  |
| DA, JA, KA, LB   | 503C981G01                  |
| JB, KB, HKB      | 1250C26G01                  |

### Motor Data

| Type<br>Breaker                       | Motor<br>Type | Hp.  | Inrush Current,<br>Ampere (Peak) |              |              | Continuous<br>Current (RMS) |              |              | Operating<br>Time, Open<br>or Close |
|---------------------------------------|---------------|------|----------------------------------|--------------|--------------|-----------------------------|--------------|--------------|-------------------------------------|
|                                       |               |      | 120<br>Volts                     | 208<br>Volts | 240<br>Volts | 120<br>Volts                | 208<br>Volts | 240<br>Volts |                                     |
| EB, EHB, FB, HFB, TRI-PAC FB          | Split Phase   | 1/75 | 10                               | 4            | 5            | 2.3                         | 1.17         | 1.65         | 1.5 Seconds                         |
| DA, JA, KA, JB, KB, LB, LBB, HKB, HLB | Split Phase   | 1/50 | 14                               | 6            | 7            | 3.5                         | 1.6          | 1.75         | 1.5 Seconds                         |
| LAB, LA, HLA                          | Reversing     | ...  | 8                                | 5            | 4            | ..                          | ...          | ...          | 12 Cycles                           |
| MA, HMA, NB, HNB                      | Reversing     | ...  | 11                               | 7            | 6            | ..                          | ...          | ...          | 12 Cycles                           |
| PB                                    | Reversing     | ...  | 20                               | 12           | 11           | ..                          | ...          | ...          | 10 Cycles                           |

### Local On-Off/Reset Pushbutton

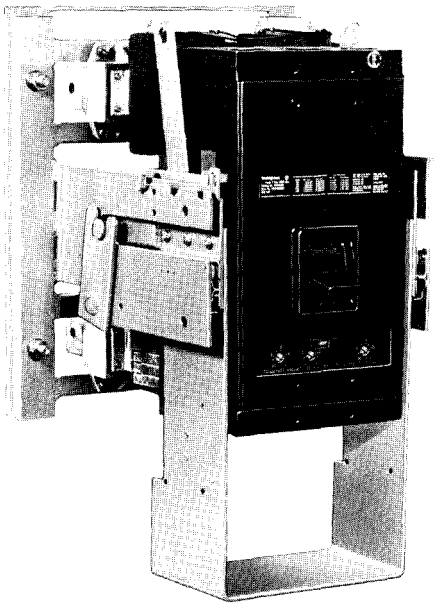
Available LA, MA, NB and PB only, must be factory installed.

### Dimensions: DS 29-170

- ② Not Underwriters' Laboratories, Inc. listed.  
③ The pilot device must be maintained contact type for EB, EHB, FB, HFB, FB TRI-PAC, DA, JA, KA, JB, KB, HKB and LB mechanisms; momentary contact type for all others.  
④ LA and larger available for 125 and 24 volts - Dc.



**Drawout Frame<sup>③</sup>**



These drawout frames are for use with standard 3-pole Westinghouse molded case circuit breakers. They consist of two separate parts: stationary mounting frame and movable carrier frame. Slide rails are drawer-type, and a screw mechanism is used to engage or withdraw the movable carrier frame.

The drawout frames have three positions: connected, test and disconnected. The frames do not include a safety tripping interlock, or secondary contacts. These are optional items and may be ordered at additional cost.

Breakers mounted in the drawout frames can be equipped with standard breaker accessories including shunt trip, undervoltage release, auxiliary switch, alarm switch and motor operator.

**Optional Features**

**Safety Interlock<sup>②</sup>**

This feature trips the breaker as the movable carrier frame is withdrawn, and must be factory installed. Order as follows.

**For LA, MA and NB breakers.**

Order standard stationary mounting frame. Order breaker and movable carrier frame assembled with safety interlock.

**Secondary Contacts**

These are used to disconnect auxiliary circuits when attachments such as shunt trip or motor operator are used. Available in multiples of four contacts with a maximum of 24 contacts for the LA 600 or 32 contacts for the MA and NB. They must be factory mounted. Order by description as similar to stationary or moving frame and specify number of contacts required. Price from accessory section of 29-020 PWE A.

**Selection Data**

| Breaker Type         | Stationary Mounting Frame Style Number | Movable Carrier Frame Style Number |
|----------------------|----------------------------------------|------------------------------------|
| LA600, LC600, HLC600 | 2603D84G01                             | 2603D84G07                         |
| MA, HMA, MC, HMC     | 5682D15G01                             | 5682D15G06                         |
| NB, HNB, NC, HNC     | 2603D85G01                             | 2603D85G07                         |
| NB TRI-PAC           | 2603D85G09                             | 2603D85G10 <sup>②</sup>            |

**Ordering Information**

**Standard Installation**

Order one stationary mounting frame and one movable carrier frame.

Order breakers without terminals or rear connectors.

Order any attachments desired (shunt trip, undervoltage release, etc.)

Order secondary contacts as required.

**With Safety Interlock**

Order stationary mounting frame and movable carrier frame as directed under Optional Features.

**Racking Crank**

A special crank to engage or withdraw the moving portion of the drawout. A standard ½ inch hex socket with extension can be used for this purpose.

Style Number: 765A767G01

**Cell Switches Mounted on Draw-out Frames, All Ratings**

Up to four switches can be provided. Order by description.

Each switch provides NO and NC contact that transfers before reaching the test position when being withdrawn, and after the test position when being racked in.

<sup>②</sup> Safety interlock not available on NB TRI-PAC, MC, NC, HMC, HNC, LC, HLC.

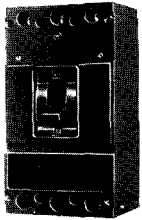
<sup>③</sup> Not Underwriters' Laboratories, Inc. listed.





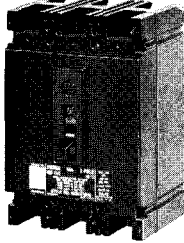
## Standard Breaker Selection Guide

DA



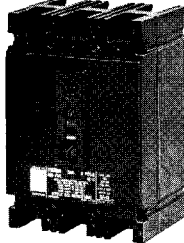
2, 3 Poles<sup>①</sup>  
250-400 Amps  
@40°C

EB



1, 2, 3 Poles  
15-100 Amps  
@40°C

EBH



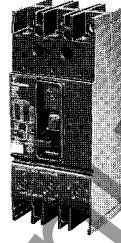
1, 2, 3 Poles  
15-100 Amps  
@40°C

FB



2, 3 Poles  
15-150 Amps  
@40°C

JB, KB



2, 3 Poles<sup>①</sup>  
70-250 Amps  
@40°C

LB, LBB



2, 3 Pole<sup>①</sup>  
70-400 Amps  
@40°C

### Dimensions, Inches, 3 Pole Breakers

H 10<sup>1</sup>/<sub>8</sub> W 5<sup>1</sup>/<sub>2</sub> D 4<sup>1</sup>/<sub>16</sub>

H 6 W 4<sup>1</sup>/<sub>8</sub> D 3<sup>3</sup>/<sub>8</sub>

H 6 W 4<sup>1</sup>/<sub>8</sub> D 3<sup>3</sup>/<sub>8</sub>

H 6 W 4<sup>1</sup>/<sub>8</sub> D 3<sup>3</sup>/<sub>8</sub>

H 10 W 4<sup>1</sup>/<sub>8</sub> D 4<sup>1</sup>/<sub>16</sub>

H 10<sup>1</sup>/<sub>8</sub> W 5<sup>1</sup>/<sub>2</sub> D 4<sup>1</sup>/<sub>16</sub>

### Ac Ratings I. C. Ratings Shown 18,000 are Symmetrical<sup>②</sup>; Ratings Shown 20,000 are Asymmetrical

240 Volts Max.  
Amps I. C.  
25,000 and 22,000

120, 240 Volts Max.  
Amps I. C.  
120 Volts: 10,000  
and 10,000  
240 Volts: 10,000  
and 10,000

277, 480 Volts Max.  
Amps I. C.  
240 Volts: 20,000  
and 18,000  
480 Volts: 15,000  
and 14,000  
277 Volts: 15,000  
and 14,000

600 Volts Max.  
Amps I. C.  
240 Volts: 20,000  
and 18,000  
480 Volts: 15,000  
and 14,000  
600 Volts: 15,000  
and 14,000

600 Volts Max.  
Amps I. C.  
240 Volts: 30,000  
and 25,000  
480 Volts: 25,000  
and 22,000  
600 Volts: 15,000  
and 14,000

600 Volts Max.  
Amps I. C.  
240 Volts: 50,000  
and 42,000  
480 Volts: 35,000  
and 30,000  
600 Volts: 25,000  
and 22,000

### Dc Ratings<sup>②</sup>

250 Volts  
10,000 Amps I. C.

125, 125/250 Volts  
5,000 Amps I. C.

125, 250 Volts  
10,000 Amps I. C.

250 Volts  
10,000 Amps I. C.

250 Volts  
10,000 Amps I. C.

250 Volts  
20,000 Amps I. C.<sup>③</sup>

### Accessories and Modifications See pages 19-28 for Description and Underwriters' Laboratories, Inc. Status

Shunt Trip  
Undervoltage Trip  
Auxiliary Switch  
Alarm Switch  
Mechanical Interlock  
Rear Connecting Studs  
Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

Shunt Trip  
Auxiliary Switch  
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Auxiliary Switch  
Alarm Switch  
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Moisture-Fungus  
Treatment  
Motor Operator  
Enclosure Handle Mech.  
Handle Lock Devices

① 2-pole unit supplied in 3-pole frame.  
② Underwriters' Laboratories, Inc. listed.  
③ Ratings above 10,000 amps not UL listed.



September 1991  
Supersedes Technical Data 29-121,  
pages 19-20, dated March 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

## Accessories

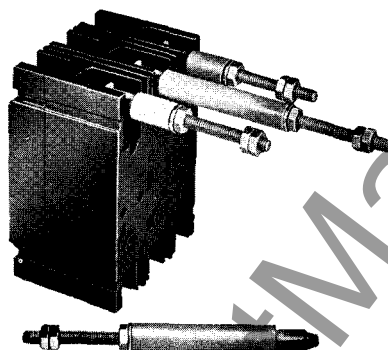
### Accessories

List Prices: See Price List 29-021, Dis. RCB-2

#### Rear Connected Studs<sup>①</sup> ②

For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, and HLB

For complete stud assembly, order a stud  
and appropriate tube based on thickness of  
customer's mounting panel. A short stud  
must be assembled adjacent to a long stud  
to maintain clearances required by Under-  
writers' Laboratories, Inc. Two studs are  
required per pole. Refer to DS 29-170 for  
stud sizes and extensions behind breaker.



For DA, EB, EHB, FB, JA, KA, JB, KB, LB,  
LBB, HFB, HKA, HKB, AND HLB

| Mounting<br>Panel<br>Thickness,<br>Inches | Stud   |                 | Tube <sup>②</sup> |                 |
|-------------------------------------------|--------|-----------------|-------------------|-----------------|
|                                           | Length | Style<br>Number | Length            | Style<br>Number |
| <b>DA, LB, LBB, HLB Breakers</b>          |        |                 |                   |                 |
| 3/4 - 1                                   | Short  | 656D565G03      | 27/32             | 313C909H17      |
|                                           | Long   | 656D565G04      | 325/32            | 313C909H20      |
| 1/2 - 3/4                                 | Short  | 656D565G03      | 13/32             | 313C909H18      |
|                                           | Long   | 656D565G04      | 41/32             | 313C909H21      |
| 1/4 - 1/2                                 | Short  | 656D565G03      | 111/32            | 313C909H19      |
|                                           | Long   | 656D565G04      | 49/32             | 313C909H22      |
| <b>EB, EHB, FB, HFB, (100 Amp Max.)</b>   |        |                 |                   |                 |
| 1                                         | Short  | 451D874G01      | 111/16            | 32B9446H20      |
|                                           | Long   | 451D874G02      | 371/16            | 32B9446H24      |
| 11/16 - 15/16                             | Short  | 451D874G01      | 13/8              | 32B9446H21      |
|                                           | Long   | 451D874G02      | 33/8              | 32B9446H25      |
| 3/8 - 5/8                                 | Short  | 451D874G01      | 111/16            | 32B9446H22      |
|                                           | Long   | 451D874G02      | 411/16            | 32B9446H26      |
| 1/4 - 5/16                                | Short  | 451D874G01      | 2                 | 32B9446H23      |
|                                           | Long   | 451D874G02      | 43/8              | 32B9446H27      |
| <b>FB, HFB 150 Amp Breakers</b>           |        |                 |                   |                 |
| 1                                         | Short  | 374D883G01      | 111/16            | 374D883H06      |
|                                           | Long   | 374D883G02      | 451/16            | 374D883H10      |
| 11/16 - 15/16                             | Short  | 374D883G01      | 13/8              | 374D883H07      |
|                                           | Long   | 374D883G02      | 43/8              | 374D883H11      |
| 3/8 - 5/8                                 | Short  | 374D883G01      | 111/16            | 374D883H08      |
|                                           | Long   | 374D883G02      | 415/16            | 374D883H12      |
| 1/4 - 5/16                                | Short  | 374D883G01      | 2                 | 374D883H09      |
|                                           | Long   | 374D883G02      | 51/4              | 374D883H13      |
| <b>JA, KA, HKA Breakers</b>               |        |                 |                   |                 |
| 3/4 - 1                                   | Short  | 656D565G01      | 27/32             | 456D983H05      |
|                                           | Long   | 656D565G02      | 325/32            | 456D983H08      |
| 1/2 - 3/4                                 | Short  | 656D565G01      | 13/32             | 456D983H06      |
|                                           | Long   | 656D565G02      | 413/32            | 456D983H09      |
| 1/4 - 1/2                                 | Short  | 656D565G01      | 111/32            | 456D983H07      |
|                                           | Long   | 656D565G02      | 49/32             | 456D983H10      |
| <b>JB, KB, HKB Breakers</b>               |        |                 |                   |                 |
| 3/4 - 1                                   | Short  | 5010D23G01      | 27/32             | 456D983H05      |
|                                           | Long   | 5010D23G02      | 33/8              | 5010D23H05      |
| 1/2 - 3/4                                 | Short  | 5010D23G01      | 13/32             | 456D983H06      |
|                                           | Long   | 5010D23G02      | 43/8              | 5010D23H06      |
| 1/4 - 1/2                                 | Short  | 5010D23G01      | 111/32            | 456D983H07      |
|                                           | Long   | 5010D23G02      | 43/8              | 5010D23H07      |

## Replacement AB DE-ION<sup>®</sup> Circuit Breakers

### Panelboard Connecting Straps<sup>①</sup>

For connecting line end of breakers to panel-  
board bus.



| Ampere<br>Rating | Connector<br>Type | Style<br>Number |
|------------------|-------------------|-----------------|
|------------------|-------------------|-----------------|

#### EB, EHB, FB, HFB Breakers Narrow Distribution Panelboards

|                                                        |         |            |
|--------------------------------------------------------|---------|------------|
| Bus Spacing 2 3/4" in Box 5 3/4" Deep (600 Volts Max.) |         |            |
| 50                                                     | Center  | 673B142G02 |
| 50                                                     | Outside | 673B142G09 |
| 100                                                    | Center  | 673B142G02 |
| 100                                                    | Outside | 673B142G10 |
| 150                                                    | Center  | 673B142G04 |
| 150                                                    | Outside | 673B142G03 |

|                                                           |         |            |
|-----------------------------------------------------------|---------|------------|
| <b>Power Panelboards (Convertible) Bus Spacing 3 1/2"</b> |         |            |
| 50                                                        | Center  | 1253C72G01 |
| 50                                                        | Outside | 1253C72G02 |
| 100                                                       | Center  | 1253C73G03 |
| 100                                                       | Outside | 1253C73G04 |
| 150                                                       | Center  | 1253C73G01 |
| 150                                                       | Outside | 1253C73G02 |
| 3-Pole Mounting Bracket                                   |         | 624B600H01 |
| 2-Pole Mounting Bracket                                   |         | 624B600H02 |

|                                                    |         |            |
|----------------------------------------------------|---------|------------|
| <b>DA, LB, LBB, HLB Breaker Bus Spacing 3 1/2"</b> |         |            |
| 400                                                | Center  | 314C940G04 |
| 400                                                | Outside | 505C680G01 |
| Mtg. Bracket (1 Req'd)                             |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JA, KA, HKA Breakers Bus Spacing 3 1/2"</b> |         |            |
| 225                                            | Center  | 314C940G03 |
| 225                                            | Outside | 180C074G01 |
| Mtg. Bracket (1 Req'd)                         |         | 208B264H01 |

|                                                |         |            |
|------------------------------------------------|---------|------------|
| <b>JB, KB, HKB Breakers Bus Spacing 3 1/2"</b> |         |            |
| 250                                            | Center  | 2600D26G01 |
| 250                                            | Outside | 2600D26G02 |
| Mtg. Bracket (1 Req'd)                         |         | 1576707    |

② Changed or added since previous issue.  
① Not Underwriters' Laboratories, Inc. listed.  
② Included at No Charge when ordered with stud.

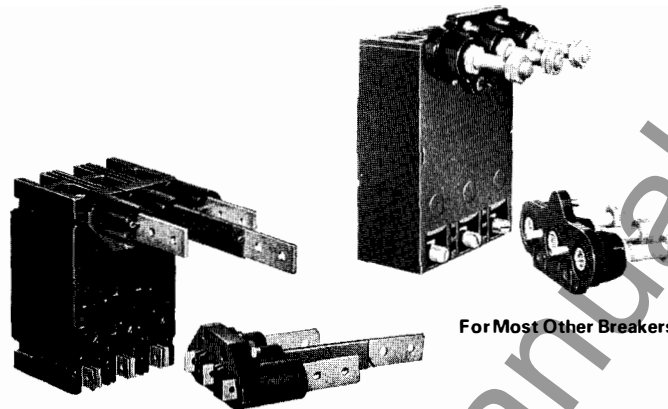


# Accessories, Continued

## Plug-in Adapter Kits

For rear connected applications such as switchboards. Facilitates ease of installation and front removal of breaker. Includes conductor for mounting on breaker, plug-in mounting blocks with matching conductor, rear studs and mounting hardware<sup>①</sup>. Order 2 mounting blocks style number when line and load are required; order 1 mounting block style number when either line or load is required.

List Prices: See Price List 29-021, Dis. RCB-2



For EB, EHB, FB and HFB

For Most Other Breakers Listed<sup>⑤</sup>

| Description                                                       | Style Number |
|-------------------------------------------------------------------|--------------|
| <b>DA, LB, LBB, HLB Breakers<sup>②</sup></b>                      |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G45   |
| 3-Pole                                                            | 313C644G46   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G03   |
| 3-Pole                                                            | 314C932G04   |
| <b>EB, EHB, FB Thermal Magnetic Breakers<sup>②</sup></b>          |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G01   |
| 2-Pole, 150 Ampere                                                | 507C036G02   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>FB and HFB Magnetic Only, HFB Thermal Magnetic<sup>②</sup></b> |              |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole, 100 Ampere                                                | 507C036G05   |
| 2-Pole, 150 Ampere                                                | 507C036G06   |
| 3-Pole, 100 Ampere                                                | 507C036G03   |
| 3-Pole, 150 Ampere                                                | 507C036G04   |
| <b>JA, KA, HKA Breakers<sup>③</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 313C644G29   |
| 3-Pole                                                            | 313C644G30   |
| 1 Mounting Block, Line or Load                                    |              |
| 2-Pole                                                            | 314C932G01   |
| 3-Pole                                                            | 314C932G02   |
| <b>JB, KB, HKB Breakers<sup>②</sup></b>                           |              |
| 2 Mounting Blocks, Line and Load                                  |              |
| 2-Pole                                                            | 506C144G17   |
| 3-Pole                                                            | 506C144G18   |
| 1 Mounting Block, Line Only                                       |              |
| 2-Pole                                                            | 1260C86G01   |
| 3-Pole                                                            | 1260C86G02   |
| 1 Mounting Block, Load Only                                       |              |
| 2-Pole                                                            | 1260C86G03   |
| 3-Pole                                                            | 1260C86G04   |

- ① EB, EHB, FB, HFB, KB, JB, HKB, have flat bus rear connectors. Others have threaded studs.  
 ② These plug-in adapter kits are UL Listed as recognized components.  
 ③ Not Underwriters' Laboratories, Inc. listed.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220

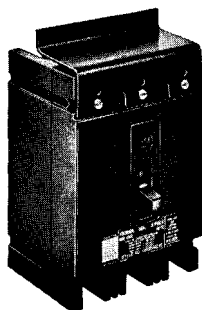


September 1991  
Supersedes Technical Data 29-121,  
pages 21-22, dated March 1988  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

Accessories, Modifications

## Replacement AB DE-ION® Circuit Breakers

### Accessories, Continued Extended Line Terminal Shields<sup>①</sup>



For shielding line side terminal connections.  
One shield required per breaker. Order sep-  
arately when needed. Sold only in lots of  
10, including hardware.

| Breaker<br>Frame                                | Style<br>Number         |
|-------------------------------------------------|-------------------------|
| DA                                              | 314C420G06              |
| JA, KA, LB, LBB (Saf-T-Vue)                     | 314C420G04              |
| JA, KA, HKA, LB, LBB, HLB<br>(Standard Breaker) | 314C420G06              |
| EB, EHB, FB, HFB                                | 625B229G08 <sup>②</sup> |
| JB, KB, HKB                                     | 1266C07G01              |

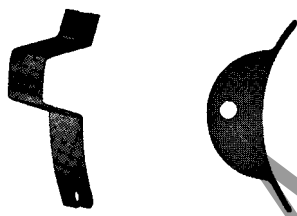
### Base Mounting Hardware

No charge when ordered with breaker.  
Order separately when needed.

| Breaker<br>Frame              | Style<br>Number |
|-------------------------------|-----------------|
| <b>1-Pole Breakers</b>        |                 |
| EB, EHB, HFB <sup>③</sup>     | 624B375G01      |
| EB, EHB, HFB <sup>④</sup>     | 624B375G02      |
| <b>2- and 3-Pole Breakers</b> |                 |
| DA, JA, KA, HKA, LB, LBB, HLB | 21C6782G22      |
| EB, EHB, FB, HFB              | 21C6782G18      |
| JB, KB, HKB                   | 673B125G12      |

List Prices: See Price List 29-021, Dis. RCB-2

### Handle Locks<sup>⑤</sup>



#### Typical Photos

#### Non-Padlockable

For prevention of unintentional operation of  
breaker. Fits over breaker handle and may  
be removed.

#### Padlockable

For prevention of unauthorized operation of  
breaker. Is non-removable once installed on  
breaker. Meets Underwriters' Laboratories,  
Inc. and California Code requirements.  
Note: All breakers are trip free and will trip  
with handle locks attached.

| Breaker Frame                 | Style Number         |
|-------------------------------|----------------------|
| <b>Non-Padlockable</b>        |                      |
| EB, EHB, FB, HFB              | 1720360 <sup>⑥</sup> |
| DA, JA, KA, HKA, LB, LBB, HLB | 29B2721H04           |
| <b>Padlockable</b>            |                      |
| EB, EHB, FB, HFB              | 765A754G01           |
| DA, JA, KA, LB, LBB, HKA, HLB | 673B796G02           |
| JB, KB, HKB                   | 673B796G01           |

⑤ Changed or added since previous issue.  
⑥ Not Underwriters' Laboratories, Inc. listed.  
② One of style 625B229G08 is one package of 10.  
③ Individually mounted.  
④ Group mounted.



## Modifications<sup>①</sup>

**List Prices:** See Price List 29-021 Dis. RCB-2

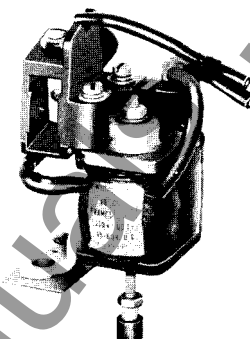
Only two internally mounted modifications – shunt trip, under voltage release, auxiliary switch, alarm switch – may be mounted in DA, JA thru LB, HKA thru HLB and thermal magnetic EB, EHB, FB and HFB breakers. Only one of these modifications may be mounted in FB magnetic only or HFB magnetic only, 2 pole EB, EHB, FB. None are available in 1-pole breakers except alarm switch in EB, EHB and HFB.

## Shunt Trip

For tripping breaker from a remote point. A solenoid device mounts within breaker case. Breaker trips when coil is energized.

Shunt trips should not be used as circuit interlocks using maintained contact pilot devices.

A cut-off switch breaks the circuit to the momentary rated coil when breaker opens. Available for control voltages up to 250 volts Dc or 600 volts Ac. Voltage and frequency must be specified. Standard leads extend 18" outside of breaker.



## Shunt Trip for Field Mounting<sup>② ③ ④</sup>

| Voltage/<br>Hertz          | Breaker Type<br>EB, EHB, FB, HFB <sup>⑤</sup><br>(Thermal Magnetic<br>only) | JB, KB, HKB | JA, KA, HKA,<br>DA, LB, LBB,<br>HLB |
|----------------------------|-----------------------------------------------------------------------------|-------------|-------------------------------------|
| <b>Right Hand Mounting</b> |                                                                             |             |                                     |
| 600/50-60 Hz               | 2609D39G15                                                                  | 2609D42G15  | 2605D15G15                          |
| 480/50-60 Hz               | 2609D39G16                                                                  | 2609D42G16  | 2605D15G16                          |
| 240/50-60 Hz               | 2609D39G17                                                                  | 2609D42G17  | 2605D15G17                          |
| 208/50-60 Hz               | 2609D39G18                                                                  | 2609D42G18  | 2605D15G18                          |
| 120/50-60 Hz               | 2609D39G19                                                                  | 2609D42G19  | 2605D15G19                          |
| 60/50-60 Hz                | 2609D39G20                                                                  | 2609D42G20  | 2605D15G20                          |
| 48/50-60 Hz                | 2609D39G21                                                                  | 2609D42G21  | 2605D15G21                          |
| 24/50-60 Hz                | 2609D39G22                                                                  | 2609D42G22  | 2605D15G22                          |
| 250 Dc                     | 2609D39G23                                                                  | 2609D42G23  | 2605D15G23                          |
| 125 Dc                     | 2609D39G24                                                                  | 2609D42G24  | 2605D15G24                          |
| 60 Dc                      | 2609D39G25                                                                  | 2609D42G25  | 2605D15G25                          |
| 48 Dc                      | 2609D39G26                                                                  | 2609D42G26  | 2605D15G26                          |
| 24 Dc                      | 2609D39G27                                                                  | 2609D42G27  | 2605D15G27                          |
| 12 Dc                      | 2609D39G28                                                                  | 2609D42G28  | 2605D15G28                          |
| <b>Left Hand Mounting</b>  |                                                                             |             |                                     |
| 600/50-60 Hz               | 2609D39G01                                                                  | 2609D42G01  | 2605D15G01                          |
| 480/50-60 Hz               | 2609D39G02                                                                  | 2609D42G02  | 2605D15G02                          |
| 240/50-60 Hz               | 2609D39G03                                                                  | 2609D42G03  | 2605D15G03                          |
| 208/50-60 Hz               | 2609D39G04                                                                  | 2609D42G04  | 2605D15G04                          |
| 120/50-60 Hz               | 2609D39G05                                                                  | 2609D42G05  | 2605D15G05                          |
| 60/50-60 Hz                | 2609D39G06                                                                  | 2609D42G06  | 2605D15G06                          |
| 48/50-60 Hz                | 2609D39G07                                                                  | 2609D42G07  | 2605D15G07                          |
| 24/50-60 Hz                | 2609D39G08                                                                  | 2609D42G08  | 2605D15G08                          |
| 250 Dc                     | 2609D39G09                                                                  | 2609D42G09  | 2605D15G09                          |
| 125 Dc                     | 2609D39G10                                                                  | 2609D42G10  | 2605D15G10                          |
| 60 Dc                      | 2609D39G11                                                                  | 2609D42G11  | 2605D15G11                          |
| 48 Dc                      | 2609D39G12                                                                  | 2609D42G12  | 2605D15G12                          |
| 24 Dc                      | 2609D39G13                                                                  | 2609D42G13  | 2605D15G13                          |
| 12 Dc                      | 2609D39G14                                                                  | 2609D42G14  | 2605D15G14                          |

## Factory Mounted Shunt Trips<sup>① ② ③</sup>

All of the above shunt trips can be specified for factory mounting at the same price as listed for the kit. These shunt trips have the leads out the side and are UL listed when factory mounted, unless other non-UL Listed modifications are used.

Shunt trips are "factory mounted only" on the following breakers:

FB magnetic only <sup>⑥ ⑦</sup>, HFB magnetic only <sup>⑥ ⑦</sup> and non-auto breakers (MCS)<sup>③</sup>

## Shunt Trip Coil Data

| Shunt Trip<br>Voltage<br>Rating | For All Breakers Listed in Table<br>to Left <sup>⑥</sup> |              |
|---------------------------------|----------------------------------------------------------|--------------|
|                                 | Coil Inrush                                              |              |
|                                 | Amperes                                                  | Volt-Amperes |
| 600 AC                          | 0.105                                                    | 63.0         |
| 480 AC                          | 0.085                                                    | 40.8         |
| 240 AC                          | 1.7                                                      | 408.0        |
| 208 AC                          | 1.4                                                      | 291.2        |
| 120 AC                          | 0.88                                                     | 105.6        |
| 60 AC                           | 9.10                                                     | 546.0        |
| 48 AC                           | 7.50                                                     | 360.0        |
| 24 AC                           | 3.95                                                     | 94.8         |
| 250 DC                          | 2.5                                                      | 625.0        |
| 125 DC                          | 0.975                                                    | 121.9        |
| 60 DC                           | 0.525                                                    | 31.5         |
| 48 DC                           | 1.3                                                      | 62.4         |
| 24 DC (FB)                      | 6.0                                                      | 144.0        |
| 24 DC (KB)                      | 3.8                                                      | 91.2         |
| 24 DC (Other)                   | 8.                                                       | 192.         |
| 12 DC                           | 6.                                                       | 72.          |

**List Prices:** See Price List 29-021, Dis. RCB-2

<sup>⑥</sup> Changed or added since previous issue.

<sup>①</sup> Right hand mounting considered standard unless specified otherwise.

<sup>②</sup> 120 volt Ac ratings suitable for 55% pickup for ground fault applications.

<sup>③</sup> Not field mountable on non-automatic breakers (MCS).

<sup>④</sup> Field mounting voids breakers' UL listing except on KB, HKB, KA, HKA, LB, HLB.

<sup>⑤</sup> Available similar to this except "Leads out the load end – (not UL listed)". Order by description.

<sup>⑥</sup> Right hand mounting only.

<sup>⑦</sup> Not UL listed.

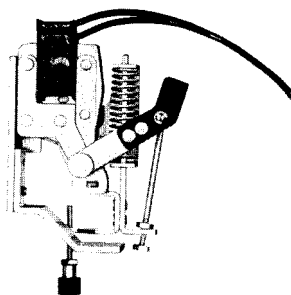


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pages 23-24, dated March 1988  
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31-500A

#### Modifications

## Replacement AB DE-ION® Circuit Breakers

### Standard Undervoltage Release<sup>②</sup>



For undervoltage protection. A solenoid device mounts within breaker case. Coil must be energized before closing breaker. Trips breaker when voltage drops below 35 to 70% of coil rating. Picks up and seals in at 85% of coil rating. For line voltages up to 250 volts Dc or 600 volts Ac. Externally mounted resistors are supplied for certain ratings. Standard leads extend 18" outside of breaker. **Note:** U.V.R. attachments are not designed for, and should not be used as, circuit interlocks. For further information, refer to Westinghouse.

### Factory Mounted Undervoltage Releases<sup>② ③</sup>

All of the above undervoltage releases can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side and are U L listed when factory mounted unless other non-U L listed modifications are used.

### Undervoltage release Attachment Kits for Field Mounting<sup>⑤ ⑥</sup>

| Attachment Voltage Hertz | Breaker Type                  |
|--------------------------|-------------------------------|
|                          | JA, KA, DA, HKA, LB, LBB, HLB |

#### For Left Hand Mounting

|        |            |
|--------|------------|
| 120 60 | 458D070G01 |
| 208 60 | 458D070G05 |
| 240 60 | 458D070G02 |
| 480 60 | 458D070G03 |
| 600 60 | 458D070G04 |
| 12 DC  | 458D070G09 |
| 24 DC  | 458D070G10 |
| 48 DC  | 458D070G11 |
| 125 DC | 458D070G12 |
| 250 DC | 458D070G13 |

### Undervoltage Release Coil Data

| Voltage Rating, Hertz | Breaker Type                     |                          |          | JA, KA, HKA, DA, LB, LBB, HLB |                                   |          |
|-----------------------|----------------------------------|--------------------------|----------|-------------------------------|-----------------------------------|----------|
|                       | EB, EHB, FB, HFB, JB, KB and HKB |                          |          | Coil Amperes                  | External Series Resistance (Ohms) | Total VA |
|                       | Coil Amperes                     | Series Resistance (Ohms) | Total VA |                               |                                   |          |
| 600 AC                | 0.020                            | 25,000                   | 12.0     | 0.012                         | 50,000                            | 7.2      |
| 480 AC                | 0.016                            | 20,000                   | 7.7      | 0.013                         | 30,000                            | 6.3      |
| 240 AC                | 0.021                            | 6,000                    | 5.1      | 0.013                         | .....                             | 3.2      |
| 208 AC                | 0.019                            | 6,000                    | 4.0      | 0.018                         | .....                             | 3.8      |
| 120 AC                | 0.023                            | .....                    | 2.8      | 0.023                         | .....                             | 2.8      |
| 60 AC                 | 0.203                            | 250                      | 12.2     | .....                         | .....                             | ..       |
| 48 AC                 | 0.245                            | 150                      | 11.8     | .....                         | .....                             | ..       |
| 24 AC                 | 0.250                            | 50                       | 6.0      | .....                         | .....                             | ..       |
| 250 DC                | 0.026                            | 5,000                    | 6.5      | 0.013                         | 16,500                            | 3.3      |
| 125 DC                | 0.026                            | .....                    | 3.3      | 0.013                         | 6,500                             | 1.7      |
| 60 DC                 | 0.248                            | 200                      | 14.9     | 0.013                         | 1,500                             | 0.8      |
| 48 DC                 | 0.260                            | 150                      | 12.5     | 0.012                         | 600                               | 0.6      |
| 24 DC                 | 0.141                            | .....                    | 3.4      | 0.023                         | .....                             | 0.6      |
| 12 DC                 | 0.286                            | .....                    | 3.5      | 0.048                         | .....                             | 0.6      |

List Prices: See Price List 29-021 Dis. RCB-2

Undervoltage releases are "factory mounted only" on the following breakers:

EB<sup>③</sup>, EHB<sup>③</sup>, FB<sup>③</sup>, HFB<sup>③</sup>, FB<sup>① ④</sup> and HFB magnetic only<sup>① ④</sup>, JB, KB, HKB

② Changed or added since previous issue.

① Not UL listed.

② Righthand mounting considered standard unless specified otherwise except JA, KA, DA, HKA, LB, LBB, HLB and seltronic available for lefthand only, and JB, KB, HKB lefthand is standard.

③ Not available on ambient compensating breakers.

④ Righthand mounting only.

⑤ Not field mountable on non automatic breakers. (Molded case switches)

⑥ Field mounting voids UL listing of breaker except on KA, HKA, LB, HLB.



### Alarm Switch

**Availability:** DA thru HLB. For light or alarm indication when breaker trips. Does not function with manual operation. Automatically resets when breaker is related. Standard leads extend 18" out side of breaker. Not field mountable.

| Breaker Frame                  | Normal Pole Mtg. | Contact Operation (Specify Type Desired) |
|--------------------------------|------------------|------------------------------------------|
| DA                             | Left             | Make or Break                            |
| EB, EHB, FB, HFB <sup>①②</sup> | Mechanism        | Make or Break                            |
| JA, KA, LB, LBB, HKA, HLB      | Left             | Make or Break                            |
| JB, KB, HKB                    | Left             | Make or Break                            |

### Alarm Switch Contact Rating (Non Inductive)

EB, EHB, FB, HFB:

5 amp, 120 volt Ac.

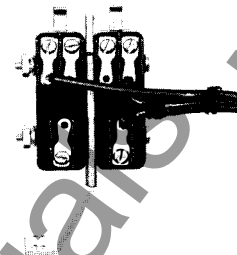
All other breakers:

10 amps, 120-240 volt Ac.

**List Prices:** See Price List 29-021 Dis. RCB-2.

### Auxiliary Switch<sup>③</sup>

For auxiliary control circuits. Miniature switches mount within breaker. Commonly used for remote indication of open or closed breaker and electrically interlocking component control circuits. "A" contacts are closed when breaker is closed. "B" contacts are open when breaker is closed. Standard leads extend 18" out side of breaker.



### Auxiliary Switch Attachment Kits for Field Mounting<sup>④⑤⑥</sup>

| Breaker Type                  | For Right Hand Mounting |                         | For Left Hand Mounting |                         | Max Ac Voltage Rating <sup>⑦</sup> | Max. Non-Inductive Amps. |
|-------------------------------|-------------------------|-------------------------|------------------------|-------------------------|------------------------------------|--------------------------|
|                               | 1A-1B                   | 2A-2B                   | 1A-1B                  | 2A-2B                   |                                    |                          |
| EB, EHB, FB, HFB <sup>⑧</sup> | 4979D06G03              | 4979D06G08              | 4979D06G03             | 4979D06G09              | 240                                | 5                        |
| JA, KA, DA, HKA, LB, LBB, HLB | 458D067G08              | 656D527G09 <sup>①</sup> | 458D067G03             | 656D527G01 <sup>①</sup> | 480                                | 10                       |
| JB, KB, HKB                   | 2600D97G08              | 2609D45G08 <sup>①</sup> | 2600D97G03             | 2609D45G03 <sup>①</sup> | 240                                | 5                        |

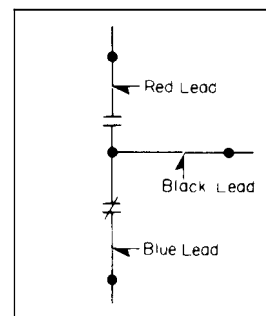
### Factory Mounted Auxiliary Switches<sup>③</sup>

All of the above auxiliary switches can be specified for factory mounting at the same price as listed for the kit. These attachments have the leads out the side of the breaker and are UL listed when factory mounted unless other non UL listed modifications are used (except as noted).

Factory mounted switches only can be supplied for the following breakers:

FB magnetic only<sup>①②</sup> and HFB magnetic only<sup>①②</sup>.

Price same as a similar kit.



- ① Not UL listed.
- ② Not available for Magnetic Only, Ambient Compensating, or breakers with Undervoltage Release.
- ③ Righthand mounting standard for EB, EHB, FB, HFB, JB, KB, HKB. All others are lefthand mounting as standard unless otherwise specified.
- ④ Not for use on non-automatic breakers. (Molded case switches).
- ⑤ All switches are multiples of 1A-1B with a common electrical connection (See diagram below).
- ⑥ Field mounting voids UL listing of breaker except on KB, HKB, KA, HKA, LB, HLB.
- ⑦ For Dc applications refer to factory.
- ⑧ Thermal magnetic only.
- ⑨ Righthand mounting only.

Westinghouse Electric Corporation  
Distribution and Control Business Unit  
Electrical Components Division  
Pittsburgh, Pennsylvania, U.S.A. 15220



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31-500A

## Modifications

# Replacement AB DE-ION® Circuit Breakers

### Modifications, Continued

#### Moisture-Fungus Treatment<sup>①</sup>

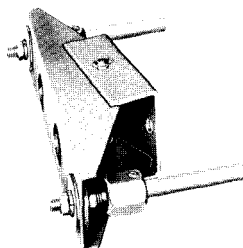
**Availability:** DA thru HLB

Treatment can be provided to meet customer's specific atmospheric conditions. Moisture-fungus treating material used meets JAN-T-152; treatment meets MIL-V-173a. Requests and orders should specify government specifications or conditions to be met.

#### Mechanical Interlocks<sup>①</sup>

For mechanically interlocking a pair of breakers so that only one may be closed at one time, but both may be open simultaneously.

#### Walking Beam Type<sup>①</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) at rear of breaker. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, JB, KB, HFB, HKB: 4 $\frac{3}{8}$ " center to center. Order as a set of two special factory drilled breakers and 1 walking beam interlock. Specify breaker type, panel thickness and center-to-center dimension of breakers.

#### Sliding Bar Type (Field Mountable)<sup>① ②</sup>



**Availability:** DA thru HLB

Mounts on panel (not included) fitting over front of breakers. Standard breaker spacing: DA, JA, KA, HKA, LB, LBB, HLB: 5 $\frac{3}{4}$ " center to center; EB, EHB, FB, HFB: 4 $\frac{3}{8}$ " center to center; JB, KB, HKB: 4 $\frac{3}{8}$ " center to center.

#### Kirk Key Interlock<sup>②</sup>



**Availability:** 100 Amp Frames (EB) thru 400 Amp Frames (HLB).

Permits interlocking of two breakers or one breaker with other devices. Before breaker can be closed, key must be inserted and turned in breaker interlock. Breaker must be opened before key can be removed. It can then be inserted in interlock or other devices to permit their closure. Requests and orders should completely outline interlocking scheme, ultimate user and his address.

<sup>①</sup> Not UL Listed.

<sup>②</sup> Not available on motor operated breakers.

## Accessories, Continued

### Motor Operators<sup>①</sup>

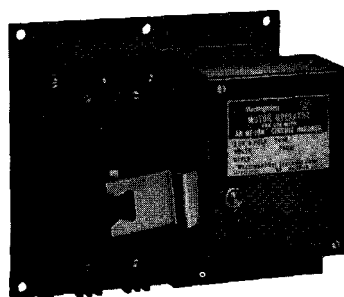
Motor operators provide complete remote control by means of a pushbutton or similar pilot device<sup>②</sup>. Positive switching action is accomplished by use of an operating arm engaging the breaker handle. The unit is energized momentarily to actuate the lever arm moving it to either the "ON" or "OFF" position. The control is broken by an internal cutoff switch. Means for emergency manual operation is provided.

Motor operators are available with motors rated 120 volts Ac, 208 volts Ac, and 240 volts Ac.

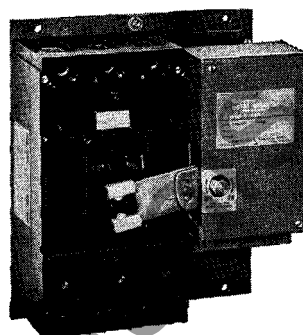
The 480 volt operators utilize a 120 volt Ac motor in conjunction with a 480/240 to 120 volt dual voltage transformer.

**Note:** The motor operator is intended only for infrequent operation in line with Underwriters' Laboratories, Inc. endurance standards for AB molded case breakers.

**List Prices:** See Price List 29-021, Dis. RCB-2



For EB, EHB, FB and HFB



For DA, JA, KA, JB, LB, LBB, HKA, HKB and HLB Breakers

### Motor Operator Selection

| Type Breaker     | Ac Voltage                |              |              |                           |
|------------------|---------------------------|--------------|--------------|---------------------------|
|                  | 120                       | 208          | 240          | 480                       |
|                  | Style Number <sup>②</sup> | Style Number | Style Number | Style Number <sup>②</sup> |
| EB, EHB, FB, HFB | 656D148G11                | 656D148G04   | 656D148G02   | 656D148G13                |
| DA, JA, KA, HKA  | 657D819G23                | 657D819G10   | 657D819G08   | 657D819G24                |
| LB, LBB, HLB     | 657D819G25                | 657D819G16   | 657D819G14   | 657D819G26                |
| JB, KB, HKB      | 2600D28G07                | 2600D28G04   | 2600D28G02   | 2600D28G08                |

### Back Mounting Plates

| Type Breaker     | 120, 208, 240, 480 Volts Ac |
|------------------|-----------------------------|
|                  | Style Number                |
| EB, EHB, FB, HFB | 503C707G01                  |
| DA, JA, KA, LB   | 503C981G01                  |
| JB, KB, HKB      | 1250C26G01                  |

### Motor Data

| Type Breaker                          | Motor       | Hp.  | Inrush Current, Ampere (Peak) |           |           | Continuous Current (RMS) |           |           | Operating Time, Open or Close |
|---------------------------------------|-------------|------|-------------------------------|-----------|-----------|--------------------------|-----------|-----------|-------------------------------|
|                                       |             |      | 120 Volts                     | 208 Volts | 240 Volts | 120 Volts                | 208 Volts | 240 Volts |                               |
| EB, EHB, FB, HFB                      | Split Phase | 1/75 | 10                            | 4         | 5         | 2.3                      | 1.17      | 1.65      | 1.5 Seconds                   |
| DA, JA, KA, JB, KB, LB, LBB, HKB, HLB | Split Phase | 1/50 | 14                            | 6         | 7         | 3.5                      | 1.6       | 1.75      | 1.5 Seconds                   |

**Dimensions:** Dimension Sheet 29-170

② Changed or added since previous issue.

① Ac voltage rated operators are UL listed as recognized components.

② The pilot device must be maintained contact type for EB, EHB, FB, HFB, DA, JA, KA, JB, KB, HKB and LB mechanisms.



Westinghouse Electric Corporation  
Low Voltage Breaker Division  
Beaver, Pennsylvania 15009

Technical Data  
29-121

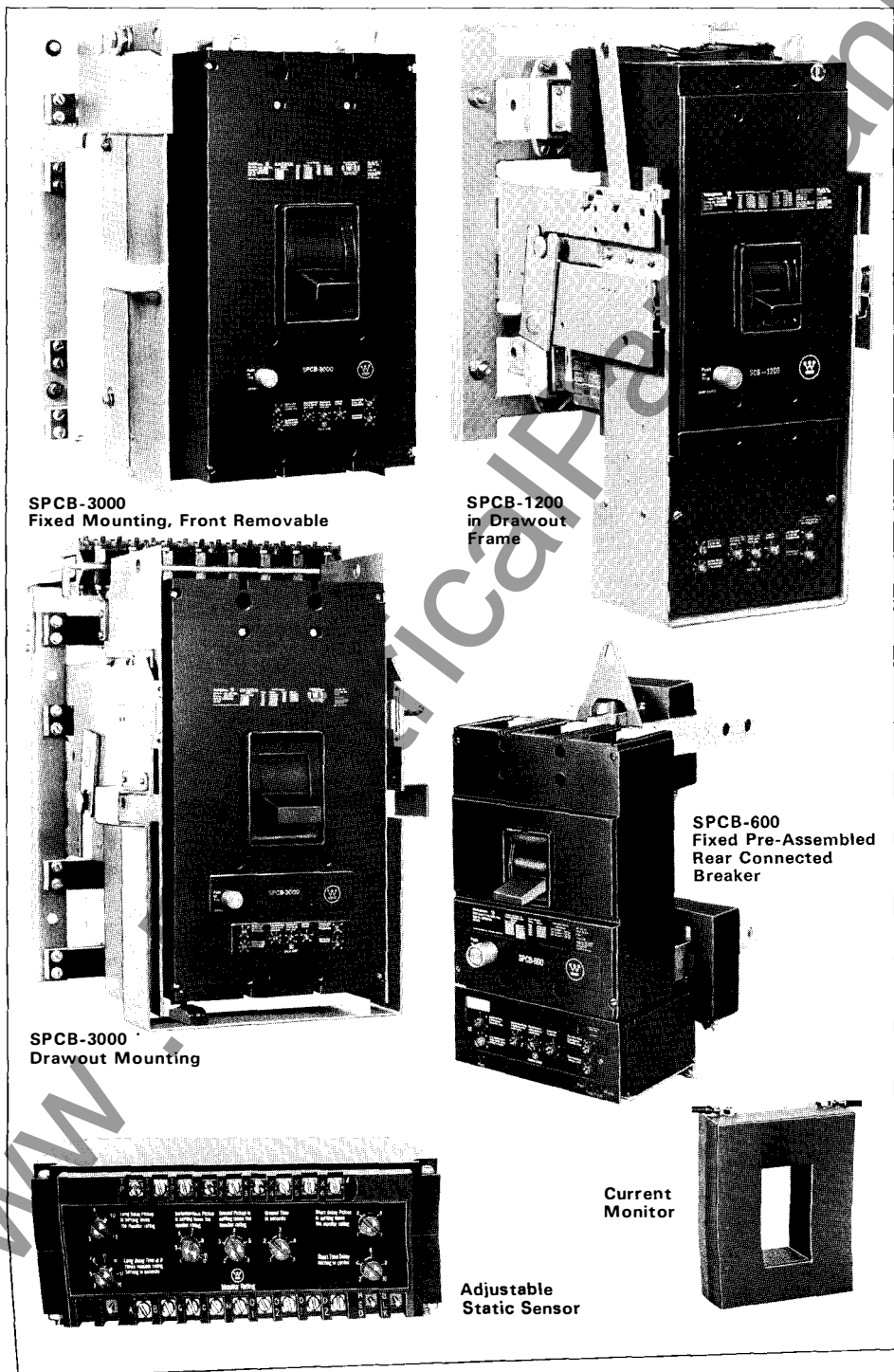
Page 1

October, 1976  
Supersedes Technical Data 29-820 T WE A  
pages 1-4, dated October, 1975.  
Mailed to: E, D, C/1901, 1923, 1929/PL

600, 1200, 2000, 2500 and 3000  
Continuous Amperes,  
240, 480, 600 volts Ac

## SCB-II Systems Circuit Breakers

### SCB-II Systems Circuit Breakers



SPCB-3000  
Fixed Mounting, Front Removable

SPCB-1200  
in Drawout  
Frame

SPCB-600  
Fixed Pre-Assembled  
Rear Connected  
Breaker

SPCB-3000  
Drawout Mounting

Current  
Monitor

Adjustable  
Static Sensor

### 250-3000 Amperes, 600 Volts Ac 3 Poles Only

Listed with Underwriter's Laboratories, Inc.  
except as noted.

#### Interrupting Ratings - UL Listed

| Breaker<br>Design-<br>ation | Max.<br>Frame<br>Size,<br>Cont.<br>Amps | Interrupting Capacity   |                        |
|-----------------------------|-----------------------------------------|-------------------------|------------------------|
|                             |                                         | Asymmetrical<br>Amperes | Symmetrical<br>Amperes |

#### 240 Volts Ac

|           |      |                     |                     |
|-----------|------|---------------------|---------------------|
| SPCB-600  | 600  | 75,000 <sup>Ⓢ</sup> | 65,000 <sup>Ⓢ</sup> |
| SPCB-1200 | 1200 | 75,000              | 65,000              |
| SPCB-2000 | 2000 | 150,000             | 125,000             |
| SPCB-2500 | 2500 | 150,000             | 125,000             |
| SPCB-3000 | 3000 | 150,000             | 125,000             |

#### 480 Volts Ac

|           |      |                     |                     |
|-----------|------|---------------------|---------------------|
| SPCB-600  | 600  | 40,000 <sup>Ⓢ</sup> | 35,000 <sup>Ⓢ</sup> |
| SPCB-1200 | 1200 | 58,000              | 50,000              |
| SPCB-2000 | 2000 | 115,000             | 100,000             |
| SPCB-2500 | 2500 | 115,000             | 100,000             |
| SPCB-3000 | 3000 | 115,000             | 100,000             |

#### 600 Volts Ac

|           |      |                     |                     |
|-----------|------|---------------------|---------------------|
| SPCB-600  | 600  | 30,000 <sup>Ⓢ</sup> | 25,000 <sup>Ⓢ</sup> |
| SPCB-1200 | 1200 | 30,000              | 25,000              |
| SPCB-2000 | 2000 | 115,000             | 100,000             |
| SPCB-2500 | 2500 | 115,000             | 100,000             |
| SPCB-3000 | 3000 | 115,000             | 100,000             |

<sup>Ⓢ</sup> Changed since previous issue.

#### How to Order

1. Specify quantity.
2. Give following information on breaker:  
Type  
Continuous Current Rating  
Volts  
Phase, No. of Wires, Frequency
3. Select desired modifications and/or accessories.
4. Ordering example: One (1) Type SPCB-2000, 1600 amperes, 240 volts Ac, 3 phase, 4 wire, 60 Hz fixed mounting with rear connectors. Motor operator for 120 volts Ac, 60 Hz.
5. Complete work sheet, Form 44440, and submit with order.

#### List Prices

See Price List 29-020 P WE A  
Discount SCB-1

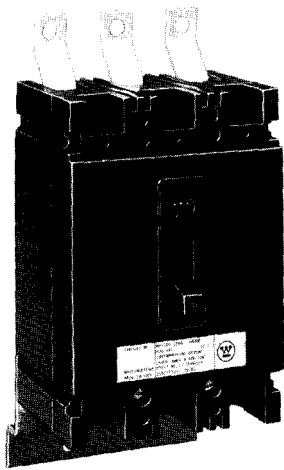


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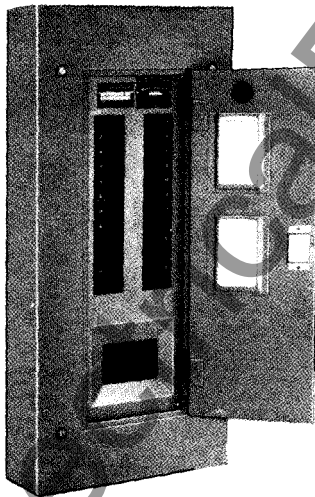


August, 1989  
Supersedes Technical Data 29-121,  
pages 29-30, dated July, 1989  
Mailed to: E, D, C/29-100A, 31-400A,  
31-500A

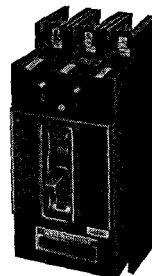
## Panelboard Replacement Breakers UL Listed



Type RF  
New  
Replacement  
Molded Case  
Circuit Breaker



Type CDP Panelboard



Type F  
Out-of-Production  
Molded Case  
Circuit Breaker

### Out-of-Production Circuit Breakers

Several models of Westinghouse molded case circuit breakers are no longer manufactured. These out-of-production circuit breakers are considered by Westinghouse to be obsolete.

However, some firms have been offering Westinghouse out-of-production circuit breakers in a reconditioned state. These circuit breakers are not new units and may have been in service for extended periods of service time.

Westinghouse molded case circuit breakers are not designed to be repaired or calibrated in the field. When these circuit breakers are reconditioned outside of the original factory, it is extremely difficult to maintain the original factory specifications of the circuit breakers.

### Replacement of Out-of Production Circuit Breakers

When out-of-production circuit breakers must be replaced, Westinghouse recommends one of these solutions:

- Upgrade or retrofit the equipment to use the most current molded case circuit breaker technology. This includes the Series C® family of molded case circuit breakers that have higher interrupting capacities in each frame size while being smaller and lighter.
- Use currently manufactured Westinghouse replacement industrial circuit breakers. They're available from stock and can be used to replace many out-of-production circuit breakers.
- Use Westinghouse Panelboard Replacement Circuit Breakers in a panelboard. These UL listed replacement circuit breakers are newly manufactured and are physically interchangeable with the circuit breakers they are designed to replace. (These circuit breakers may be suitable for other replacement applications as well.)
- Westinghouse strongly recommends that out-of-production circuit breakers be replaced with one of the newly manufactured circuit breakers described in the preceding paragraphs. As a last resort, another alternative is to utilize out-of-production circuit breakers that have been reconditioned by Westinghouse at the original factory.



Westinghouse Panelboard Replacement Circuit Breakers are newly manufactured and tested to the latest applicable standards at the Westinghouse molded case circuit breaker plant in Beaver, Pennsylvania. This plant has a long and well-recognized tradition of product safety, integrity, and quality.

The Panelboard Replacement Circuit Breaker solution eliminates the need to consider alternative approaches. Westinghouse customers are assured that the high standards of product quality and reliability do not have to be sacrificed when replacing Westinghouse out-of-production circuit breakers.

All Panelboard Replacement Circuit Breakers are easily identified by the prefix "R" added to the out-of-production type circuit breaker catalog number they replace.

Here are three examples of the new Panelboard Replacement Circuit Breaker catalog numbering system.

1. An RF3100, pictured on the front cover, is a newly manufactured, three-pole, 100 ampere trip Panelboard Replacement Circuit Breaker. It replaces an out-of-production F circuit breaker.

**R F 3 100**

**R** Designates New Panelboard Replacement Circuit Breaker

**F** Identifies the Out-of-Production Circuit Breaker Frame

**3** Number of Poles

**100** Trip Unit Ampere Rating

2. An out-of-production single pole E-frame circuit breaker with a 15 ampere trip had a catalog number of E1015.

A new Panelboard Replacement Circuit Breaker for this out-of-production E-frame circuit breaker has a current catalog number of RE1015.

3. An out-of-production two-pole EA-frame circuit breaker with a 50 ampere trip had a catalog number of EA2050.

A new Panelboard Replacement Circuit Breaker for this out-of-production EA-frame circuit breaker has a current catalog number of REA2050.

#### Replacement Chart

| Current Panelboard<br>Circuit Breaker Type | Out-of-Production<br>Circuit Breaker Type | Volts AC<br>(50/60 Hz) |     |     |
|--------------------------------------------|-------------------------------------------|------------------------|-----|-----|
|                                            |                                           | 240                    | 480 | 600 |
| REA                                        | EA                                        | •                      |     |     |
| RE                                         | E                                         | •                      |     |     |
| REH                                        | EH                                        |                        | •   |     |
| RFA                                        | FA                                        |                        |     | •   |
| RHFA                                       | HFA                                       |                        |     | •   |
| RF                                         | F                                         |                        |     | •   |
| RHF                                        | HF                                        |                        |     | •   |

Panelboard Replacement Circuit Breakers have noninterchangeable trip units and the same interrupting capacity as the out-of-production circuit breakers they replace.