Instructional Leaflet **IL2C14762**

Effective December 2021
Supersedes August 2011

# Shunt trip in Magnum low voltage circuit breakers

**⚠ 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.**

**⚠ WARNING**

**THE INSTRUCTIONS CONTAINED IN THIS IL AND ON PRODUCT LABELS MUST BE FOLLOWED. OBSERVE THE FIVE SAFETY RULES.**

- **DISCONNECTING;**
- **ENSURE THAT DEVICES CANNOT BE ACCIDENTALLY RESTARTED;**
- **VERIFY ISOLATION FROM THE SUPPLY;**
- **EARTHING AND SHORT-CIRCUITING; AND;**
- **COVERING OR PROVIDING BARRIERS TO ADJACENT LIVE PARTS.**

## Section 1: General information

The shunt trip opens the circuit breaker when its coil is energized by a voltage input. The intermittent shunt trip is limited to intermittent duty and requires the included shunt trip cut-off switch. When replacing a standard shunt trip, both the shunt trip and the cut-off switch must be replaced. The continuous duty shunt trip does not require a switch.

This product is intended for use in Magnum circuit breakers with PXR or Digitrip trip units.

**Note:** All images show a Magnum circuit breaker with a PXR trip unit unless stated otherwise. Some components, such as the trip unit, not shown for clarity.

### Required tools

- 1/4-inch drive socket
- 10 mm socket

## Section 2: Installation of shunt trip

To install the shunt trip, proceed with the following steps:

**Step 1:** Remove the front cover by unscrewing the hex-head captive bolts (four for three-pole, six for four-pole) that join the cover to the breaker housing using a 10 mm 1/4-inch drive socket. Then hold the charge handle down approximately 45 degrees to pull off the cover.

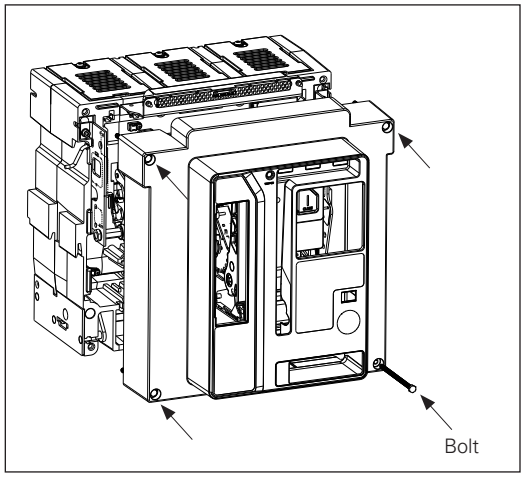


**Figure 1. Step 1.**

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**Step 2:** The intermittent duty shunt trip comes with a cut-off switch. Mount the switch by sliding the lock to the unlocked (up) position. Install the hook feet down through openings as shown. Then slide the assembly forward towards the left side of the breaker so the hook feet engage the mounting plate. Slide the lock down into the locked position.

**Note: The cut-off switch is not applicable for the continuous duty shunt trip.**

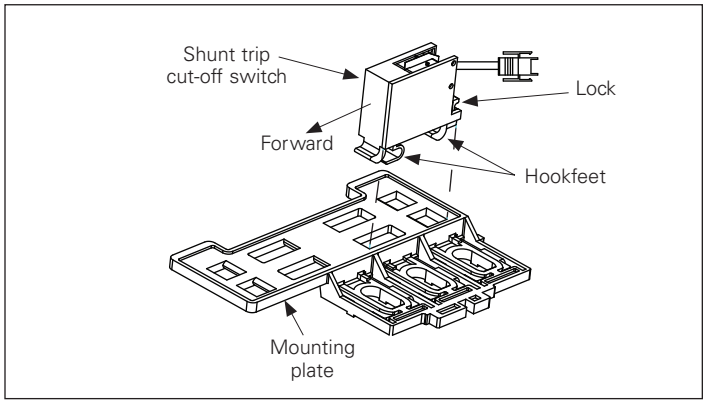


**Figure 2. Step 2.**

**Step 3:** Slide the lock on the shunt trip to the unlocked (up) position, and install the hook feet down through the opening. Then slide it forward until the feet engage the mounting plate. Slide the lock back down to lock the shunt trip in place.

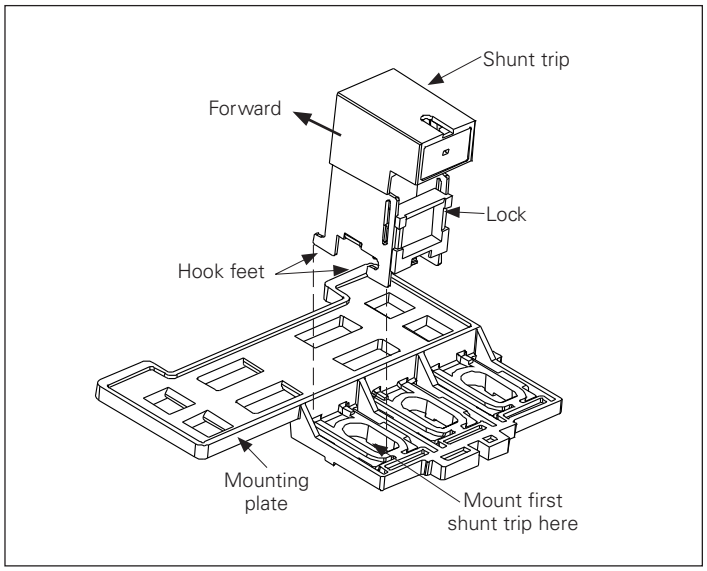


**Figure 3. Step 3.**

**Step 4:** Mate the shunt trip connector with the cut off switch connector, where required.

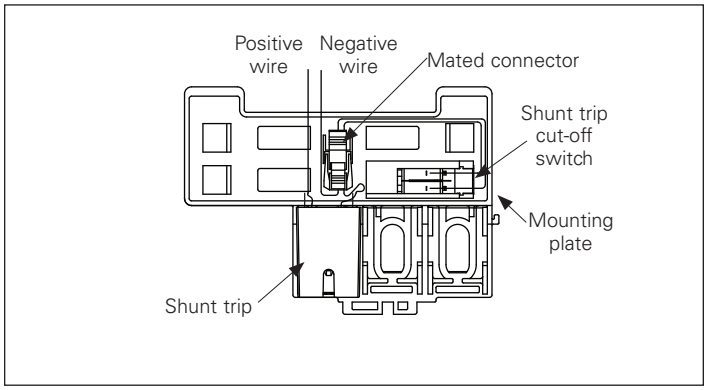


**Figure 4. Step 4.**

**Step 5:** Connect wires from the shunt trip to the secondary connector referring to **Table 1**, in keeping with the wire markings. Terminal maps for the secondary connectors are located on top of the secondary connectors.

**Table 1. Secondary connector shunt trip positions**

| | Shunt trip 1 | | Shunt trip 2 | |
|---|---|---|---|---|
| **Trip unit** | **Positive** | **Negative** | **Positive** | **Negative** |
| Digitrip (Fig. 5) | B10 | B11 | A7 | A8 |
| PXR (Fig. 6) | C50 | C51 | C56 | C57 |

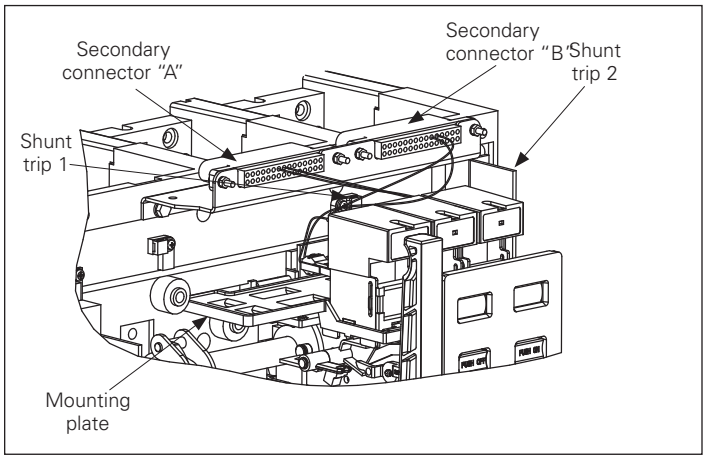


**Figure 5. Step 5 Magnum with Digitrip.**

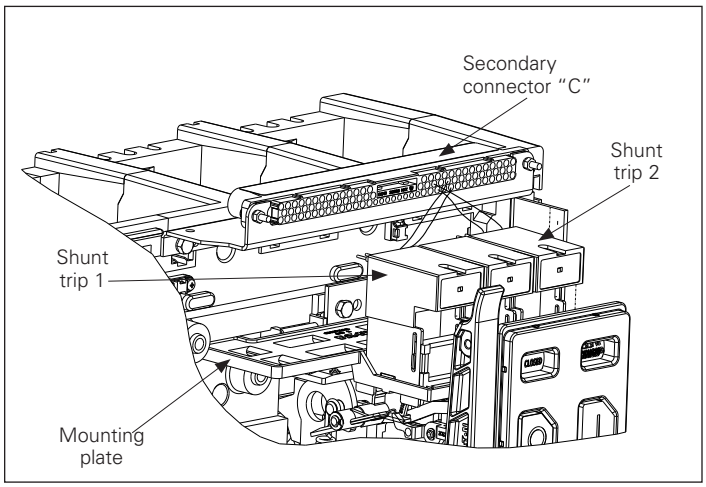

**Figure 6. Step 5 Magnum with PXR**.

**Step 6:** If a second shunt trip is to be installed, repeat Steps 2, 3, and 4 and wire to the secondary connector in accordance with Table 1.

**Note:** The second shunt trip in a Magnum circuit breaker with a PXR trip unit must be a continuous duty shunt trip.

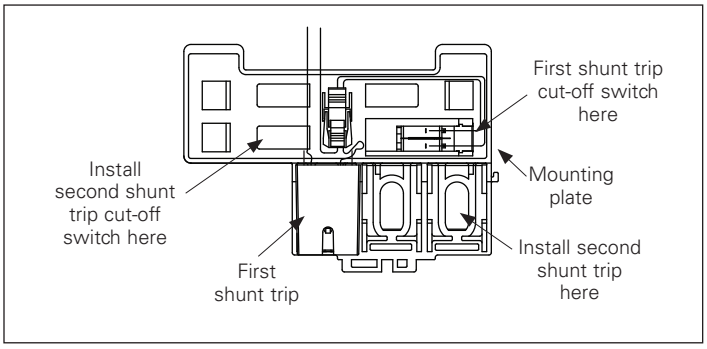


**Figure 7. Step 6.**

**Step 7:** Reinstall front cover removed in Step 1.

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