



nofuze De-ion[®] circuit breakers

enclosed • type AB-I

descriptive
bulletin

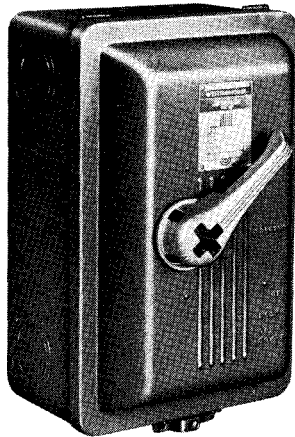
30-230

page 1

amperes: 15 to 600

maximum voltage: 600 v a-c • 250 v d-c

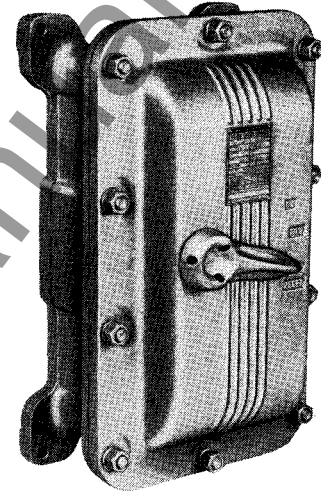
dust resisting



water and dust tight



for hazardous locations



application

Westinghouse type AB-I enclosed circuit breakers are used for the protection of conductors from the effects of sustained overloads and short circuits. Industrial plant, commercial building, apartment and house circuits can be protected with circuit breakers with current ratings from 15 to 600 amperes and voltage ratings to 600 volts a-c or 250 volts d-c as shown on pages 2 and 3.

Choice of enclosure is dictated by the environment in which the circuit breaker will be used. The three major requirements, as portrayed above, are: dust resisting, water or dust tight, hazardous location service. This choice of enclosure is thoroughly covered on page 2.

For service entrance applications, Westinghouse offers AB-I breakers as shown on page 8. Non-automatic enclosed circuit interrupters are not equipped with thermal or magnetic trip elements and are intended for high capacity manual switching applications. These devices are also shown on page 8.

advantages

low maintenance costs: Eliminates calls to replace fuses. Quick-make—quick-break mechanism and De-ion arc quenchers reduces burning of contacts—increases contact life.

low watts loss: Silver alloy contacts and welded connections provide low resistance and eliminate high resistance caused by riveted and bolted joints of fusible equipment.

accuracy: Each breaker pole is given three calibration tests in a controlled atmosphere to insure maximum accuracy. Complete breaker is given an insulation test to insure maximum dielectric strength.

motor protection: Overload on any pole opens all poles—minimizing the possibility of single phasing polyphase motors. The breaker cannot be held closed under fault conditions.

operates in any position: Breakers operate independent of gravity and maintain service when mounted in any position.

compactness: Mounting space and weight requirements are much less than for fusible devices.

inverse time-delay protection: Circuit breakers have a sufficient thermal capacity by virtue of their bimetallic action to prevent tripping on harmless overloads.

August, 1954

supersedes descriptive bulletin 30-230, pages 1 to 8, dated October, 1948
mailed to: E42-5H; D63-5D; C26-5B

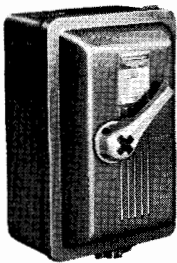


enclosures



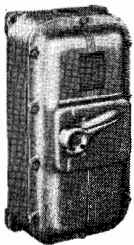
NEMA 1

sheet steel, surface mounting: The general purpose AB-I is designed for use in commercial buildings, apartments and other such applications. Available in E, F and J frame sizes. Breaker handle can be locked in either "on" or "off" position. See page 8 for complete details.



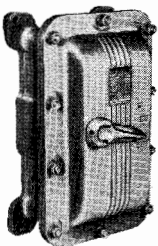
NEMA 1A

dust resisting, surface mounting: This standard sheet steel enclosure is for general purpose indoor applications. Dust-resistant by virtue of neoprene gasket with screw-down cover. Available in all breaker types and ranges from 15 amperes through 600 amperes, see page 4. Also available in NEMA 12, see page 9 for complete description.



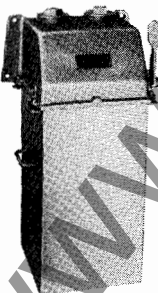
NEMA 3, 4, 5

water and dust tight: Enclosure is cast iron with an iron oxide primer and a sprayed on aluminum finish. Machined fit between handle shaft and bushings; heavy rubber gasket between case and cover. Available in all sizes and ratings. See page 5 for complete description.



NEMA 7, 9

hazardous location, class I, group D; class II, groups E, F, G: Modular cast iron enclosure with wide, ground fit flange to prevent arcing inside enclosure from igniting outside atmospheres. Used in atmosphere containing benzol, naphtha, acetone, lacquer and other explosive vapors and combustible dusts. See page 6.



NEMA 8, 11

oil-immersed: Cast iron head and boiler plate tank. For use in corrosive or hazardous atmospheres such as found in oil refineries, chemical plants, paper and cement mills. Magnetic trip only in F, G, K, and L-frames. See page 7.

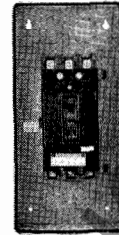
breakers

E



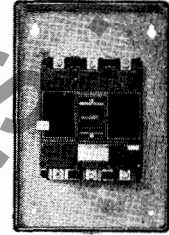
100 ampere

F



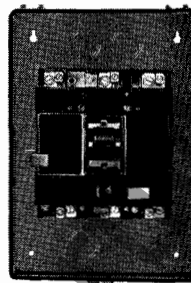
100 ampere

G



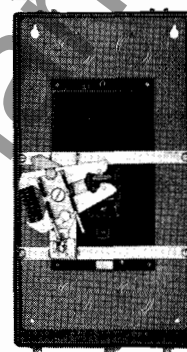
100 ampere

J



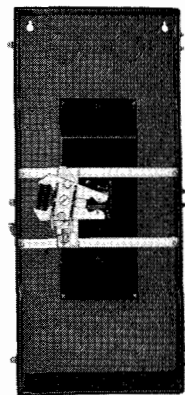
225 ampere

K



225 ampere

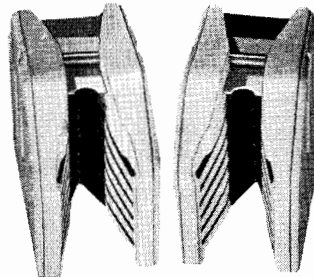
L



600 ampere

breaker features

De-ion[®] arc quenchers



This Westinghouse development consists of a series of grid plates mounted in parallel between supports of insulating material. The slots in the steel plates extend directly over the contacts; draw the arc from the moving contact up into the divided chamber. The arc is thus segmented and extinguished in approximately 1/2 cycle.

breaker operation

Westinghouse AB-I circuit breakers cannot be "teased" and will operate only with handle in ON position. When tripped, handle assumes center position and must first be moved to RESET then back to ON to restore service. Handle can be padlocked at OFF position for added machinery and personnel protection. Cover cannot be opened until handle is at proper labeled position below OFF and RESET. Handle position shows exact circuit breaker status at all times.

nofuze De-ion circuit breakers enclosed • type AB-I

descriptive
bulletin

30-230

page 3

amperes: 15 to 600

maximum voltage: 600 v a-c • 250 v d-c

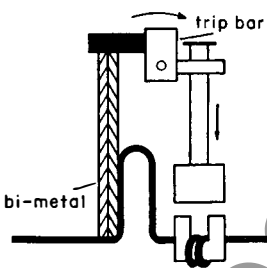
ampere range	frame	no. of poles	voltages		amps—interrupting ratings			type of trip element	enclosures available (NEMA types)
			a-c	d-c	under-writers' listing	Westinghouse ratings+ based on NEMA test procedures			
						241 v a-c to 600v a-c	240 v a-c or less		
15 to 50	E	2 SN	120	125	5,000	10,000	thermal magnetic (non-interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7I, 9, 12
15 to 100	E	2 3	240 240	125/250 125/250	5,000 5,000	10,000 10,000	thermal magnetic (non-interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7I, 9, 12
15 to 100	F	2 3	600 600	250 ...	10,000 10,000	15,000 15,000	20,000 20,000	combination thermal & magnetic (non-interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7, 8, 9, 11, 12
50 to 100	F	2 3	600 600	250 ...	10,000 10,000	15,000 15,000	20,000 20,000	adjustable magnetic trip only (non-interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7, 8, 9, 11, 12
50 to 100	G	2 3	800 600	250 ...	10,000 10,000	15,000 15,000	20,000 20,000	combination thermal & adjustable magnetic (interchangeable)	NEMA 1A, (3,4,5), 7, 8, 9, 11
70 to 225	J	2 3	600 600	250 ...	10,000 10,000	15,000 15,000	25,000 25,000	combination thermal & adjustable magnetic (non-interchangeable)	NEMA 1, 1B, 1A, 3, 12
70 to 225	K	2 3	600 600	250 ...	10,000 10,000	25,000 25,000	30,000 30,000	combination thermal & adjustable magnetic (interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7, 8, 9, 11
225 to 600	L	2 3	600 600	250 ...	10,000 10,000	25,000 25,000	40,000 40,000	combination thermal & adjustable magnetic (interchangeable)	NEMA 1, 1B, 1A, 3, (3,4,5), 7I, 8, 11, 12

† Class I, group D (type 7) enclosures can be used on class II, groups E, F and G (NEMA 9) applications.

‡ See page 8 for solid neutral and screw-on (and weatherproof) types.

+ Dual interrupting ratings for F, G, J, K, and L.

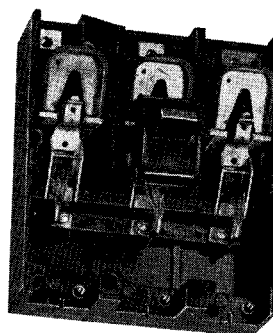
thermal magnetic tripping elements



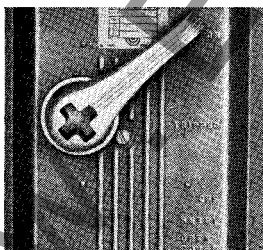
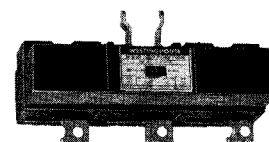
THERMAL-MAGNETIC TRIP

The *thermal* trip utilizes excessive heat from sustained overload at precisely calibrated current level to actuate the bi-metal element. This action releases tripping latch, causing breaker to open. The *magnetic* trip, utilizing current of heavy overload or short circuit fault, energizes the magnetic trip element coil which instantly releases tripping latch. Combination *thermal magnetic* tripping elements are available in all Westinghouse Breakers.

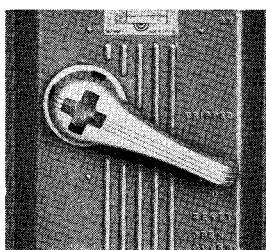
interchangeable trip units



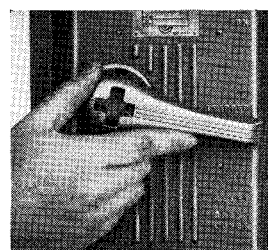
The G, K, and L breakers are equipped with interchangeable trip units. This feature provides commercial or industrial users a maximum flexibility of current ratings within the limits of a given frame size.



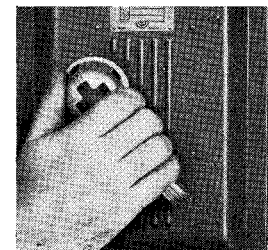
circuit closed and protected—handle ON. Note travel distance to OFF position



circuit open—handle can be locked at OFF with three padlocks while tracing fault



dangerous overload or short-circuit TRIPPED position. Circuit is open



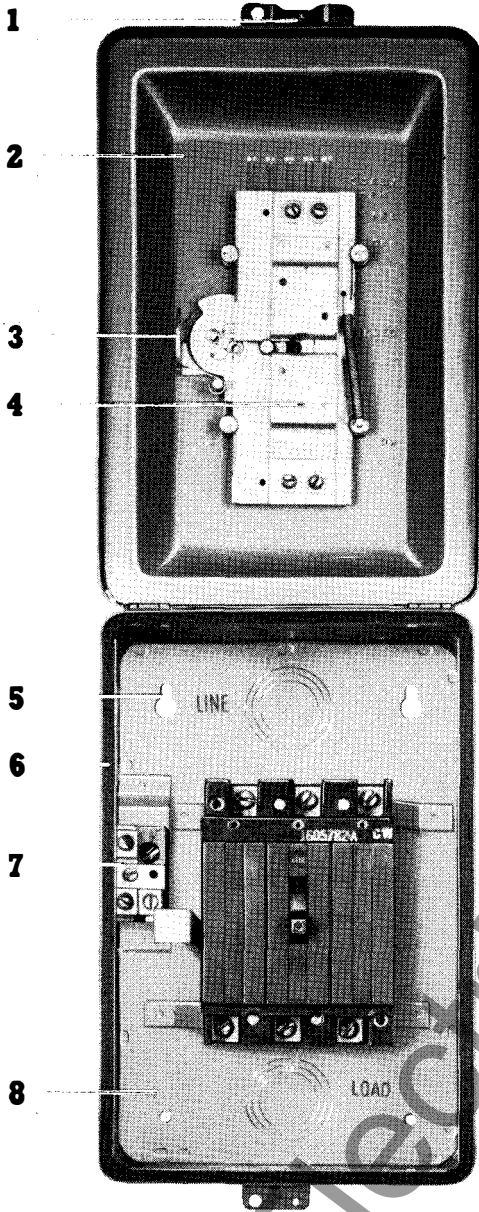
after tripping: pull handle down to RESET—then up to ON to restore service



design features

NEMA 1A

dust resisting, surface mounting



The sheet steel enclosure, designated as NEMA 1A, is the standard of the Westinghouse AB-I De-ion circuit breaker line. It is available in all breaker ratings from the 15 ampere E frame through the 600 ampere L frame. The NEMA 1A is a dust-resisting, semi-dust tight enclosure.

To allow close gang mounting, the cover is top hinged, as shown in the illustration, in all but the 600 ampere frame. The 600 ampere L frame, being too large for top hinging, is hinged at the left side.

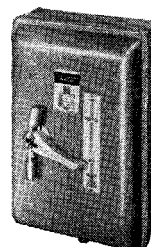
Your Westinghouse distributor stocks a complete line of these circuit breakers and can, in most cases, make immediate shipment. For easy selection of the proper De-ion circuit breaker, see pages 10 and 11.

- 1 **captive screw:** Holds cover firmly against gasket.
- 2 **Bonderizing:** Provides a secure anchor for the final gray enamel finish, minimizing corrosion, improving appearance, and assuring a lasting finish.
- 3 **interlock:** Prevents opening of the cover when the breaker is in the ON position. Interlock release on cover permits inspection of the breaker by authorized personnel without interrupting service.
- 4 **positive handle mechanism:** Prevents improper handle indication when cover is closed. Operating handle position indicates whether the breaker is ON, OFF, or TRIPPED.
- 5 **keyhole type mounting:** Installation is made easier by use of this type of mounting.
- 6 **neoprene gasket:** Between the case and cover makes the enclosure dust resisting. The enclosure will retain its dust resisting properties after extended usage due to the resiliency of the neoprene gasket.
- 7 **insulated groundable neutral:** Can be provided when required.
- 8 **ample wiring space:** For easy access to terminals, plus numerous knock-outs for wiring and simplified installation.

ratings • dimensions • weights

frame size	ampere range	no. poles	dimensions			approx. weight
			width	height	depth	
E 50 ▲	15 to 50	2-3	7 ⁵ / ₁₆	12 ³ / ₄	6 ⁷ / ₁₆	13
E 100 ▲	70 to 100	2-3	8 ¹ / ₂	13 ¹ / ₈	7 ⁷ / ₁₆	16
F 100 ▲	15 to 50	2-3	7 ⁵ / ₁₆	16 ¹ / ₄	7 ³ / ₈	19
F 100 ▲	70 to 100	2-3	8 ⁵ / ₈	18	7 ⁵ / ₈	22
G 100 △	50 to 100	2-3	12	18	7 ⁵ / ₈	33
J 225 ▲	70 to 225	2-3	13 ³ / ₁₆	19 ³ / ₁₆	9 ¹ / ₁₆	33
K 225 △	70 to 225	2-3	14 ⁵ / ₈	27 ⁷ / ₈	11 ¹ / ₂	80
L 600 △	225 to 600	2-3	18 ⁵ / ₈	41 ⁵ / ₈	13 ³ / ₄	184

▲ non-interchangeable trip △ interchangeable trip



Cover can be locked closed by use of a padlock to prevent unauthorized tampering with breaker and to provide added safety. As many as three padlocks may be used to meet rigid safety requirements. The locking cup may be drilled for locking in the ON position, if desired. For NEMA 1 enclosures, see page 8.

nofuze De-ion circuit breakers
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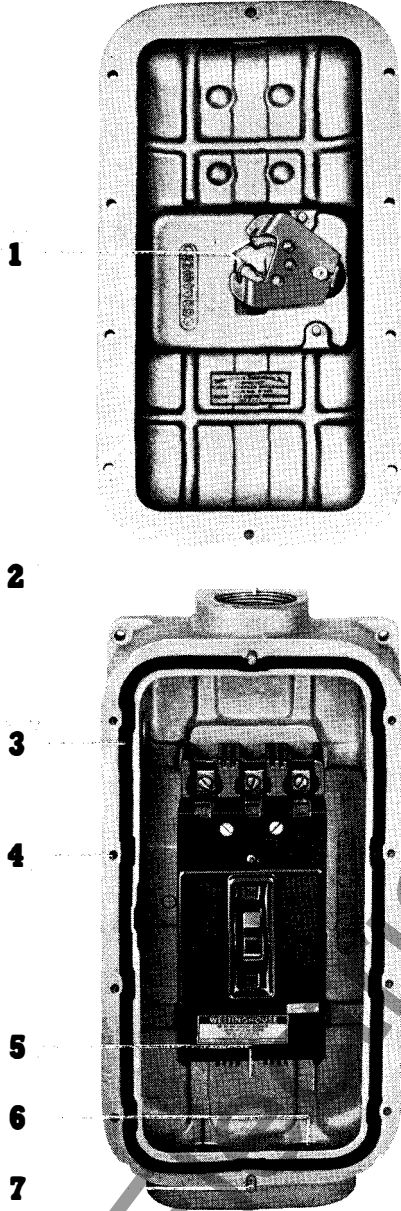
30-230

amperes: 15 to 600
maximum voltage: 600 v a-c • 250 v d-c

page 5

NEMA 3, 4, 5

water and dust-tight



Westinghouse AB-I De-ion circuit breakers for water and dust tight service are of cast iron with a painted aluminum finish. A heavy rubber gasket between enclosure and cover, together with a machined fit between the handle shaft and bushings, make these AB-I's able to withstand rigorous indoor or outdoor service. Not for use in hazardous locations.

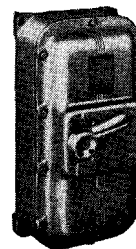
All cast iron enclosures are supplied with standard conduit drilling for each frame size. For smaller openings, a reducer bushing must be used.

- 1 flexible spring fingers:** These fingers prevent the transmission of severe shock to the unit circuit breaker handle.
- 2 tapped openings:** These conduit drillings are provided in top and bottom. Most enclosures may be reversed end for end to provide desired conduit openings. See Dimension Sheet 30-230 for complete information.
- 3 neoprene rubber gasket:** This heavy barrier between the case and cover excludes water and dust.
- 4 tapped holes:** These are for silicon bronze bolts, which are furnished as standard because of their high tensile strength and weather resistant properties.
- 5 ample wiring space:** Room for easy wiring saves installation time.
- 6 casting core:** For conduit in the top and bottom. Has lips at the inside edges to eliminate the need for bushings.
- 7 alignment studs:** These studs on top and bottom of box guarantee proper alignment of cover.

ratings • dimensions • weights

frame size	ampere range	no. poles	dimensions			approx. weight
			width	height	depth	
E 50 ▲	15 to 50	1-2	5¾	9⅞	5¾	22
E 50 ▲	15 to 50	3	9⅞	9⅞	6⅞	29
F 100 ▲	15 to 50	2-3	8¾	16½	7⅞	61
F 100 ▲	70 to 100	2-3	8¾	18⅞	7¾	64
G 100 ▲	50 to 100	2-3	12⅞	19⅞	7⅞	95
K 225 ▲	70 to 225	2-3	17	30	9¾	210
L 600 ▲	225 to 600	2-3	23½	47	19¾	750

▲ non-interchangeable trip △ interchangeable trip



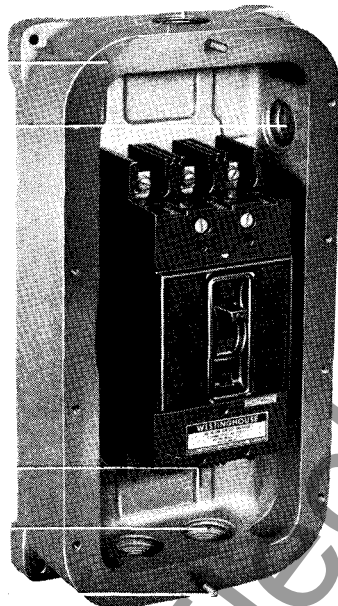
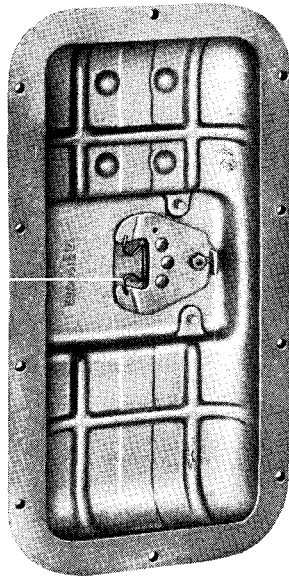
NEMA 3, 4, and 5 enclosure available for all frames and sizes. Enclosures for G and K frame breakers are provided with studs on top and bottom for easy alignment of cover and case when the cover is being replaced. L frame enclosure is hinged at the side to facilitate alignment.



design features

NEMA 7, 9

hazardous location



NEMA Class I, Group D locations are those with atmospheres containing gasoline, naphtha, petroleum, benzol, alcohol, acetone, lacquer, solvent vapors and natural gas. The enclosures are approved for use in these atmospheres.

Class II, Groups E, F, and G differ from the above in that in place of vapors, etc., the hazard is from a suspension of explosive or combustible dusts. This class of enclosure must also be used where large quantities of combustible dust collects to cause overheating of electrical devices through loss of normal radiation.

Class II enclosures are similar in construction and operation to those AB-I's used in water and dust-tight service. The exception is that the lips of the cast iron cover and case are wider and are ground fit instead of being gasketed. Enclosures are aluminum spray painted finish.

- 1 **flexible spring fingers:** To prevent the transmission of severe shock to the breaker handle.
- 2 **conduit drilling:** Those cast enclosures having a different number of conduit drillings in the top and bottom may be reversed end for end, when desired. Side conduit drilling is available in some enclosures. Refer to Dimension Sheet 30-230 for complete information.
- 3 **machine ground flanges:** Accurate machining of flanges and close fitting handle shaft bearing prevent internal arcing from igniting the outside atmosphere.
- 4 **tapped holes:** These are for silicon bronze bolts, which are furnished as standard because of their high tensile strength and corrosive resistant properties.
- 5 **ample wiring space:** Room for easy wiring saves installation time.
- 6 **tapped openings:** For conduit in the top and bottom. Has lips at the inside edges to eliminate the need for bushings. Conduit drilling through casting core to allow for sufficient threads to meet requirements for installation of AB-I in explosive atmospheres.
- 7 **alignment studs:** These studs on top and bottom of box guarantee proper alignment of cover.

ratings • dimensions • weights

frame size	ampere range	no. poles	dimensions • NEMA 7			approx. weight	dimensions • NEMA 9			approx. weight
			width	height	depth		width	height	depth	
E 50▲	15 to 50	1-2	6 ⁵ / ₁₆	10 ³ / ₁₆	6	31	5 ³ / ₁₆	9 ⁷ / ₁₆	5 ³ / ₁₆	30
E 50▲	15 to 50	3	9 ⁵ / ₁₆	11 ³ / ₁₆	7 ¹ / ₁₆	61	9 ³ / ₁₆	9 ⁵ / ₁₆	6 ⁷ / ₁₆	31
F 100▲	15 to 50	2-3	9 ⁷ / ₁₆	16 ¹³ / ₁₆	7 ³ / ₁₆	128	8 ³ / ₁₆	16 ¹ / ₂	7 ¹¹ / ₃₂	60
F 100▲	70 to 100	2-3	9 ⁷ / ₁₆	19 ¹ / ₁₆	8 ³ / ₁₆	128	8 ³ / ₁₆	18 ⁵ / ₁₆	7 ⁷ / ₁₆	61
G 100△	50 to 100	2-3	15 ³ / ₁₆	20 ³ / ₁₆	7 ⁷ / ₁₆	215	12 ¹³ / ₁₆	19 ⁵ / ₁₆	7 ¹ / ₁₆	100
K 225△	70 to 225	2-3	20 ¹ / ₂	30 ¹ / ₂	14 ⁷ / ₈	455	17	30	9 ⁵ / ₁₆	220
L 600△	225 to 600	2-3	23 ¹ / ₂	47	19 ³ / ₁₆	845	23 ¹ / ₂	47	19 ³ / ₁₆	845

▲ non-interchangeable trip △ interchangeable trip



NEMA 7 at left has wider flange than the NEMA 9 enclosure above. Note absence of gasket—which is found only in NEMA 3, 4 and 5 as shown on page 5.

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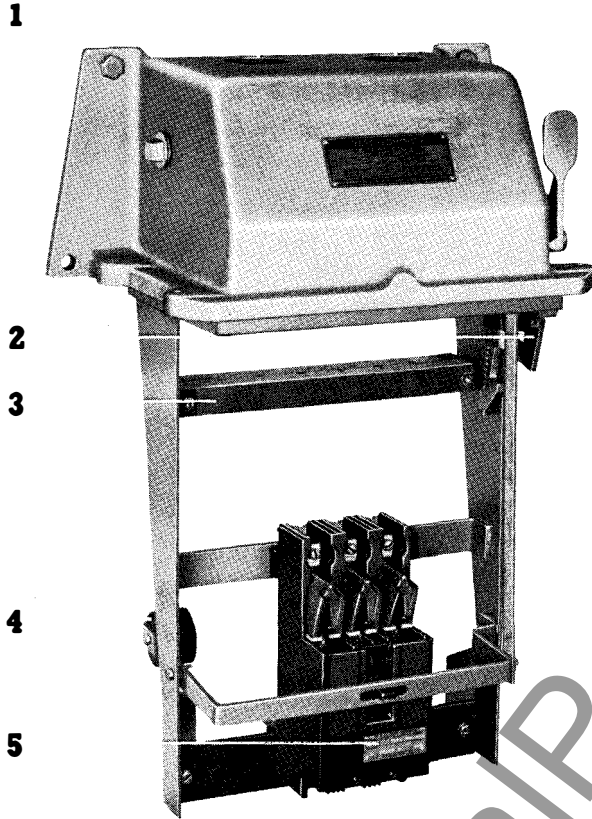
descriptive
bulletin

30-230

page 7

amperes: 15 to 600
maximum voltage: 600 v a-c • 250 v d-c

NEMA 8, 11 **oil-immersed**



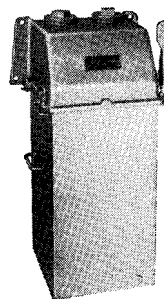
Type AB-I-O oil immersed breakers are designed for use in corrosive (NEMA 11) or hazardous (NEMA 8) atmospheres. Oil refineries, chemical and coke plants, paper and cement mills and similar industries use this type of equipment extensively. The unit breakers used in these AB-I's have an instantaneous magnetic-trip only to provide positive short circuit protection. Available in F, G, K, and L frame ratings —continuous amperes 15 through 600.

- 1 conduit drilling:** Top and back conduit drilling is provided as standard. Side drilling can be furnished if requested. See Dimension Sheet 30-230 for complete information.
- 2 safety interlock:** This added feature is provided to prevent lowering of tank until operating handle is moved to "off" position.
- 3 cable rack:** An important provision to maintain proper alignment of conductors.
- 4 counterweight:** Operating mechanism is counterweighted to provide easier handle operation.
- 5 adjustable magnetic trip:** Magnetic trip of unit breaker can be adjusted to operate under a wide range of surge conditions.

ratings • dimensions • weights

frame size	cont. amp. rating	mag. trip set-amperes ♦	dimensions			approx. weight
			width	height	depth	
F	100	450 to 1200	18	27¼	10	142
G	100	650 to 2200	18	27¼	10	148
K	225	600 to 2250	19¼	34⅞	14	260
L	600	1100 to 4000	19¼	41⅞	14	298

♦ magnetic trip adjustable in this range. 2 pole breakers also available.



It is recommended that a six-inch head of WEMCO "C" oil be maintained above the circuit breaker. An indicating oil level gauge is provided as standard.



general purpose

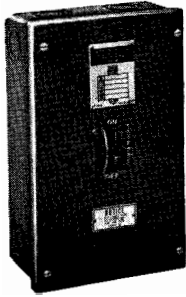
special service

NEMA 1 • surface mount

NEMA 1 • surface mount

NEMA 1B • flush mount

without
pilot
light



The commercial line of AB-I breakers is primarily intended for use in such applications as hospitals, schools, apartment buildings, and other commercial type structures. This device consists essentially of a NEMA 1 enclosure with a Westinghouse type AB unit breaker in **E**, **F** and **J** frame size. Provisions are made for locking the breaker handle in either the ON or OFF position. See page 9 for outline dimensions and weights.

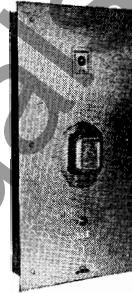
with
pilot
light



An additional NEMA 1 AB-I breaker is available with an auxiliary flap cover which can be sealed or locked to prevent operation by unauthorized persons.

In addition, a pilot light on the cover indicates whether the breaker is "on" or "off". Up to and including 225 amperes, the breakers have an insulated groundable neutral. Figure 1 in page 9 is also applicable to this style for dimensions and weights.

with
pilot
light



Intended for the same service usages as both styles of NEMA 1 AB-I breakers at the left, the flush mounting NEMA 1B with pilot light completes the line of sheet steel enclosures.

The NEMA 1B is available in the same ratings and sizes as the surface mounting styles. Dimensions and weights are listed under figure 2 in page 9.

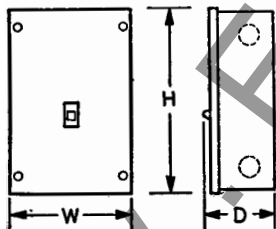
non-automatic circuit interrupters

application: Non-automatic enclosed De-ion circuit interrupters are high capacity switching devices and can be applied for manual control, disconnecting or the interrupting of circuits in industrial plants, commercial buildings, hotels or any other place where non-fusible switches or other non-automatic disconnecting devices are used on highly inductive circuits.

design features: Non-automatics are identical in appearance and design to the standard AB-I circuit breakers described on the preceding pages, with the exception that solid connection straps replace the automatic tripping unit. The interrupter unit is operated by a handle on the front of the enclosure indicating whether the circuit is "on" or "off." Available in all standard enclosures.

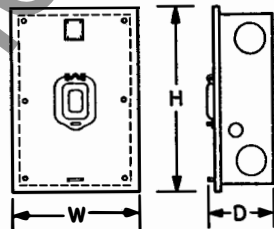
outline dimensions, weights

figure 1



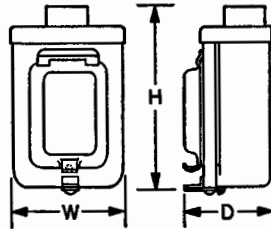
NEMA 1 • surface

figure 2



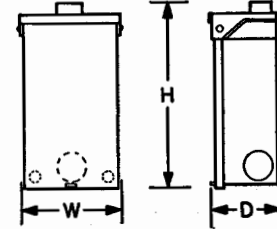
NEMA 1B • flush

figure 3



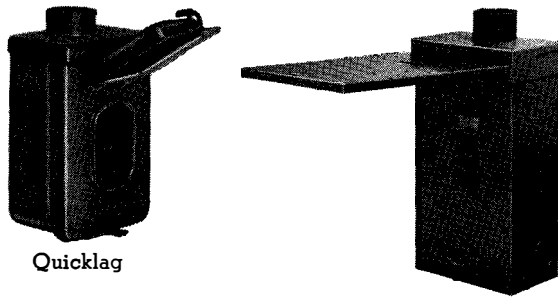
NEMA 3 • Quicklag

figure 4



NEMA 3 • raintight

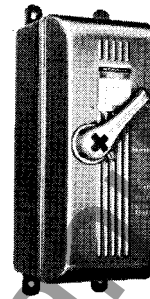
NEMA 3



Quicklag

Westinghouse outdoor service control centers employing the Quicklag breaker or the heavy duty E, F, J, and K frame circuit breakers inside a weatherproof sheet steel NEMA 3 enclosure, serves as main disconnect and overcurrent protection for feeder circuits. These units are listed by Underwriters' Laboratories, Inc. and meet REA requirements as service entrance equipment. The devices are adaptable for farmstead wiring where the meter and service equipment can be mounted on a yard pole.

NEMA 12



The Westinghouse NEMA 12 AB-I breaker is designed for use in special industry applications where unusually severe conditions involving oil, coolant, lint, dust and other foreign material exist in the operating atmosphere. The enclosure is designed in conformance with the Joint Industrial Control Specifications. This enclosure incorporates the Westinghouse slam-proof handle operating mechanism which may be padlocked in either the ON of OFF position with as many as three locks.

frame size	ampere range	number poles	dimensions			approx. wt. lbs.
			width (W)	height (H)	depth (D)	

NEMA 1 • surface mount • figure 1

E 50 ▲	15 to 50	2SN	5 ⁵ / ₈	10 ¹ / ₁₆	4 ¹ / ₄	12
		2	6 ⁷ / ₈	11 ³ / ₈	4 ¹ / ₄	11
		3	7 ⁵ / ₈	11 ³ / ₈	4 ¹ / ₄	14

NEMA 1B • flush mount • figure 2

E 50 ▲	15 to 50	2SN	6 ⁵ / ₈	11 ² / ₃₂	4 ¹ / ₄	12
E	15 to 50	2	8 ¹ / ₈	12 ⁵ / ₈	4 ¹ / ₄	11
E	15 to 50	3	8 ⁷ / ₈	12 ⁵ / ₈	4 ¹ / ₄	14
E 50 ▲	15 to 100	3SN,4SN	8 ⁷ / ₈	14	4 ³ / ₄	14
E 100 ▲	70 to 100	3SN,4SN	8 ⁷ / ₈	18 ³ / ₈	5 ¹ / ₂	17
F 100 ▲	70 to 100	3SN,4SN	8 ⁷ / ₈	18 ³ / ₈	5 ¹ / ₂	20
J 225 ▲	70 to 227	3SN,4SN	14 ¹ / ₁₆	20 ¹ / ₁₆	6 ¹ / ₁₆	53
K 225 ▲	70 to 225	3SN,4SN	13 ⁷ / ₈	29 ³ / ₄	6 ¹ / ₁₆	80
L 600 ▲	225 to 600	3SN,4SN	16 ¹ / ₁₆	39 ² / ₃₂	9	130

▲ non-interchangeable trip △ interchangeable trip

frame size	ampere range	number poles	dimensions			approx. wt. lbs.
			width (W)	height (H)	depth (D)	

NEMA 3 • Quicklag • figure 3

120 v. a-c	1-35	1	4 ¹ / ₁₆	8 ¹ / ₁₆	4 ⁵ / ₁₆	..
			4 ¹ / ₁₆	8 ¹ / ₁₆	4 ⁵ / ₁₆	..
			4 ¹ / ₁₆	8 ¹ / ₁₆	4 ⁵ / ₁₆	..

voltage	ampere range	number poles	dimensions			approx. wt. lbs.
			width (W)	height (H)	depth (D)	

NEMA 3 • raintight • figure 4

E 50 ▲	15 to 50	2,3,3SN,4SN	6 ⁷ / ₈	11 ⁵ / ₈	4 ⁷ / ₈	15
E 100 ▲	70 to 100	2,3,3SN,4SN	7 ¹ / ₄	13 ¹ / ₄	4 ⁷ / ₈	17
F 100 ▲	70 to 100	2,3,3SN,4SN	9 ³ / ₄	17 ¹ / ₄	6	20
J 225 ▲	125 to 225	2,3,3SN,4SN	6 ¹ / ₁₆	21 ¹ / ₁₆	6 ¹ / ₁₆	32
K 225 ▲	125 to 225	2,3,3SN,4SN	12 ³ / ₄	26 ¹ / ₁₆	6 ¹ / ₁₆	70



packaging plan

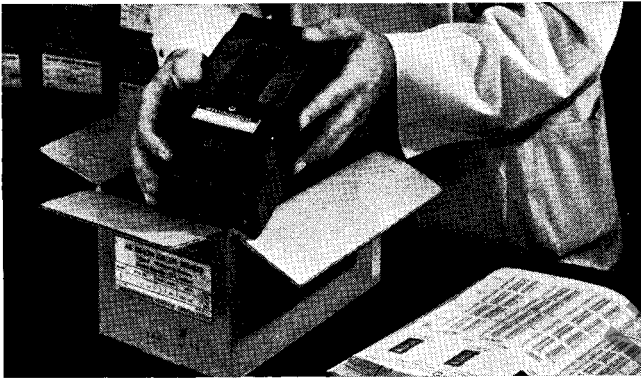
NEMA 1A

Enclosures and breakers are now being packed and stocked as two separate items. This new packaging plan enables Westinghouse to offer a complete line of AB-I enclosed circuit breakers quickly from the shelf. Delivery to meet critical job dates is assured.

Dual packaging speeds installation, eliminates removing the breaker unit from the enclosure in order to run conduit and pull in cable. The breaker unit stays packed until it's ready for mounting, reducing danger of damage or loss in handling.

In addition to Westinghouse AB-I circuit breakers' superior protection, separate packaging offers improved availability and greater convenience.

AB breaker packaged separately



NEMA 1A enclosure packaged separately



selection

From the breaker selection key, first and second columns of selector chart, choose the proper circuit breaker frame size and the ampere rating required. Next, select catalog number from either 2 pole column or 3 pole column, as needed. This catalog number is grouped with the specific breaker and enclosure numbers and is the only information required by your Westinghouse distributor when ordering an AB-I under the new packaging plan.

breaker selection key

when you need this frame size circuit breaker:

with this ampere rating:

E frame

100 ampere
240 volts, a-c
125/250 volts, d-c
25 and 35 ampere ratings on request



15
20
30
40
50
70
90
100

F frame

100 ampere
600 volts, a-c
250 volts, d-c
25 and 35 ampere ratings on request



15
20
30
40
50
70
90
100

F frame

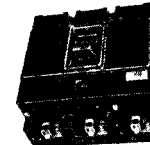
100 ampere
adjust. magnetic trip
600 volts, a-c
125/250 volts, d-c



5
10
25
50
70
100

G frame

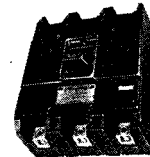
100 ampere
600 volts, a-c
250 volts, d-c



50
70
90
100

J frame

225 ampere
600 volts, a-c
250 volts, d-c



70
90
100
125
150
175
200
225

K frame

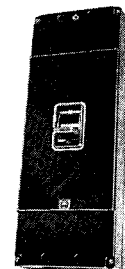
225 ampere
600 volts, a-c
250 volts, d-c



70
90
100
125
150
175
200
225

L frame

600 ampere
600 volts, a-c
250 volts, d-c



225
250
275
300
325
350
400
450
500
550
600

noIuze De-ion circuit breakers
enclosed • type AB-I

descriptive
bulletin

30-230

amperes: 15 to 600
maximum voltage: 600 v a-c • 250 v d-c

page 11

for 2 pole combinations

<i>specify this AB-I catalog number:</i>	<i>which consists of: NEMA 1A style number</i>	<i>unit breaker style number</i>	
DA-2215	1613 720	1532 382	
DA-2220		1532 383	
DA-2231		1532 384	
DA-2241		1532 385	
DA-2250		1532 386	
DA-2270	1720 916	1632 942	
DA-2290		1605 779	
DA-2211		1605 780	
DF-2615	1613 721	1222 022	
DF-2620		1222 023	
DF-2631		1222 098	
DF-2641		1531 171	
DF-2650		1531 776	
DF-2670	1613 722	1531 777	
DF-2690		1531 778	
DF-2611		1531 779	
DF-2605A	1613 721	1222 061	
DF-2610A		1222 062	
DF-2625A		1222 063	
DF-2650A		1222 064	
DF-2670A	1613 722	1222 065	
DF-2611A		1222 066	
DB-2650	1613 723	999 166	
DB-2670		999 167	
DB-2690		999 168	
DB-2611		999 169	
DJ-2670	1739 242	1613 541	
DJ-2690		1613 542	
DJ-2611		1613 543	
DJ-2612		1613 544	
DJ-2616		1613 545	
DJ-2617		1613 546	
DJ-2621		1613 547	
DJ-2622		1613 548	
DC-2670		available only as assembled units	
DC-2690			
DC-2611			
DC-2612			
DC-2616			
DC-2617			
DC-2621			
DC-2622			
DD-2622	available only as assembled units		
DD-2626			
DD-2627			
DD-2630			
DD-2632			
DD-2636			
DD-2640			
DD-2645			
DD-2651			
DD-2655			
DD-2660			

for 3 pole combinations

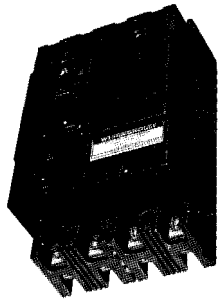
<i>specify this AB-I catalog number:</i>	<i>which consists of: NEMA 1A style number</i>	<i>unit breaker style number</i>
DA-3215	1613 720	1532 392
DA-3220		1532 393
DA-3231	1720 916	1532 394
DA-3241		1532 395
DA-3250		1532 396
DA-3270		1632 943
DA-3290		1605 781
DA-3211		1605 782
DF-3615	1613 721	1222 032
DF-3620		1222 033
DF-3631		1222 099
DF-3541		1531 172
DF-3650		1531 786
DF-3670	1613 722	1531 787
DF-3690		1531 788
DF-3611		1531 789
DF-3605A	1613 721	1222 071
DF-3610A		1222 072
DF-3625A		1222 073
DF-3650A		1222 074
DF-3670A	1613 722	1222 075
DF-3611A		1222 076
DB-3650	1613 723	999 176
DB-3670		999 177
DB-3690		999 178
DB-3611		999 179
DJ-3670	1739 242	1613 551
DJ-3690		1613 552
DJ-3611		1613 553
DJ-3612		1613 554
DJ-3616		1613 555
DJ-3617		1613 556
DJ-3621		1613 557
DJ-3622		1613 558
DC-3670	available only as assembled units	
DC-3690		
DC-3611		
DC-3612		
DC-3616		
DC-3617		
DC-3621		
DC-3622		
DD-3622	available only as assembled units	
DD-3626		
DD-3627		
DD-3630		
DD-3632		
DD-3636		
DD-3640		
DD-3645		
DD-3651		
DD-3655		
DD-3660		



nofuze De-ion circuit breakers
enclosed • type AB-I

accessories see price list 29-060 for complete details

4 pole breakers



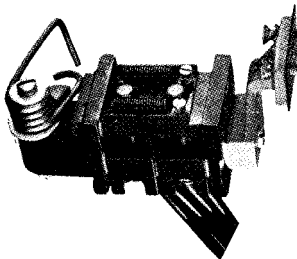
For 2 phase 4 wire and 2 phase 5 wire service, 4 pole F, G and K breakers can be furnished. All four poles operate simultaneously.

In the F frame, all 4 poles are provided with thermal magnetic trips.

In the 4 pole G and K breakers, are 3 poles with thermal magnetic trips and an unprotected fourth pole used as a non-automatic disconnect.

switches

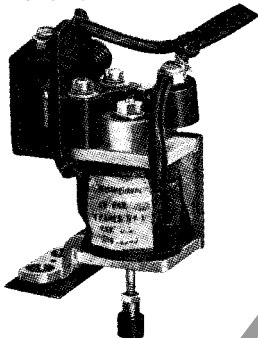
auxiliary



These internally-mounted switches are used to open and close relays or control circuits as the breaker operates and to operate indicating lights in remote locations. The capacity of these switches at 120 volts a-c is 10 amps.; at 600 volts a-c, 2 amps. Available for all breakers.

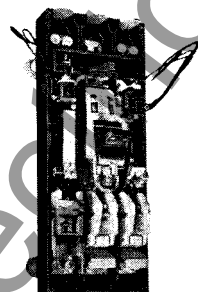
trips

shunt



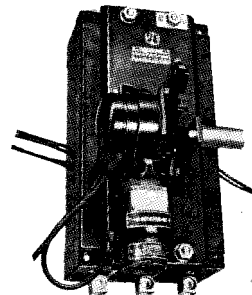
For electrical tripping of the breaker from a remote point, this solenoid-plunger combination can be mounted within E, F, G, J, K, and L breakers. For control voltage up to 250 volts d-c or 600 volts a-c. Included are 18-inch leads and, except in the case of the E model, a cut-off switch to break the energizing current when the breaker opens.

reverse current



This device opening circuits on a 10-15 percent reversal of current is internally mounted in a 3-pole K or L frame for 2-pole operation; outside poles are used for connections. Included are a reverse-current switch and a shunt trip actuated by this switch. In addition to this right pole accessory, the breakers will accommodate one other attachment.

remote control



An externally-mounted motor operator permits distant personnel to throw breaker contacts to OFF and ON positions and to reset the breaker after tripping, using a spring return switch or push-button.

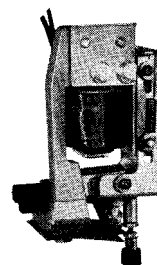
Remote indication can be provided by auxiliary or alarm switches. Shunt trips may also be ordered for tripping from the control station. Available on K and L frames only.

alarm



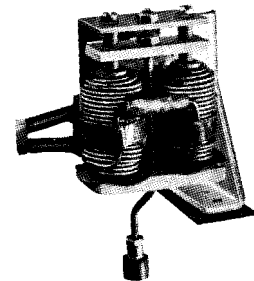
For light or alarm indication, this internal switch with external leads functions only on breaker tripping. It does not perform during manual breaker operation. It automatically resets when the breaker is re-latched. Normally, the switch is closed when the breaker is tripped. Switches opening on tripping may also be supplied if specified. Available on F, G, J, K and L breakers.

low voltage



When the line voltage drops below 40 to 60 percent of normal, this undervoltage device automatically trips the breaker. Internally-mounted in the right pole of the F, J, K, L, and 3 pole G breakers, unless left-hand mounting is specified. Anchored 18 inch leads and, when required, 10 inch external resistors are supplied.

ground current



These internally-mounted magnetic devices are used to prevent dangerous ground currents in mining installations and to detect ground faults in one of a set of parallel conductors.

thermal-magnetic ground current limiters are built into one pole of 3 pole size G, J and K trip units to prevent repeated momentary reclosures of the breaker on a fault.