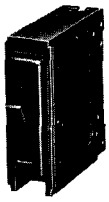
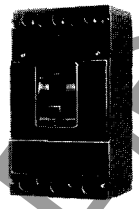
Westinghouse

AB De-ion ® Circuit Breakers

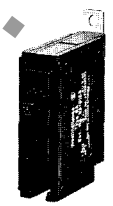
Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

Commercial Line Breakers Thermal Magnetic

Type Breaker		Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Poles	H	W	D
Quicklag P 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 10,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
			5,000 **10,000** (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	2⅞	3	2⅜
Quicklag B 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
			5,000 (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	2⅞	3	2⅜
Quicklag C 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 10,000 (120/240)	.....	.....	.....	1	3¾	1	2 7/16
			5,000 **10,000** (120/240)	.....	.....	.....	2	3¾	2	2 7/16
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	3¾	3	2 7/16
CA 225 Amps. Max. 2, 3 Poles Non Interchangeable Trip		240	10,000	.....	.....	.....	2	6½	2¾	2 1/16
			10,000	.....	.....	.....	3	6½	4⅛	2 1/16
DA 400 Amps. Max. 2, 3 Poles Non Interchangeable Trip		240	25,000	.....	.....	**10,000** 250 Volts	2	10⅛	5½	4 1/16
			22,000	.....	.....		3	10⅛	5½	4 1/16

Industrial Line Breakers

BA 1, 2, 3 Poles Non Interchangeable Trip 100 Amps. Max. (120/240, 240 Volts) 30 Amps. Max. (277 Volts)		120/240 (1, 2 Poles)	10,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
		240 (2, 3 Poles)	**10,000** (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		277 (1-Pole)	10,000 **10,000** (240)	....	....	....	3	2⅞	3	2⅜
			10,000 **10,000** (277)	....	....	....	1 (277V)	3⅛	1	2 13/16

Breaker Terminal Data

All breakers listed have pressure-type terminals except 5 to 30 ampere ratings of types QP, QB, QC and BA 120/240 volt and 240 volt which have binding screw-type terminals. 277 volt BA has pressure-type terminals. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables
QP, QB, QC, BA (120/240, 240 Volts)		
5- 30	#14 – #8 Cu	1
35- 70	#14 – #2 Al/Cu	1
90-100	# 6 – #1 Al/Cu	1
BA (277 Volts)		
15- 30	#14 – #6 Al/Cu	1
CA		
125-175	# 1 – 4/0 Al/Cu	1
200-225	2/0 – 300 MCM Al/Cu	1
DA (Standard Terminals)		
250-350	250 – 500 MCM Cu	1
400	3/0 – 4/0 Cu	2
DA (Alternate Aluminum Body Terminals)		
250-350	250 – 500 MCM Al/Cu	1
400	3/0 – 250 MCM Al/Cu	2

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000:** Symmetrical.

August, 1971
Supersedes Specification Data 29-180, pages 1-2, dated October, 1968
E, D, C/1901 PL, DB; E, C/2605

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AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
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Terminal Data

Industrial Line Breakers, *Continued* Available as Thermal Magnetic, Magnetic Only, Ambient Compensating, SAF-T-VUE®

Type Breaker	Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Poles	Approximate Dimensions, Inches H	W	D
EB 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip	240③	10,000	.....	.....	**5,000** 125/250 V Dc	1	6	1⅜	3⅜
						2	6	2¾	3⅜
		10,000	.....	.....		3	6	4⅛	3⅜
EHB 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip	480④	20,000	15,000	.....	**10,000** 250 V Dc	1	6	1⅜	3⅜
						2	6	2¾	3⅜
		18,000	**14,000**	.....		3	6	4⅛	3⅜
FB 150 Amps. Max. 2, 3 Poles Non Interchangeable Trip	600	20,000	15,000	15,000	**10,000** 250 V Dc	2	6	2¾	3⅜
		18,000	**14,000**	**14,000**		3	6	4⅛	3⅜
JA 225 Amps. Max. 2, 3 Poles Non Interchangeable Trip **KA** 225 Amps. Max. 2, 3 Poles Interchangeable Trip	600	30,000	25,000	25,000	**10,000** 250 V Dc	2	10⅛	5½	4¹⁄₁₆
		25,000	**22,000**	**22,000**		3	10⅛	5½	4¹⁄₁₆
LAB 400 Amps. Max. 2, 3 Poles Non Interchangeable Trip **LA** 600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000	**10,000**① 250 V Dc	2	10¾	8¼	4¹⁄₁₆
		42,000	**30,000**	**22,000**		3	10¾	8¼	4¹⁄₁₆
MA 800 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000	**10,000**① 250 V Dc	2	16	8¼	4¹⁄₁₆
		42,000	**30,000**	**22,000**		3	16	8¼	4¹⁄₁₆
NB 1200 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000		2	16	8¼	**5½**
		42,000	**30,000**	**22,000**		3	16	8¼	**5½**

Breaker Terminal Data

All breakers listed have pressure-type terminals. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
EB, EHB, FB (Standard Terminals)			
10- 100	#14 - #0 Al/Cu	1	.....
125- 150	# 6 - 3/0 Al/Cu	1	.....
EB, EHB, FB (Alternate Aluminum Body Terminals)			
10- 50	#14 - #4 Al/Cu	1	.....
60- 100	# 6 - 3/0 Al/Cu	1	.....
JA, KA			
70- 225	#6 - 350 MCM Cu	1	T225LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
LAB, LA			
70- 225	#6 - 350 MCM Cu	1	T225LA
250- 400	3/0 - 600 MCM Cu and #4 - 250 MCM Cu	1 ea.	T401LA
500- 600	250 - 500 MCM Cu	2	T600LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
250- 400	#3/0 - 600 MCM Al/Cu and #4 - 250 MCM Al/Cu	1 ea.	TA400LA1
500- 600	250 - 500 MCM Al/Cu	2	TA600LA
MA			
125- 350	#1 - 600 MCM Cu	1	T350MA
400- 600	3/0 - 500 MCM Cu	2	T601MA
700- 800	3/0 - 350 MCM Cu	3	T800MA
125- 600	#1 - 500 MCM Al/Cu	2	TA700MA
700- 800	3/0 - 400 MCM Al/Cu	3	TA800MA1
NB (Standard Terminals)			
700-1000	3/0 - 400 MCM Cu	3	T1000NB
1100-1200	300 - 500 MCM Cu	4	T1200NB
NB (Alternate Aluminum Body Terminals)			
700-1000	3/0 - 400 MCM Al/Cu	3	TA1000NB
1100-1200	3/0 - 500 MCM Al/Cu	4	TA1200NB
1100-1200	500 - 750 MCM Al/Cu	3	TA1201NB

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000**: Symmetrical.
③ 1 pole rated at 120 volts Ac with 10,000 amps I. C.
④ 1 pole rated at 277 volts Ac with 15,000 amps asym.; 14,000 amps sym. I. C.

Westinghouse Electric Corporation
Low Voltage Breaker Division, Beaver, Pa. 15009
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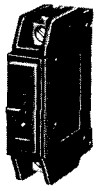
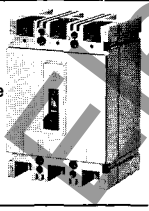
AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

Industrial Line Breakers, *Continued* Available as Thermal Magnetic, Magnetic Only, Ambient Compensating, SAF-T-VUE®

Type Breaker		Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Approximate Dimensions, Inches Poles	H	W	D
PB 2500 Amps. Max. 2, 3 Poles Interchangeable Trip		600	150,000	100,000	75,000		2	22	12	9
			125,000	**85,000**	**65,000**		3	22	12	9
High Interrupting Line Breakers MARK 75®, TRI-PAC®										
Mark 75 Quicklag HP 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	2⅞	1	2¾
			65,000	.....	.....	.....				
		240 (3 Poles)	75,000	.....	.....	.....	2	2⅞	2	2¾
			65,000	.....	.....	.....				
							3	2⅞	3	2¾
Mark 75 HBA 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	2⅞	1	2¾
			65,000	.....	.....	.....				
		240 (3 Poles)	75,000	.....	.....	.....	2	2⅞	2	2¾
			65,000	.....	.....	.....				
							3	2⅞	3	2¾
Mark 75 Quicklag HC 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	3¾	1	2⁷⁄₁₆
			65,000	.....	.....	.....				
		240 (3 Poles)	75,000	.....	.....	.....	2	3¾	2	2⁷⁄₁₆
			65,000	.....	.....	.....				
							3	3¾	3	2⁷⁄₁₆
MARK 75 HFB 150 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		600③	75,000	①30,000	20,000	**10,000**① 250 V Dc	1	6	1¾	3¾
							2	6	4⅛	3¾
			65,000	**①25,000**	**18,000**		3	6	4⅛	3¾
MARK 75 HKA 225 Amps. Max. 2, 3, Poles Interchangeable Trip		600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	10⅛	5½	4⁷⁄₁₆
			65,000	**35,000**	**25,000**		3	10⅛	5½	4⁷⁄₁₆

Breaker Terminal Data

All breakers listed have pressure-type terminals except 15 to 30 ampere ratings of types HP, HC and HBA which have binding screw-type terminals, and the PB which is designed for bus connection. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
PB			
Primarily used for bus bar connection.			
HP, HC, HBA			
15- 30	#14 – #8 Cu	..	.....
HFB (Standard Terminals)			
10-100	#14 – #0 Al/Cu	1	.....
125-150	#6 – 3/0 Al/Cu	1	.....
HFB (Alternate Aluminum Body Terminals)			
10- 50	#14 – #4 Al/Cu	1	.....
60-100	#6 – 3/0 Al/Cu	1	.....
HKA			
70-225	#6 – 350 MCM Cu	1	T225LA
70-225	#6 – 350 MCM Cu or #4 – 350 MCM Al	1	TA225LA1

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000:** Symmetrical.
③ 1 pole breakers are rated as 277 volts Ac with an interrupting rating of 75,000 amps Asym., 65,000 amps Sym. For 15-30 amps; and 30,000 amps Asym., 25,000 amps Sym. for 40-100 amps.

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AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

High Interrupting Line Breakers *Continued* MARK 75®, TRI-PAC®

Type Breaker	Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Approximate Dimensions, Inches Poles	H	W	D
MARK 75 HLA 600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	10¾	8¼	4 1/16
		65,000	**35,000**	**25,000**		3	10¾	8¼	4 1/16
MARK 75 HMA 800 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	16	8¼	4 1/16
		65,000	**35,000**	**25,000**		3	16	8¼	4 1/16
MARK 75 HNB 1200 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000		2	16	8¼	5½
		65,000	**35,000**	**25,000**		3	16	8¼	5½
TRI-PAC FB 100 Amps. Max. 2, 3 Poles Non Interchangeable Trip	600	.....	.....	.....		2	8¾	4⅛	3½
		200,000	**200,000**	**200,000**		3	8¾	4⅛	3½
TRI-PAC LA 400 Amps. Max. 2, 3 Poles Interchangeable Trip	600	.....	.....	.....		2	16	8¼	4¾
		200,000	**200,000**	**200,000**		3	16	8¼	4¾
TRI-PAC NB 800 Amps. Max. 2, 3 Poles Interchangeable Trip	600	.....	.....	.....		2	22	8¼	5½
		200,000	**200,000**	**200,000**③		3	22	8¼	5½
TRI-PAC PB 1600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	.....	.....	.....		2	22	12	9
		200,000	**200,000**	**200,000**		3	22	12	9

Breaker Terminal Data

All breakers listed have pressure-type terminals except TRI-PAC PB which is designed for bus connection. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
HLA, TRI-PAC LA			
70- 225	#6 - 350 MCM Cu	1	T225LA
250- 400	3/0 - 600 MCM Cu and #4 - 250 MCM Cu	1 ea	T401LA
500- 600	250 - 500 MCM Cu	2	T600LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
250- 400	3/0 - 600 MCM Al/Cu and #4 - 250 MCM Al/Cu	1 ea.	TA400LA1
500- 600	250 - 500 MCM Al/Cu	2	TA600LA
HNB (Standard Terminals)			
700-1000	3/0 - 400 MCM Cu	3	T1000NB
1100-1200	300 - 500 MCM Cu	4	T1200NB
HNB (Alternate Aluminum Body Terminals)			
700-1000	3/0 - 400 MCM Al/Cu	3	TA1000NB
1100-1200	3/0 - 500 MCM Al/Cu	4	TA1200NB
1100-1200	500 - 750 MCM Al/Cu	3	TA1201NB
TRI-PAC FB (Standard Terminals)			
15- 100	#14 - #0 Al/Cu	1	.....
TRI-PAC FB (Alternate Aluminum Body Terminals)			
15- 50	#14 - #4 Al/Cu	1	.....
60- 100	#6 - 3/0 Al/Cu	1	.....
TRI-PAC NB (Standard Terminals)			
300- 350	#1 - 600 MCM Cu	1	T350NB
400- 600	3/0 - 500 MCM Cu	2	T700NB
700- 800	3/0 - 400 MCM Cu	3	T1000NB
TRI-PAC NB (Alternate Aluminum Body Terminals)			
300- 600	#1 - 500 MCM Al/Cu	2	TA700NB
700- 800	3/0 - 400 MCM Al/Cu	3	TA1000NB

TRI-PAC PB
Primarily used for bus bar connection.

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000**: Symmetrical.
③ Based on NEMA test procedures. U/L Listed I. C. is 100,000 amps. sym. at 240, 480 or 600 volts.

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Low Voltage Breaker Division, Beaver, Pa. 15009
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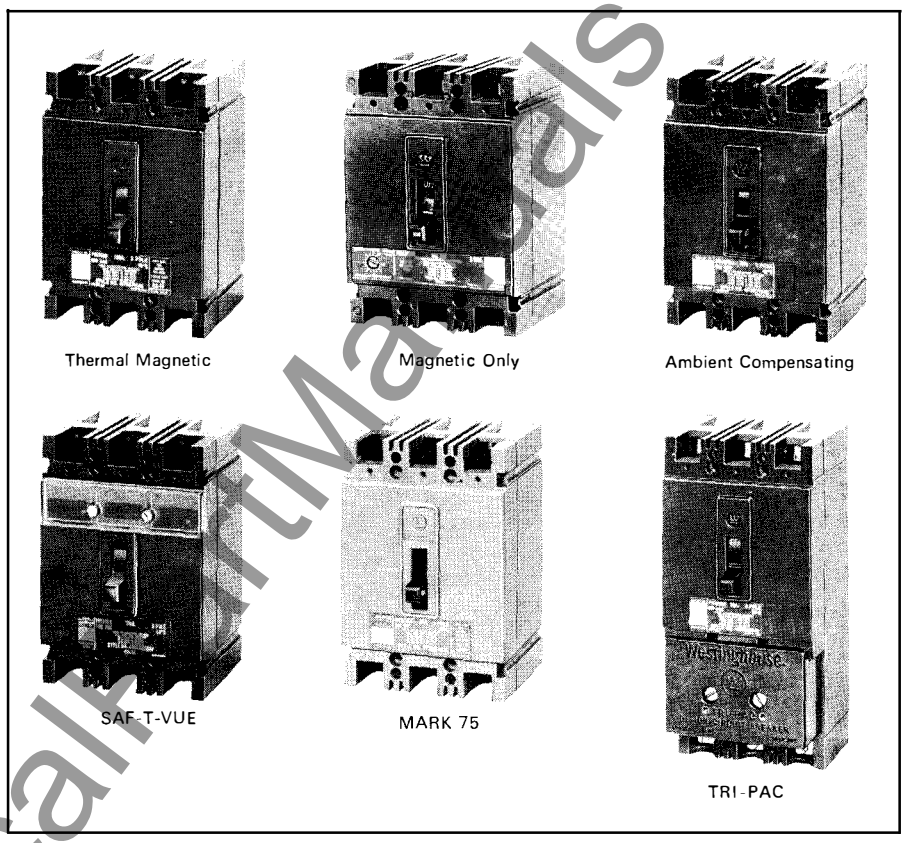

Typical Specifications for Molded Case Circuit Breakers

Electrical circuits shall be protected by molded case circuit breakers as manufactured by Westinghouse Electric Corporation, or an approved equal.

Each pole of these breakers shall provide inverse time delay and instantaneous circuit protection.

The breakers shall be operated by a toggle type handle and shall have a quick-make, quick-break over-center switching mechanism that is mechanically trip free from the handle so that the contacts cannot be held closed against short circuits and abnormal currents. Tripping due to overload or short circuit shall be clearly indicated by the handle automatically assuming a position midway between the manual ON and OFF positions. All latch surfaces shall be ground and polished. All poles shall be so constructed that they open, close and trip simultaneously.

Breakers must be completely enclosed in a molded case. Non-interchangeable trip breakers shall have their covers sealed; interchangeable trip breakers shall have the trip unit sealed to prevent tampering. Ampere ratings shall be clearly visible. Contacts shall be of non-welding silver alloy. Arc extinction must be accomplished by means of DE-ION® arc chutes, consisting of metal grids mounted in an insulating support.

The minimum interrupting ratings of the circuit breakers shall be at least equal to the available short circuit at the line terminals.

Circuit breakers shall be listed with Underwriters' Laboratories, Inc. (where procedures exist), conform to the applicable requirements of NEMA Standards Publication No. AB 1-1969, and meet the appropriate classifications of Federal Specifications W-C-375a.

Circuit breaker ratings, modifications, etc. shall be as indicated on the drawings.

Molded case circuit breakers shall be of the:

1. **Thermal magnetic standard or MARK 75® type** that provides inverse time delay overload and instantaneous short circuit protection by means of a thermal magnetic element.

2. **Magnetic only standard** that provides instantaneous only short circuit protection by means of a front adjustable magnetic only element. The adjustment button ('s) shall have main setting points and mid-setting points following a linear scale so that each point has a significant value within calibration tolerances.

3. **Ambient compensating standard** that provides inverse time delay overload and instantaneous short circuit protection by means of a thermal magnetic element. Compensation shall be accomplished by a secondary bimetal that will allow the breaker to carry rated current between 25°C and 50° with tripping characteristics that are approximately the same throughout this temperature range

(All of the above breakers are available as SAF-T-VUE® breakers, with the exception of MARK 75 breakers, and if required, suffix the following to the appropriate type. "A transparent window made of clear heat resisting thermoplastic shall be inserted into the cover to permit easy viewing of the contacts.")

4. **TRI-PAC® type** that combines time delay thermal trip protection, instantaneous magnetic trip protection and current limiting protection in one complete assembly. The above protective actions shall be so coordinated that overcurrents will be cleared by the thermal action; short circuits of relatively low magnitude will be cleared by the magnetic action; and high fault currents above a predetermined point will be cleared by the current limiters. The current limiters shall not be affected when the thermal and/or magnetic trip functions to clear the circuit. Regardless of which tripping device serves to clear the circuit, all poles of the breaker shall simultaneously open automatically.

The breaker must not be resettable until current limiters which have functioned have been replaced and the cover refastened. The current limiters shall have a visual means to determine which one has operated and requires replacement when the cover is removed.

On breakers with interchangeable, thermal, adjustable magnetic trip, the accessibility and position of the adjustment knob shall not be changed from those on the standard breaker.

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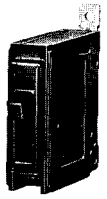
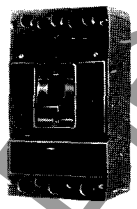
Commercial Line Breakers Thermal Magnetic

Type Breaker		Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Poles	Approximate Dimensions, Inches H	W	D
Quicklag P 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 10,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
			5,000 **10,000** (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	2⅞	3	2⅜
Quicklag B 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
			5,000 (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	2⅞	3	2⅜
Quicklag C 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip		120/240 (1, 2 Poles)	5,000 10,000 (120/240)	.....	.....	.....	1	3¾	1	2 7/16
			5,000 **10,000** (120/240)	.....	.....	.....	2	3¾	2	2 7/16
		240 (2, 3 Poles)	10,000 **10,000** (240)	.....	.....	.....	3	3¾	3	2 7/16
CA 225 Amps. Max. 2, 3 Poles Non Interchangeable Trip		240	10,000	.....	.....	.....	2	6½	2¾	2 1/16
			10,000	.....	.....	.....	3	6½	4⅛	2 1/16
DA 400 Amps. Max. 2, 3 Poles Non Interchangeable Trip		240	25,000	.....	.....	**10,000** 250 Volts	2	10⅛	5½	4 1/16
			22,000	.....	.....		3	10⅛	5½	4 1/16

Industrial Line Breakers

BA 1, 2, 3 Poles Non Interchangeable Trip 100 Amps. Max. (120/240, 240 Volts) 30 Amps. Max. (277 Volts)		120/240 (1, 2 Poles)	10,000 (120/240)	.....	.....	.....	1	2⅞	1	2⅜
		240 (2, 3 Poles)	**10,000** (120/240)	.....	.....	.....	2	2⅞	2	2⅜
		277 (1-Pole)	10,000 **10,000** (240)	.....	.....	.....	3	2⅞	3	2⅜
			10,000 **10,000** (277)	.....	.....	.....	1 (277V)	3⅛	1	2 13/16

Breaker Terminal Data

All breakers listed have pressure-type terminals except 5 to 30 ampere ratings of types QP, QB, QC and BA 120/240 volt and 240 volt which have binding screw-type terminals. 277 volt BA has pressure-type terminals. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables
QP, QB, QC, BA (120/240, 240 Volts)		
5- 30	#14 – #8 Cu	1
35- 70	#14 – #2 Al/Cu	1
90-100	# 6 – #1 Al/Cu	1
BA (277 Volts)		
15- 30	#14 – #6 Al/Cu	1
CA		
125-175	# 1 – 4/0 Al/Cu	1
200-225	2/0 – 300 MCM Al/Cu	1
DA (Standard Terminals)		
250-350	250 – 500 MCM Cu	1
400	3/0 – 4/0 Cu	2
DA (Alternate Aluminum Body Terminals)		
250-350	250 – 500 MCM Al/Cu	1
400	3/0 – 250 MCM Al/Cu	2

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000:** Symmetrical.

August, 1971
Supersedes Specification Data 29-180, pages 1-2, dated October, 1968
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AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

Industrial Line Breakers, *Continued* Available as Thermal Magnetic, Magnetic Only, Ambient Compensating, SAF-T-VUE®

Type Breaker	Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Approximate Dimensions, Inches Poles	H	W	D
EB 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip	240③	10,000	.....	.....	**5,000** 125/250 V Dc	1	6	1⅜	3⅜
						2	6	2¾	3⅜
		10,000	.....	.....		3	6	4⅛	3⅜
EHB 100 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip	480④	20,000	15,000	.....	**10,000** 250 V Dc	1	6	1⅜	3⅜
						2	6	2¾	3⅜
		18,000	**14,000**	.....		3	6	4⅛	3⅜
FB 150 Amps. Max. 2, 3 Poles Non Interchangeable Trip	600	20,000	15,000	15,000	**10,000** 250 V Dc	2	6	2¾	3⅜
		18,000	**14,000**	**14,000**		3	6	4⅛	3⅜
JA 225 Amps. Max. 2, 3 Poles Non Interchangeable Trip **KA** 225 Amps. Max. 2, 3 Poles Interchangeable Trip	600	30,000	25,000	25,000	**10,000** 250 V Dc	2	10⅛	5½	4 1⅛₆
		25,000	**22,000**	**22,000**		3	10⅛	5½	4 1⅛₆
LAB 400 Amps. Max. 2, 3 Poles Non Interchangeable Trip **LA** 600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000	**10,000**① 250 V Dc	2	10¾	8¼	4 1⅛₆
		42,000	**30,000**	**22,000**		3	10¾	8¼	4 1⅛₆
MA 800 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000	**10,000**① 250 V Dc	2	16	8¼	4 1⅛₆
		42,000	**30,000**	**22,000**		3	16	8¼	4 1⅛₆
NB 1200 Amps. Max. 2, 3 Poles Interchangeable Trip	600	50,000	35,000	25,000		2	16	8¼	5½
		42,000	**30,000**	**22,000**		3	16	8¼	5½

Breaker Terminal Data

All breakers listed have pressure-type terminals. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
EB, EHB, FB (Standard Terminals)			
10- 100	#14 - #0 Al/Cu	1	.....
125- 150	# 6 - 3/0 Al/Cu	1	.....
EB, EHB, FB (Alternate Aluminum Body Terminals)			
10- 50	#14 - #4 Al/Cu	1	.....
60- 100	# 6 - 3/0 Al/Cu	1	.....
JA, KA			
70- 225	#6 - 350 MCM Cu	1	T225LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
LAB, LA			
70- 225	#6 - 350 MCM Cu	1	T225LA
250- 400	3/0 - 600 MCM Cu and #4 - 250 MCM Cu	1 ea.	T401LA
500- 600	250 - 500 MCM Cu	2	T600LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
250- 400	#3/0 - 600 MCM Al/Cu and #4 - 250 MCM Al/Cu	1 ea.	TA400LA1
500- 600	250 - 500 MCM Al/Cu	2	TA600LA
MA			
125- 350	#1 - 600 MCM Cu	1	T350MA
400- 600	3/0 - 500 MCM Cu	2	T601MA
700- 800	3/0 - 350 MCM Cu	3	T800MA
125- 600	#1 - 500 MCM Al/Cu	2	TA700MA
700- 800	3/0 - 400 MCM Al/Cu	3	TA800MA1
NB (Standard Terminals)			
700-1000	3/0 - 400 MCM Cu	3	T1000NB
1100-1200	300 - 500 MCM Cu	4	T1200NB
NB (Alternate Aluminum Body Terminals)			
700-1000	3/0 - 400 MCM Al/Cu	3	TA1000NB
1100-1200	3/0 - 500 MCM Al/Cu	4	TA1200NB
1100-1200	500 - 750 MCM Al/Cu	3	TA1201NB

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000**: Symmetrical.
③ 1 pole rated at 120 volts Ac with 10,000 amps I. C.
④ 1 pole rated at 277 volts Ac with 15,000 amps asym.; 14,000 amps sym. I. C.

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Low Voltage Breaker Division, Beaver, Pa. 15009
Printed in USA

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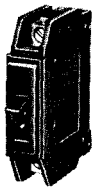
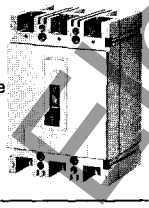
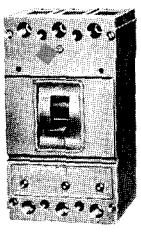
AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

Industrial Line Breakers, *Continued* Available as Thermal Magnetic, Magnetic Only, Ambient Compensating, SAF-T-VUE®

Type Breaker	Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Approximate Dimensions, Inches Poles	H	W	D
 **PB** 2500 Amps. Max. 2, 3 Poles Interchangeable Trip	600	150,000	100,000	75,000		2	22	12	9
		125,000	**85,000**	**65,000**		3	22	12	9
High Interrupting Line Breakers MARK 75®, TRI-PAC®									
 **Mark 75 Quicklag HP** 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip	120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	2⅞	1	2¾
		65,000	.....	.....	.....				
	240 (3 Poles)	75,000	.....	.....	.....	2	2⅞	2	2¾
		65,000	.....	.....	.....				
						3	2⅞	3	2¾
 **Mark 75 HBA** 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip	120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	2⅞	1	2¾
		65,000	.....	.....	.....				
	240 (3 Poles)	75,000	.....	.....	.....	2	2⅞	2	2¾
		65,000	.....	.....	.....				
						3	2⅞	3	2¾
 **Mark 75 Quicklag HC** 30 Amps. Max. 1, 2 Poles 20 Amps. Max. 3 Poles Non Interchangeable Trip	120/240 (1, 2 Poles)	75,000	.....	.....	.....	1	3⅜	1	2⁷⁄₁₆
		65,000	.....	.....	.....				
	240 (3 Poles)	75,000	.....	.....	.....	2	3⅜	2	2⁷⁄₁₆
		65,000	.....	.....	.....				
						3	3⅜	3	2⁷⁄₁₆
 **MARK 75 HFB** 150 Amps. Max. 1, 2, 3 Poles Non Interchangeable Trip	600③	75,000	①30,000	20,000	**10,000**① 250 V Dc	1	6	1¾	3¾
						2	6	4⅛	3¾
		65,000	**①25,000**	**18,000**		3	6	4⅛	3¾
 **MARK 75 HKA** 225 Amps. Max. 2, 3, Poles Interchangeable Trip	600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	10⅛	5½	4⁹⁄₁₆
		65,000	**35,000**	**25,000**		3	10⅛	5½	4⁹⁄₁₆

Breaker Terminal Data

All breakers listed have pressure-type terminals except 15 to 30 ampere ratings of types HP, HC and HBA which have binding screw-type terminals, and the PB which is designed for bus connection. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
PB Primarily used for bus bar connection.			
HP, HC, HBA			
15- 30	#14 - #8 Cu	..	.....
HFB (Standard Terminals)			
10-100	#14 - #0 Al/Cu	1	.....
125-150	#6 - 3/0 Al/Cu	1	.....
HFB (Alternate Aluminum Body Terminals)			
10- 50	#14 - #4 Al/Cu	1	.....
60-100	#6 - 3/0 Al/Cu	1	.....
HKA			
70-225	#6 - 350 MCM Cu	1	T225LA
70-225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000:** Symmetrical.
③ 1 pole breakers are rated as 277 volts Ac with an interrupting rating of 75,000 amps Asym., 65,000 amps Sym. For 15-30 amps; and 30,000 amps Asym., 25,000 amps Sym. for 40-100 amps.

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AB De-ion® Circuit Breakers

Breaker Selection Guide

Maximum Voltage and Ampere Ratings
Interrupting Capacities, Dimensions,
Terminal Data

High Interrupting Line Breakers *Continued* MARK 75®, TRI-PAC®

Type Breaker	Maximum Voltage, Ac	Interrupting Ratings by Voltage② 240 Ac	480 Ac	600 Ac	Dc	Approximate Dimensions, Inches Poles	H	W	D
MARK 75 HLA 600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	10¾	8¼	4 1/16
		65,000	**35,000**	**25,000**		3	10¾	8¼	4 1/16
MARK 75 HMA 800 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000	**10,000**① 250 V Dc	2	16	8¼	4 1/16
		65,000	**35,000**	**25,000**		3	16	8¼	4 1/16
MARK 75 HNB 1200 Amps. Max. 2, 3 Poles Interchangeable Trip	600	75,000	40,000	30,000		2	16	8¼	5½
		65,000	**35,000**	**25,000**		3	16	8¼	5½
TRI-PAC FB 100 Amps. Max. 2, 3 Poles Non Interchangeable Trip	600	.....	.....	.....		2	8¾	4⅛	3½
		200,000	**200,000**	**200,000**		3	8¾	4⅛	3½
TRI-PAC LA 400 Amps. Max. 2, 3 Poles Interchangeable Trip	600	.....	.....	.....		2	16	8¼	4¾
		200,000	**200,000**	**200,000**		3	16	8¼	4¾
TRI-PAC NB 800 Amps. Max. 2. 3 Poles Interchangeable Trip	600	.....	.....	.....		**2**	22	8¼	5½
		200,000	**200,000**	**200,000**③		3	22	8¼	5½
TRI-PAC PB 1600 Amps. Max. 2, 3 Poles Interchangeable Trip	600	.....	.....	.....		2	22	12	9
		200,000	**200,000**	**200,000**		3	22	12	9

Breaker Terminal Data

All breakers listed have pressure-type terminals except TRI-PAC PB which is designed for bus connection. Wire ranges given are Underwriters' Laboratories, Inc. listed.

Ampere Rating	Wire Range and Type	No. of Cables	Terminal Cat. No.
HLA, TRI-PAC LA			
70- 225	#6 - 350 MCM Cu	1	T225LA
250- 400	3/0 - 600 MCM Cu and #4 - 250 MCM Cu	1 ea	T401LA
500- 600	250 - 500 MCM Cu	2	T600LA
70- 225	#6 - 350 MCM Cu or #4 - 350 MCM Al	1	TA225LA1
250- 400	3/0 - 600 MCM Al/Cu and #4 - 250 MCM Al/Cu	1 ea.	TA400LA1
500- 600	250 - 500 MCM Al/Cu	2	TA600LA
HNB (Standard Terminals)			
700-1000	3/0 - 400 MCM Cu	3	T1000NB
1100-1200	300 - 500 MCM Cu	4	T1200NB
HNB (Alternate Aluminum Body Terminals)			
700-1000	3/0 - 400 MCM Al/Cu	3	TA1000NB
1100-1200	3/0 - 500 MCM Al/Cu	4	TA1200NB
1100-1200	500 - 750 MCM Al/Cu	3	TA1201NB
TRI-PAC FB (Standard Terminals)			
15- 100	#14 - #0 Al/Cu	1	.....
TRI-PAC FB (Alternate Aluminum Body Terminals)			
15- 50	#14 - #4 Al/Cu	1	.....
60- 100	#6 - 3/0 Al/Cu	1	.....
TRI-PAC NB (Standard Terminals)			
300- 350	#1 - 600 MCM Cu	1	T350NB
400- 600	3/0 - 500 MCM Cu	2	T700NB
700- 800	3/0 - 400 MCM Cu	3	T1000NB
TRI-PAC NB (Alternate Aluminum Body Terminals)			
300- 600	#1 - 500 MCM Al/Cu	2	TA700NB
700- 800	3/0 - 400 MCM Al/Cu	3	TA1000NB

TRI-PAC PB
Primarily used for bus bar connection.

① Changed or added since previous issue.
② Ratings shown 5,000: Asymmetrical; ratings shown **5,000**: Symmetrical.
③ Based on NEMA test procedures. U/L Listed I. C. is 100,000 amps. sym. at 240, 480 or 600 volts.

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Low Voltage Breaker Division, Beaver, Pa. 15009
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AB De-ion® Circuit Breakers

Typical Specifications for Molded Case Circuit Breakers

Electrical circuits shall be protected by molded case circuit breakers as manufactured by Westinghouse Electric Corporation, or an approved equal.

Each pole of these breakers shall provide inverse time delay and instantaneous circuit protection.

The breakers shall be operated by a toggle type handle and shall have a quick-make, quick-break over-center switching mechanism that is mechanically trip free from the handle so that the contacts cannot be held closed against short circuits and abnormal currents. Tripping due to overload or short circuit shall be clearly indicated by the handle automatically assuming a position midway between the manual ON and OFF positions. All latch surfaces shall be ground and polished. All poles shall be so constructed that they open, close and trip simultaneously.

Breakers must be completely enclosed in a molded case. Non-interchangeable trip breakers shall have their covers sealed; interchangeable trip breakers shall have the trip unit sealed to prevent tampering. Ampere ratings shall be clearly visible. Contacts shall be of non-welding silver alloy. Arc extinction must be accomplished by means of DE-ION® arc chutes, consisting of metal grids mounted in an insulating support.

The minimum interrupting ratings of the circuit breakers shall be at least equal to the available short circuit at the line terminals.

Circuit breakers shall be listed with Underwriters' Laboratories, Inc. (where procedures exist), conform to the applicable requirements of NEMA Standards Publication No. AB 1-1969, and meet the appropriate classifications of Federal Specifications W-C-375a.

Circuit breaker ratings, modifications, etc. shall be as indicated on the drawings.

Molded case circuit breakers shall be of the:

1. **Thermal magnetic standard or MARK 75® type** that provides inverse time delay overload and instantaneous short circuit protection by means of a thermal magnetic element.

2. **Magnetic only standard** that provides instantaneous only short circuit protection by means of a front adjustable magnetic only element. The adjustment button ('s) shall have main setting points and mid-setting points following a linear scale so that each point has a significant value within calibration tolerances.

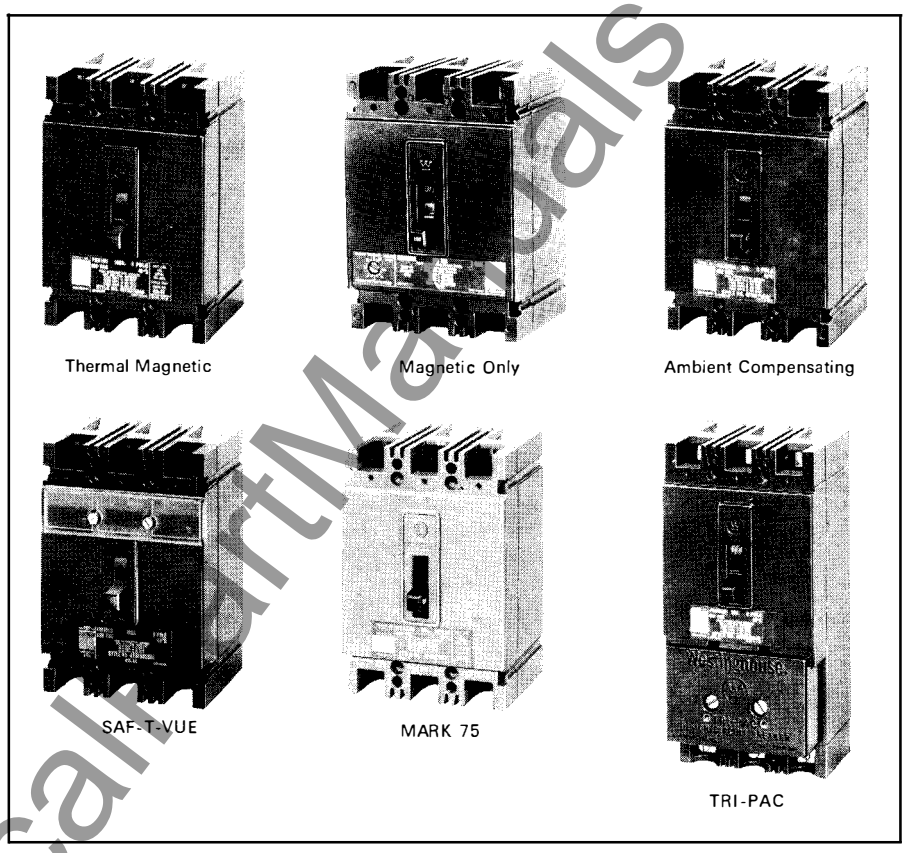
3. **Ambient compensating standard** that provides inverse time delay overload and instantaneous short circuit protection by means of a thermal magnetic element. Compensation shall be accomplished by a secondary bimetal that will allow the breaker to carry rated current between 25°C and 50° with tripping characteristics that are approximately the same throughout this temperature range.

(All of the above breakers are available as SAF-T-VUE® breakers, with the exception of MARK 75 breakers, and if required, suffix the following to the appropriate type. "A transparent window made of clear heat resisting thermoplastic shall be inserted into the cover to permit easy viewing of the contacts.")

4. **TRI-PAC® type** that combines time delay thermal trip protection, instantaneous magnetic trip protection and current limiting protection in one complete assembly. The above protective actions shall be so coordinated that overcurrents will be cleared by the thermal action; short circuits of relatively low magnitude will be cleared by the magnetic action; and high fault currents above a predetermined point will be cleared by the current limiters. The current limiters shall not be affected when the thermal and/or magnetic trip functions to clear the circuit. Regardless of which tripping device serves to clear the circuit, all poles of the breaker shall simultaneously open automatically.

The breaker must not be resettable until current limiters which have functioned have been replaced and the cover refastened. The current limiters shall have a visual means to determine which one has operated and requires replacement when the cover is removed.

On breakers with interchangeable, thermal, adjustable magnetic trip, the accessibility and position of the adjustment knob shall not be changed from those on the standard breaker.



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