

# ProTrip™ Trip Unit Rating Plugs

## ProTrip™ Conversion Kits

### Function

ProTrip™ Trip Units are designed with interchangeable Rating Plugs. These Rating Plugs change the per-unit (1x) continuous-current rating of the breaker. A circuit breaker equipped with a suitable Trip Unit and Rating Plug has a long-time trip current equal to the ampere rating marked on the Rating Plug times the LT setting on the Trip Unit.

For example, a breaker frame with a 1600 A sensor, an 800 A Rating Plug, and a long-time pickup switch setting of 1.0 has an 800 A continuous-current (long-time) rating.

Several Rating Plugs are available for each sensor rating and each Rating Plug is keyed for a particular sensor rating.

The catalog number structure for the available Rating Plugs for ProTrip conversion kits is listed in Table 1. See DEH-40034, *ProTrip™ Trip Units User's Guide*, for a complete listing of all Rating Plug catalog numbers.

### Front Label

The front label, shown in Figure 1, is visible when the Rating Plug is installed. The items listed are:

- Sensor Rating (S) The ampere rating of the corresponding breaker frame.
- Rating Plug Amps (X) The Rating Plug continuous current in amperes.
- Test The test-jack receptacle is used with the Test Kit, catalog number TVRMS2, for overcurrent and ground-fault functional testing.
- Catalog Number Follows the format PTppCqqqGFD, as shown in Table 1.



Figure 1. Rating Plug with ground-fault function.

PT 20 C 700 GFD

Code	Description	Function
1	150 A	Sensor
225	225 A	
4	400 A	
6	600 A	
8	800 A	
16	1600 A	
20	2000 A	
30	3000 A	
32	3200 A	
40	4000 A	
GFD	Ground Fault Defeatable	Ground Fault

  

Code	Description	Function
80	80 A	Rating
100	100 A	
125	125 A	
150	150 A	
225	225 A	
250	250 A	
300	300 A	
400	400 A	
450	450 A	
500	500 A	
600	600 A	
700	700 A	
800	800 A	
1000	1000 A	
1100	1100 A	
1200	1200 A	
1500	1500 A	
1600	1600 A	
2000	2000 A	
2400	2400 A	
2500	2500 A	
3000	3000 A	
3200	3200 A	
3600	3600 A	
4000	4000 A	

Table 1. Rating Plug catalog number structure.

## Ground-Fault Protection

Ground-fault protection with ProTrip Trip Units is provided in the Rating Plug. Rating Plugs are equipped with defeatable ground fault protection.

Ground-fault protection is activated when a Rating Plug is installed in the Trip Unit. The pickup and delay settings available with the switches on the Rating Plug are described in DEH-40034, *ProTrip™ Trip Units User's Guide*.

**WARNING:** Rating Plugs equipped with ground fault must be replaced only with other ground-fault-equipped Rating Plugs. Failure to do so could result in personal injury or death, as well as damage to equipment.

**AVERTISSEMENT:** Les calibreurs munis d'un détecteur de défaut de mise à la terre ne doivent être remplacés que par des calibreurs munis d'un détecteur de défaut de mise à la terre. La non application de cette directive peut entraîner des blessures ou même provoquer la mort ainsi qu'endommager l'équipement.

## Installation

Before installing a Rating Plug into a ProTrip Trip Unit, inspect the plug for damage, then follow these steps:

1. Verify that the Rating Plug catalog number matches the desired continuous current rating (X) and the sensor rating (S) on the breaker frame.
2. Hold the Rating Plug between the thumb and forefinger, then push it into the Trip Unit. Proper engagement is verified by a click.

**CAUTION:** Do not attempt to push the Rating Plug into the Trip Unit if there is resistance. This may indicate the wrong Rating Plug for the current sensor rating. Stop immediately and verify that the breaker sensor rating (S) and the Rating Plug nameplate "S=" value are the same.

**ATTENTION:** Il ne faut pas essayer de pousser le calibreur dans le déclencheur si il y a une résistance. Cela peut indiquer que c'est le mauvais calibreur pour ce type d'appareil. Arrêtez immédiatement et vérifiez que la valeur assignée du disjoncteur "S" correspond à celle de la plaque signalétique du disjoncteur "S=".

## Removal

An installed Rating Plug is seated firmly in the Trip Unit. As shown in Figure 1, there are tabs at the sides of the Rating Plug for removal. A Rating Plug Removal Tool, catalog number TRTOOL, also known as an integrated circuit (DIP) extractor, is required to remove the Rating Plug. Grasp the tabs of the Rating Plug with the tool, as illustrated in Figure 2. Be careful to hold the tabs and not the front cover, as the Rating Plug could be damaged otherwise. Gently pry the Rating Plug out by pulling away from the Trip Unit. A gentle left-right wriggling motion assists the removal. Insure that the tabs are held securely until the Rating Plug is completely removed.

**NOTE:** Protection to the breaker is maintained at only 25% of the current sensor rating when the Rating Plug is removed. If the breaker is carrying more than 25% of the current sensor rating, the breaker will trip after the long-time delay setting.

**NOTE:** La protection du disjoncteur n'est maintenue qu'à 25% de la valeur du transformateur de courant lorsque le calibreur est retiré. Si le disjoncteur est chargé à plus de 25% de la valeur du transformateur de courant, le disjoncteur se déclenchera après une période prédéterminée par une mnuterie.



Figure 2. Rating Plug removal.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.

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GE Industrial Systems

General Electric Company  
41 Woodford Ave., Plainville, CT 06062