Drawout cassette open/close door interlock kit for Magnum® drawout circuit breaker

WARNING
(1) ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.
(2) ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS IF A CIRCUIT BREAKER CANNOT BE REMOVED TO A SAFE WORK LOCATION.
(3) DRAWOUT CIRCUIT BREAKERS SHOULD BE LEVERED (RACKED) OUT TO THE DISCONNECT POSITION.
(4) ALL CIRCUIT BREAKERS SHOULD BE SWITCHED TO THE OFF POSITION AND MECHANISM SPRINGS DISCHARGED. FAILURE TO FOLLOW THESE STEPS FOR ALL PROCEDURES DESCRIBED IN THIS INSTRUCTION LEAFLET COULD RESULT IN DEATH, BODILY INJURY, OR PROPERTY DAMAGE.

General information
This kit incorporates the "drawout cassette open door interlock kit" as well as the "drawout cassette door latch interlock kit" for a combination that gives protection by preventing the circuit breaker from CLOSING while the cell door is open, and also by locking the cell door closed when the circuit breaker is CLOSED, respectively.

WARNING: All components described in this Instruction Leaflet MUST be installed for safety, not just one or the other, due to safety dependence of the open door interlock kit on the door latch interlock kit.

Kit parts identification
(A) Drive arm (one)
(B) Connecting rod (one)
(C) M6 nylock nut (one)
(D) Mechanical interlock assembly (one)
(E) Latch assembly (one)
(F) M6 x 12 screw (five)
(G) Compression spring B (one)
(H) Helical lock washer (five)
(I) Square nut (four)
(J) M6 x 25 flathead screw (one)
(K) Tension spring (two)
(L) M6 x 12 low-profile screw (one)
(M) Slider retainer (two)
(N) M6 x 10 thread-forming screw (two)
(O) Open door interlock assembly (one)

Figure 1. Contents of kit

Required tools
• 10 mm socket and drive
• Phillips head screw driver (#2 recommended)
• Utility knife
• Pliers
• Round hand file

Figure 1. Contents of kit
Installation of mechanism interlock assembly

Installing drive arm

Step 1
Remove the front cover by unscrewing the hex-head captive bolts (four for three-pole, six for the four-pole) that join the cover to the breaker housing using a 10 mm ¼-inch drive socket. Then hold the charge handle down approximately 45 degrees to pull off the cover. Refer to Figure 2.

![Figure 2. Step 1](image1)

Step 2
Remove the knockout from the right side of the front cover using pliers to break the U-shaped tab. Carefully file any excess material from the broken edge. Refer to Figure 3.

![Figure 3. Step 2](image2)

Step 3
Install the drive arm (A) to the right end of the pole shaft with the drive arm lever extending downward as shown. Use an M6 x 25 mm (J) flathead screw to make the connection and torque to 65–85 in-lb (7.3–9.6 N·m). Refer to Figure 4.

![Figure 4. Step 3](image3)

Notes: If the end of the pole shaft is not machined as shown, contact Eaton for instructions. If an M6 square nut is not located in the slot as shown, remove the bracket’s top bolt and loosen the two bottom bolts seven turns. While holding the trip lever in the position shown, slide the top part of the bracket away from the breaker, and insert a square nut into the slot with the flat face toward the outside. Refasten all three bolts.

Installing the new interlock

Step 4
Attach the slider bracket assembly to the side sheet using two slider retainers (M), two washers (H), and two M6 x 10 thread-forming screws (N). Hook the free end of the return spring onto the tab marked “A” in the slider bracket, and attach the other end of the spring with one M6 x 12 thread-forming screw (F) into the hole marked “B.” Tighten the screw enough to secure it, but not enough that it protrudes inside the cassette. Refer to Figure 5.

![Figure 5. Step 4](image4)

Installing second interlock

Step 5
First assemble the drive rod assembly. Install two square nuts (I) onto the threaded rod (B) (approximately 2 inches) followed by a wave washer (H), and then insert through the pivot of the interlock. Once through the interlock pivot, install a second wave washer (H), followed by the compression spring (G). Secure all the hardware in place with an M6 nylock nut (C). Refer to Figure 6.
Step 6
Mount the interlock assembly and the latch assembly to the side sheet of the cassette using M6 x 12 screws (F) and one low-profile M6 x 12 screw (L) (this low profile screw creates clearance for the shutterlink). Adjust the assemblies as shown in the detail views of the illustration. Refer to Figure 7.

Step 7
Reinstall front cover removed in Step 1.

Step 8
Functionally check the interlock by checking the positions of the latch assembly with the associated status of the breaker. The dimensions shown in the illustration details are from the bottom edge of the cassette side sheet to the bottom edge of the latch. Refer to Figure 8.

Visual inspection
Step 9
Verify that all system power is OFF.

Step 10
Verify that breaker is in “Connect” position.

Step 11
Depress the plunger until rear face of the plunger can is in-line with front edge of cassette side sheet.

Step 12
Verify slider bracket is not in contact with breaker wire form.
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