

DBR DUST-IGNITION PROOF BOLTED CONSTRUCTION, INTERLOCK RECEPTACLE

Installation & Maintenance Information

IF 1181

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

DBR interlocked receptacles with circuit breakers are used as a service outlet for portable equipment. The interlocked receptacles with circuit breakers are mechanically interlocked to provide line disconnect means and short circuit protection. The receptacle contacts cannot be made or broken under load. The circuit breaker cannot be closed until the plug is fully inserted and the plug cannot be withdrawn until the breaker is open.

DBR interlock receptacles are suitable for use in Class II, Div. 1 and 2, groups F, G; Class III hazardous locations as defined by the National Electrical Code.

DBR Interlock receptacles are available in 30, 60, and 100A, 600VAC ratings in style 1 and style 2 Arkrite® configurations. They are compatible with Crouse-Hinds APJ and NPJ Arkrite plugs.

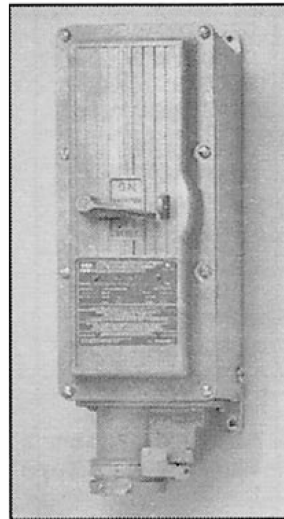


Figure 1
Model M4 DBR series cast aluminum enclosure, interlock receptacle.

⚠ WARNING

For installation only by a qualified electrician in accordance with the National Electric Code, local codes, and the instructions herein.

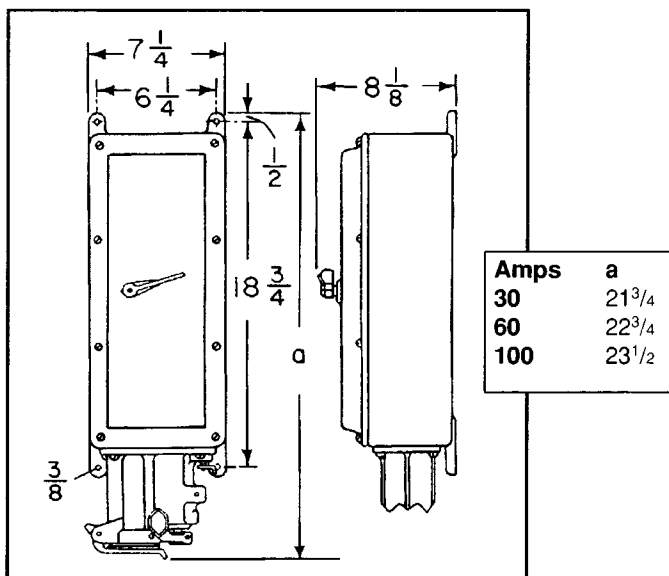
⚠ WARNING

Risk of death, severe personal injury, or substantial property damage can result from contact with energized equipment. Do not attempt to install or perform maintenance while equipment is energized. Always verify that no voltage is present before proceeding.

CAUTION

Hazardous location information specifying class and group is marked on the nameplate of each enclosure. Electrical ratings, catalog number and operating precautions are also marked on nameplate. Care should be taken to preserve the integrity of the nameplate for the life of the product.

Dimensions



OPERATION AND DESCRIPTION

DBR Interlock receptacle enclosure houses a Cutler-Hammer FDB circuit breaker that is factory wired to a Crouse-Hinds Arkrite receptacle. The circuit breaker supplies power to the receptacle and can be turned on only when a Crouse-Hinds Arkrite plug is inserted. Inserting the plug will trigger the receptacle interlock mechanism and lock the plug in place. This action also releases the main handle operator and permits the breaker to be turned on. The plug cannot be removed until the "plug release handle" is pushed to the release position. This cannot occur until the main handle operator is moved to the off position, turning the breaker off and disconnecting power to the receptacle.

The enclosure is cast aluminum with a cast aluminum bolted on cover. The Interlock receptacle is cast aluminum with Krydon Insulator. Brass contacts and stainless steel components.

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100 Ampere Frame Size with Non-Interchangeable Thermal Trip and Non-Adjustable Magnetic Trip

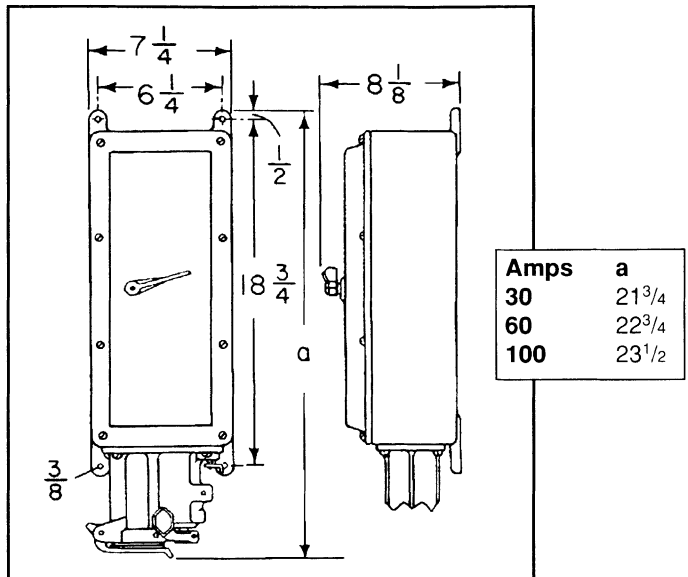
Receptacle With Spring Door Housing†	Circuit Breaker Rating	Enclosure		
		Hub Size	Ckt. Bkr. Amps	With Circuit Breaker Cat. # Westinghouse "FDB"
30 amp., 3-wire 3-pole, Style 1	3-pole 600VAC	1 1/2	20	DBR53731-WT20-3
			30	DBR53731-WT30-3
			40	DBR53731-WT40-3*
			50	DBR53731-WT50-3*
30 amp., 2-wire, 3-pole, Style 2	2-pole 600VAC or 250VDC	1 1/2	20	DBR53732-WT20-2
			30	DBR53732-WT30-2
			40	DBR53732-WT40-2*
			50	DBR53732-WT50-2*
30 amp., 3-wire, 4-pole, Style 2	3-pole 600VAC	1 1/2	20	DBR53742-WT20-3
			30	DBR53742-WT30-3
			40	DBR53742-WT40-3*
			50	DBR53742-WT50-3*
60 amp., 3-wire, 3-pole, Style 1	3-pole 600VAC	1 1/2	50	DBR56731-WT50-3
			60	DBR56731-WT60-3
			70	DBR56731-WT70-3*
			90	DBR56731-WT90-3*
60 amp., 2-wire, 3-pole, Style 2	2-pole 600VAC or 250VDC	1 1/2	50	DBR56732-WT50-2
			60	DBR56732-WT60-2
			70	DBR56732-WT70-2*
			90	DBR56732-WT90-2*
60 amp., 3-wire, 4-pole, Style 2	3-pole 600VAC	1 1/2	50	DBR56742-WT50-3
			60	DBR56742-WT60-3
			70	DBR56742-WT70-3*
			90	DBR56742-WT90-3*
100 amp., 3-wire, 3-pole, Style 1	3-pole 600VAC	1 1/2	60	DBR51731-WT60-3
			70	DBR51731-WT70-3
			90	DBR51731-WT90-3
			100	DBR51731-WT100-3
100 amp., 2-wire, 3-pole, Style 2	2-pole 600VAC or 250VDC	1 1/2	60	DBR51732-WT60-2
			70	DBR51732-WT70-2
			90	DBR51732-WT90-2
			100	DBR51732-WT100-2
100 amp., 3-wire, 4-pole, Style 2	3-pole 600VAC	1 1/2	60	DBR51742-WT60-3
			70	DBR51742-WT70-3
			90	DBR51742-WT90-3
			100	DBR51742-WT100-3

INSTALLATION

Enclosure

1. Select a mounting location that will provide suitable strength and rigidity for supporting the enclosure, taking into consideration that the plug insertion with portable cable will add to the weight.
2. Mount the enclosure using the (4) four cast mounting feet. Mounting holes are .375 dia.
3. 2 1/2" threaded conduit opening with 1 1/2 reducer provided on top center for attaching conduit. For additional reducer sizes see catalog section 7F.

Dimensions



OPENING COVER

DBR Interlock receptacles have a non-hinged, bolted on cover. To remove cover, remove the (8) bolts.

CAUTION
The cover bolts are not captivated. Take care not to drop or misplace them.

CAUTION
Cover is not secured to enclosure with a hinge, tether or other means. Removing the last bolt will allow cover to drop. Hold cover firmly to prevent the cover from dropping and causing injury.

CAUTION
Do not damage the fiber gasket when removing and handling the cover. If gasket is torn or damaged, replace before using DBR.

GROUNDING AND BONDING

Grounding and bonding of the conduit and equipment is required by the National Electrical Code. Receptacles and attachment plugs must be the type providing for connection to the grounding conductor.

WARNING
DBR interlocked receptacles must be securely attached into a permanently grounded system in accordance with Article 501-16, 502-16 of the National Electrical Code.

Determine the type of distribution system to be used that will comply with NEC requirements and ensure grounding continuity.

All conductive materials that enclose the electrical conductors or attached equipment or forming part of such equipment must be grounded. A permanent conducting connection must be made between all such equipment and the earth.

WIRING CONNECTIONS

1. Establish a wiring pattern for your system.

WARNING

Before installing an DBR interlocked receptacle, a wiring pattern must be established for your system. Locations having different voltages, frequencies, or types of current (AC or DC) **MUST NOT** have interchangeable attachment plugs as stated in Paragraph 210-7F of the National Electrical Code.

2. Connect grounding conductor to lug provided. Pull all phase conductors into enclosure and make connections as shown in breaker manufacturer's instructions. All electrical connections should be tightened to torque values specified in manufacturers literature and comply with the National Electrical Code and any local codes.
3. Test wiring for correct phase relationships with continuity checks and also for unwanted grounds with an insulation resistance check.

BREATHER/DRAIN

A drain is factory installed and located in the bottom receptacle housing. Provisions are provided to add additional breather/drains in the enclosure. A 1/2" tapped hole is located on the bottom right sidewall and also on the top left endwall. Both are factory sealed with an aluminum plug.

Remove plug(s) and replace with desired breather/drain if required. See catalog section 8F to select appropriate Crouse-Hinds breather/drain suitably certified for application.

CLOSING COVER

CAUTION

Dirt or foreign material must not accumulate on flat surfaces or gasket. Surfaces must seat fully against each other to provide a proper dust-ignition proof joint.

Align handle to breaker toggle. Seat cover so the internal fiber plate toggle cut-out sets down around the breaker toggle. The interlock arm must set down over the receptacle shaft. Install all (8) bolts and torque to 30-35 in./lb. Use ONLY bolts supplied with the enclosure.

MAINTENANCE

WARNING

Always disconnect primary power source before opening enclosure for inspection or service.

1. Frequent inspection should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that it should be at least once a year.
2. Perform visual, electrical and mechanical checks on all components on a regular basis.
 - Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts, or leakage evidenced by water or corrosion in the interior.
 - Electrically check to make sure that all connections are clean and tight and that contacts in the components make or break as required.
 - Mechanically check that all parts are properly assembled, and operating mechanisms move freely.

WARNING

If any parts of the plug or receptacle appear to be missing, broken, or show signs of damage, **DISCONTINUE USE IMMEDIATELY**. Replace with the proper replacement part(s) before continuing service.

In addition to these required maintenance procedures, we recommend an Electrical Preventive Maintenance program as described in the National Fire Protection Association Bulletin NFPA No. 70B.

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Crouse-Hinds "Terms and Conditions of Sale", and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.



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