Instructional Leaflet **IL2A12995**

Effective December 2021
Supersedes March 2012

Interlocking trip indicator with remote reset 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.**

DISCONNECT THE EQUIPMENT FROM THE SUPPLY. USE ONLY AUTHORIZED SPARE PARTS IN THE REPAIR OF THE EQUIPMENT. THE SPECIFIED MAINTENANCE INTERVALS AS WELL AS THE INSTRUCTIONS FOR REPAIR AND EXCHANGE MUST BE STRICTLY ADHERED TO PREVENT INJURY TO PERSONNEL AND DAMAGE TO THE SWITCHBOARD.

Powering Business Worldwide

Interlocking trip indicator with remote reset in Magnum low voltage circuit breakers

Section 1: General information

A red, pop out mechanical trip indicator is an optional feature located above the trip unit on the breaker's front faceplate. In the event the trip unit trips the breaker on an overcurrent condition, or by an enhanced protection feature (if programmed, available on Digitrip 1150+ and PXR 25), the red trip flag releases and "pops" out to provide local visual indication. This trip indication is always in addition to any LED trip indication provided by the trip unit.

The remote reset trip indicator comes equipped with mechanical interlocking features. These features mechanically lock the breaker after it has tripped and prevent the breaker from being re-closed until the trip indicator has been reset.

The remote reset trip indicator can be reset by applying a control voltage to the electromagnetic coil enclosed in the accessory device. After allowing sufficient time to reset the trip indicator, the control voltage is cutoff by a timing board also enclosed in the accessory device. The control voltage cannot, however, be continuously applied to the device to allow the board to reset and be ready for the next "event". It is recommended that the control voltage not be applied to the secondary terminals any longer than 5 seconds.

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

Note: The proper control voltage of the device is marked on the accessory device.

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

- ¼" (10mm) socket drive (with torque measuring capabilities)
- 10mm socket
- Phillips head screwdriver (#2 recommended)
- Dremmel saw (or similar device used for removing front cover prongs)

  Note: This is only required when retrofitting this accessory into a Magnum breaker produced prior to August 2011.
- Wire cutters (for removal of any necessary wire ties)

Kit parts identification

Refer to **Figure 1** for visual identification of the parts listed below:

A. Trip indicator (1)
B. Trip indicator push rod (1)
C. Trip unit mounting plate for Digitrip 520 model (1)
D. M3.5 x 13 hi-lo screw (2)
E. M3.5 flat washer (2)
F. Accessory kit labels (1)
G. Wire ties (2)

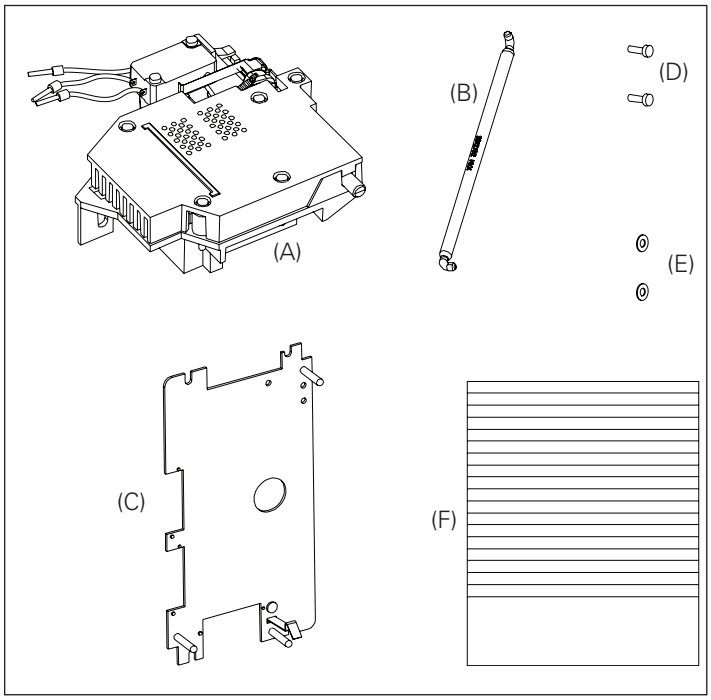

Figure 1. Contents of kit 2C15799

Section 2: Installation of remote reset trip indicator kit

Proceed with the following steps:

Step 1: Remove the front cover by unscrewing the hex head captive bolts (4 for 3-pole, 6 for 4-pole) that join the cover to the breaker housing using a 10mm ¼ inch drive socket. Then hold the charge handle down approximately 45 degrees to pull off the cover.

Step 2: Place the trip indicator option label (F) on the front cover nameplate space located under "Accessories". Using a Dremmel saw (or similar tool), remove the two notches in the top right corner of the front cover as shown in the figure.

Note: The notches must be removed in order to replace the front cover with the remote reset trip indicator installed.

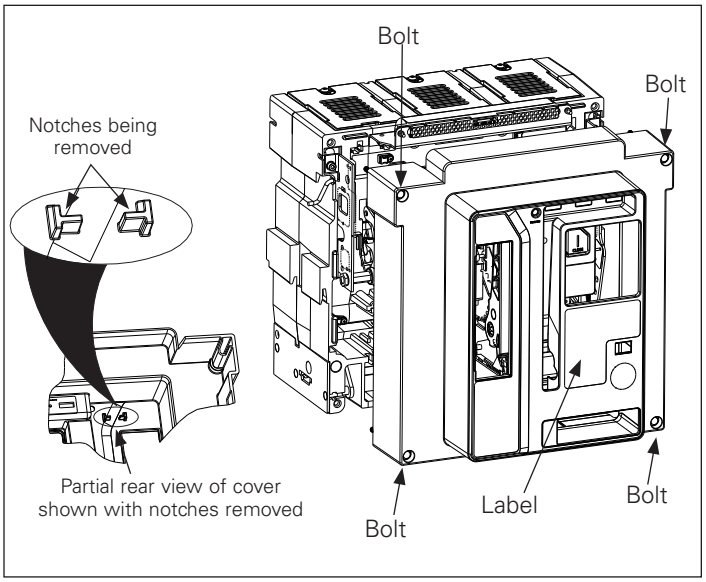

Figure 2. Step 1 and 2.

Step 3: To simplify the installation and **avoid inadvertent damage** to the trip indicator push rod **(B)**, the push rod should be installed in the breaker first by inserting one hooked-end of the push rod through the hole in the lever on the mechanism. The open end of the hook should be toward the rear as shown.

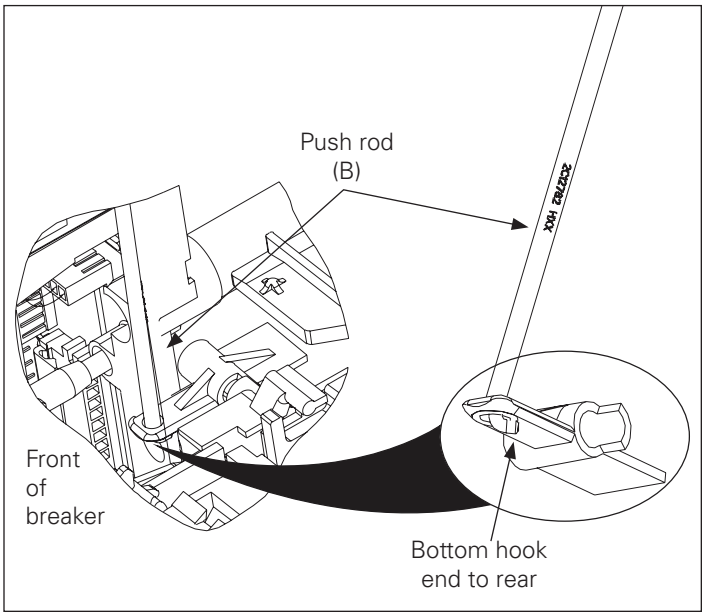

Figure 3. Step 3.

Step 4: Connect the trip indicator **(A)** to the already attached push rod **(B)** from step 3 by carefully rotating the trip indicator onto the upper hook end of the push rod as shown. Keep in mind that the lower hook end of the push rod must ultimately point to the rear.

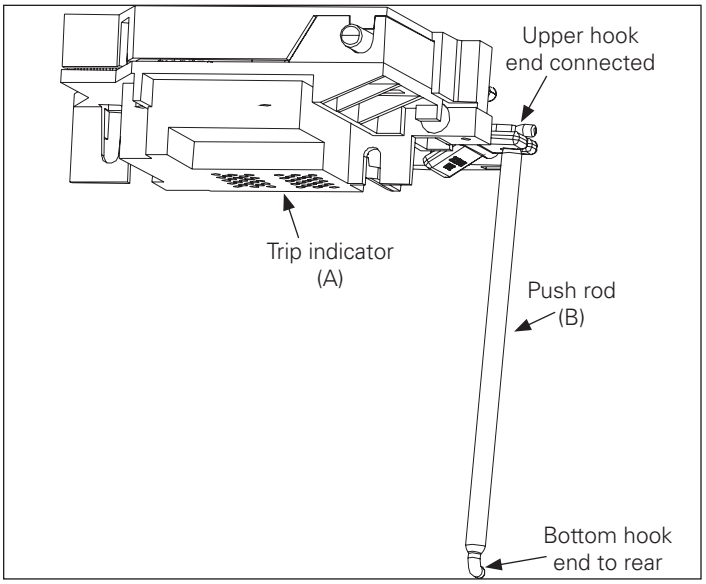

Figure 4. Step 4.

Step 5: If the installed trip unit is a Digitrip Model 520 trip unit, skip this step and proceed directly to step 6. If the installed trip unit is a Model 1150 trip unit, complete this step as outlined below and then proceed to step 8. If the installed trip unit is a PXR trip unit, skip this step and proceed to step 7.

Remove the trip unit retaining spring from the upper left hand corner of the trip unit mounting deck. Mount the completed trip indicator assembly from step 4 to the top two posts of the trip unit's mounting deck directly above the Model 1150 trip unit using the supplied hardware (two M3.5 x 13 Hi-Lo Screws **(D)**, two M3.5 flat washers **(E))** as shown. Torque 0 18-22 in-lbs. (2.0-2.5 N-m). Connect the trip indicator assembly remote reset wires to the secondary connector as referenced in **Table 1**.

Table 1. Secondary connector remote reset positions

Trip unit	OTS 2 mate (positive)	OTS 2 com (negative)
Digitrip	A4	A5
PXR	C4	C5

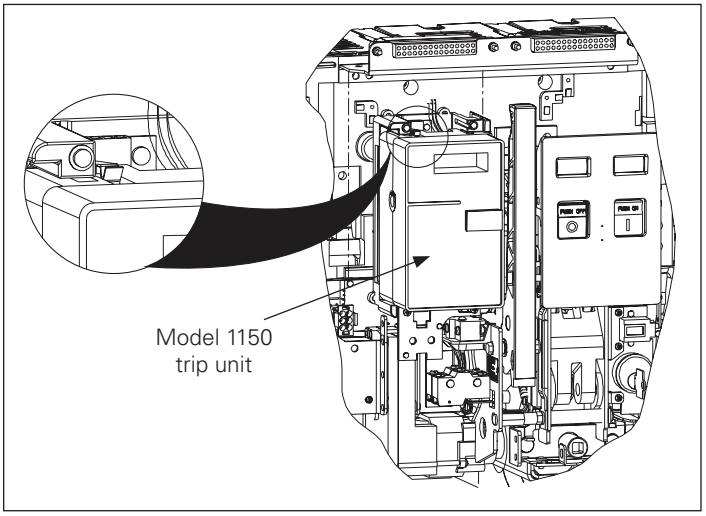

Figure 5. Step 5.

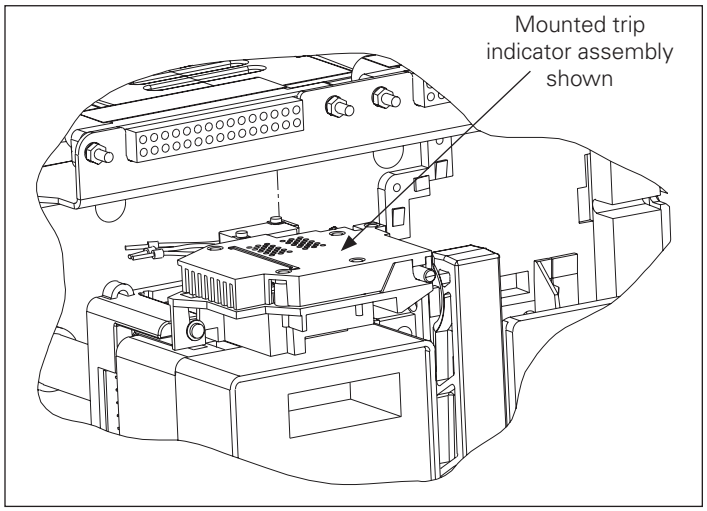

Figure 6. Step 5.

Step 6: If the installed trip unit is a Model 520 trip unit and a metal plate is already mounted to the two top posts of the trip unit's mounting deck, remove the plate completely. Position the completed trip indicator assembly from step 4 to the top two mounting posts of the deck. Replace the trip unit mounting plate with the supplied trip unit mounting plate **(C)** and secure the trip indicator between the posts and the plate using the removed mounting screws (There are extra screws supplied in the kit). Torque to 18-22 in-lbs. (2.0-2.5 N-m). Connect the trip indicator assembly remote reset wires to the secondary connector as referenced in **Table 1**.

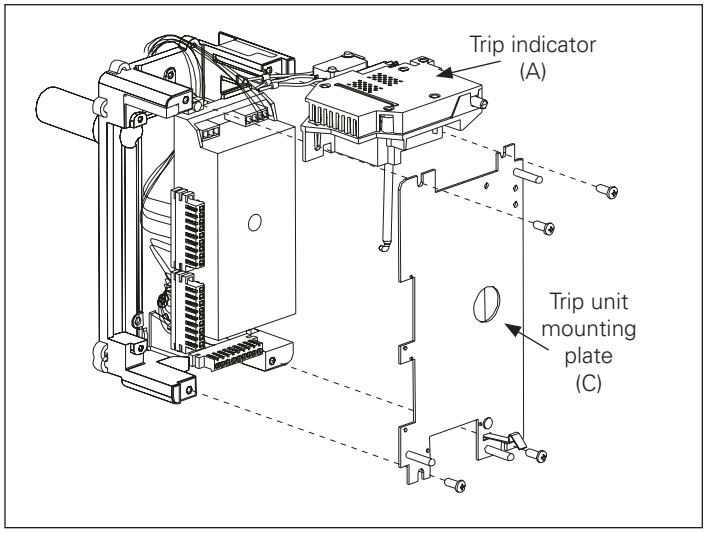

Figure 7. Step 6.

Step 7: If the installed trip unit is a PXR trip unit, remove the plate completely. Position the completed trip indicator assembly from step 4 to the top two mounting posts of the deck. Reinstall the trip unit mounting plate and secure the trip indicator between the posts and plate using the removed mounting screws. Torque to 18-22 in-lbs. (2.0 - 2.5 N·m). Connect the trip indicator assembly remote reset wires to the secondary connector as referenced in **Table 1**.

Keep in mind that the trip indicator **(A)** is shown here without the push rod **(B)** attached for mounting orientation reasons only.

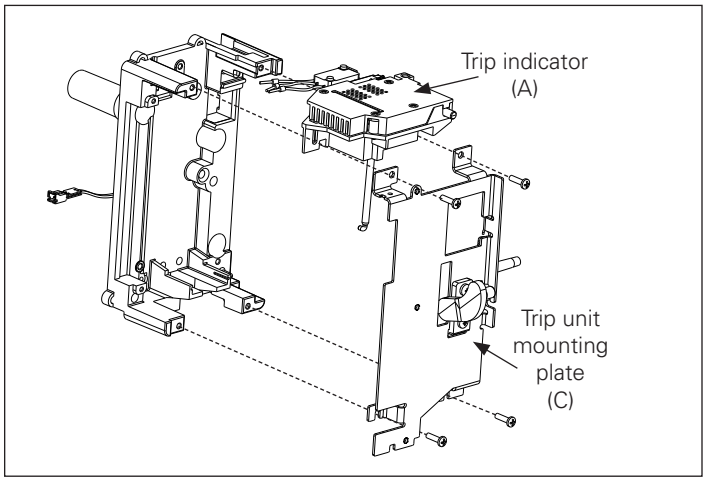

Figure 8. Step 6.

Note: Terminal maps for the secondary connectors are located on top of the secondary connectors.

Step 8: After installation, verify that the trip indicator assembly remains latched when the breaker is operated with the push buttons. Verify that the mechanical trip indicator trips when the breaker opens with the trip actuator. Verify the breaker cannot be reclosed with the trip indicator in the tripped (popped out) position. Finally, verify that the trip indicator assembly resets when the proper control voltage is applied to the secondary terminals.

Step 9: Static trip actuator test: As the trip latch rotates slowly, the trip actuator must not trip before the breaker trips. The indicator may not trip during this test but the breaker must trip.

Step 10: Connect the wires from the overcurrent trip switch (bell alarm) to the secondary connector, referencing **Table 2**, in keeping with the wiring markings. Terminal maps for the secondary connections are located on top of the secondary connectors.

Verify that the overcurrent trip switches are in the open position when the trip indicator has tripped. Verify that the overcurrent trip switches are in the closed position when the trip indicator has not tripped

Table 2. Secondary connector overcurrent trip switch positions

Trip unit	OTS 1 make	OTS 1 com	OTS 1 break
Digitrip (Fig. 7)	A1	A2	A3
PXR (Fig. 8)	C1	C2	C3

Step 11: Reinstall front cover removed in Step 1.

Notes.

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