Reprogramming guide

Instructions apply to:

UL489 : PD-NF
IEC : PD-NF, IZMX16

UL489 : PD-RF
IEC : PD-RF, IZMX40

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**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.

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**WARNING**

THE INSTRUCTIONS CONTAINED IN THIS IL AND ON PRODUCT LABELS HAVE TO BE FOLLOWED. OBSERVE THE FIVE SAFETY RULES:
– DISCONNECTING
– ENSURE THAT DEVICES CANNOT BE ACCIDENTALLY RESTARTED
– VERIFY ISOLATION FROM THE SUPPLY
– EARTHING AND SHORT-CIRCUITING
– 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.
Section 1: Introduction

Power circuit breakers with PXR 20/25 electronic trip units are pre-configured at the factory for their rated current ($I_n$). This software allows you to modify the $I_n$ within a restricted range. The allowable $I_n$ ratings are determined by a combination of factors including the breaker’s construction and the breaker’s application. This software will restrict the $I_n$ to the values supported by the circuit breaker’s construction. You are responsible to limit the $I_n$ value based on the application and not exceed any value specified by the engineer responsible for the installation.

Protection settings of the trip unit are based on the $I_n$ rating. These settings affect the time-current curves and contribute to proper system coordination. Modification of the $I_n$ may require re-evaluation of the circuit breaker’s protection settings and overall coordination study to ensure proper application by the engineer responsible for the installation.

With this kit, you are licensed to modify the $I_n$ of a single circuit breaker. When used for the first time, this USB drive will be permanently linked with the circuit breaker. For your convenience, you may want to mark the USB drive with a breaker identifier and store it for later use. It may be used repeatedly with that circuit breaker, but cannot be used to modify the $I_n$ of a different circuit breaker. If you need to modify the $I_n$ of multiple circuit breakers, you must purchase multiple kits.

The $I_n$ tool is used in place of the rating plugs used in Digitrip trip units.

Section 2: Tools/materials required

- 1/8 in. (3 mm) slotted screwdriver.
- Windows® PC with USB port and Windows 7.0 or above.
  - Administrative rights are required on the PC in order to install the software.
- Installation kit - contents:
  - USB Drive;
    1. Electronic copy of this document, “PXR $I_n$ Reprogramming Guide”;
    2. Software installation program, “PXR $I_n$ Reprogramming Tool.exe”;
    3. License to change $I_n$;
- USB type A to Micro USB cable;
- Multiple frame rating module battery covers (with various rated currents, or $I_n$, printed).
**Section 3: Installation**

**Step 1.** Uninstall any previous versions of this program.
   A. Use Control Panel → Programs → Uninstall a Program.
   B. The program name to uninstall is “PXR In Reprogramming Tool.exe”.

**Step 2.** Plug in the USB flash drive supplied with the kit.

**Step 3.** Run “PXR In Reprogramming Tool.exe”.

**Step 4.** Follow the on screen instructions.
   A. Welcome screen - click “Next”.
   B. Destination folder - click “Next”.
   C. Review Settings - click “Install” (you need administrator rights to the PC).
   D. User Account Control - click “Yes”.
   E. Completed screen - click “Finish”.

**Section 4: Program execution**

**Step 1.** Run “PXR In Reprogramming Tool”.

**Step 2.** Find the USB key.

**Figure 2. The USB Key window.**

A. Install the USB drive in the computer.
B. Click “Continue”. The program will search for any valid USB keys installed on the PC.
C. If a valid USB drive is found, the program will indicate success and proceed to the next step.

**Step 3.** Connecting the Trip Unit

**Figure 3. The Trip Unit window.**

A. Connect the PXR trip unit and allow it to power up.
B. Click “Continue”. The program will search the communication ports for a PXR trip unit.
C. If a PXR trip unit is detected, the program will indicate success and proceed to the next step.

**Step 4.** In Reprogramming the trip unit.

**Figure 4. The In Reprogramming window.**

A. Click “Continue”. The program reads the required information from the trip unit and displays the existing $I_n$ setting.
B. Click on the drop down box. All of the available settings appear in the list.
C. Select the desired $I_n$ setting then click “Continue”.
D. When the $I_n$ setting is reprogrammed, the following message is displayed.
Figure 5. Window that indicates successful reprogramming.

Step 5. Removing the frame rating module (FRM) battery cover.

Note: A number of graphics in these instructions use the NF frame breaker only as typical examples. The RF frame breaker is similar in those situations.

A. Remove the four screws holding the front cover in place (two on each side of the cover).

Figure 6. Removing the screws from circuit breaker cover (NF frame shown).

B. Remove the front cover. Pull down on the charging handle to simplify removal.

Figure 7. Removing the circuit breaker cover (NF frame shown).

Figure 8. Square cavity where tool is placed (NF frame shown).

Figure 9. Removing the FRM battery cover (NF frame shown).

IMPORTANT

The FRM battery cover can be removed with the PXR trip unit in place.

C. Remove the battery tray and battery taking care to note the battery polarity. Hold your hand under the tray while removing to ensure that the battery itself does not fall.

Note: The FRM battery cover is held in place by snap-in tabs on both sides. They can be released by carefully pressing inward on the tabs with a small screwdriver and pushing/pulling the FRM battery cover outward.

D. Insert a 1/8 in. (3 mm) slotted screwdriver into the small square cavity on the outside of the FRM where the FRM battery is attached.

E. Gently put force on the screwdriver to act as a wedge where the front of the cavity meets the battery cover. Maneuver the screwdriver slightly as you remove the cover outward.
Figure 9. Removing the battery cover (NF frame shown).

F. Change the FRM battery cover as needed to correspond to the programmed $I_n$.

Step 6. Installing the FRM battery cover.
A. While supporting the bottom of the FRM battery cover, align the battery cover with the FRM. Insert the right side of the FRM battery cover first (a), followed by the left (b). It should snap into place with the $I_n$ value facing outward.

Figure 10. Installing the battery cover (NF frame shown).
B. Replace the battery into the battery tray and insert into the FRM battery cover.
1. Ensure the front of the battery tray is flush with the FRM battery cover. If misaligned, gently push the slider forward until it is flush.
C. Reverse Step 5 (parts A and B) to install the circuit breaker cover.
Section 5: Additional Information

Please contact Eaton with any questions:

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Reprogramming guide

Notes:
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