Magnum low-voltage drawout circuit breaker shutter kit for double-wide narrow frame cassettes with horizontal stab connections

WARNING

1. ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.
2. DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON THE EQUIPMENT WHILE ENERGIZED. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING.
3. ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS BEFORE REMOVING CIRCUIT BREAKER.

FAILURE TO FOLLOW THESE STEPS FOR ALL PROCEDURES DESCRIBED IN THIS INSTRUCTION LEAFLET COULD RESULT IN DEATH, BODILY INJURY, OR PROPERTY DAMAGE.

Section 1: General information

Cassette safety shutters are optional, automatically operated, insulating-type safety shutters for use with a drawout cassette. When the drawout circuit breaker is levered (racked) from the CONNECT position, the shutters automatically close to cover the fixed primary contacts. When the circuit breaker is levered (racked) into the cassette, the shutters automatically open, permitting primary connections to be made.

Required tools
- Blade screwdriver
- M10 socket or M10 box wrench
- Long-nose pliers
- Grease brush

Kit parts identification
(A) Shutters/stabs cover assembly (two)
(B) Top and bottom shutter shaft assembly
(C) Top and bottom shutter link assembly
(D) M6 hex nut with captive external toothwasher (four)
(E) Shaft collars (four)
(F) M12 E-rings (four)
(G) Magnalube
(H) M6 x 30 thread-forming screws (eight)

Figure 1. Contents of kit
Section 2: Installation of double-wide narrow frame cassette shutter kit

Proceed with the following eight steps.

**Step 1:** Install two shaft collars on left side sheet (on right side sheet for right side mounting). Fasten the grooves on the collars with retaining rings.

**Step 2:** Apply Magnalube (G) lubricant (provided with kit) to wide washer face and edges of slots. Run two link mounting pins through slots and washers, and capture with O-rings. Hook shutter spring on the mounting post of shutter link slide assembly.

**Step 3:** Mount the shutter slide link assemblies to the cassette side sheet with M6 hex nut with captive external toothwasher. The left side mounting is shown with the right side mounting just the opposite.

**Note:** The straight edge (without step) of the slide link assembly is on the bottom of the lower assembly and is up on the upper assembly.

**Step 4:** Become familiar with the parts included in the assembled shutter shafts. The assembled shafts will be used starting with Step 6.

**Note:** There is a top and a bottom assembly. Also note the location of the slotted shaft arms.

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**Figure 2. Step 1**

**Figure 3. Step 2**

**Figure 4. Step 3**

**Figure 5. Step 4**
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Step 5: Mount each shutter assembly with four M6 x 30 thread-forming screws (six required for four-pole shutters). Torque the M6 thread-forming screws to 64–80 in-lb (7–9 N•m).

Step 6: Apply Magnalube (G) lubricant to the edges of slots on the shaft arms of the shaft assemblies and to the inside surfaces of the shaft collars.

Step 7: Refer to the Step 8 illustration for an exploded view of the shutter assemblies.

1. Position the tips of the shaft arms between the pins on the shutters. Maintain this position during the assembly.
2. Extend the other end of shaft through holes on other side sheets (without shaft collars). Then position slot on the shaft arm over the pin on the shutter link (refer to Figure 8).
3. Insert the shaft end into the shaft collar (refer to Figure 8). Check the positions of the shaft arms between the shutter pins, and the slot on shaft arm over shutter link pin.

Step 8: To install the shutter shaft assemblies, insert the two remaining shaft collars through the other side sheet and onto the other ends of the shafts. Fasten grooves on these collars with retaining rings.
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