

# MCG Surge Protection

## Installation Instructions For Model PT160 Delta

### Important Warranty Information

MCG surge protectors are designed to work at specific voltages and configurations, for example, at 120/208VAC, Wye. Installation of the surge protector improperly on a power system will automatically void the warranty.

### 1. Confirm Model with Power Service.

Measure Phase - Ground, Phase - Phase, with voltmeter to confirm application voltage prior to installation.

NOTE: This device features an internal protection that will disconnect the surge protective component at the end of its useful life but will maintain power to the load – now unprotected. If this situation is undesirable for the application, follow the manufacturer's instructions for replacing the device.

WARNING – Risk of Electric Shock:  
This unit contains no user serviceable parts.

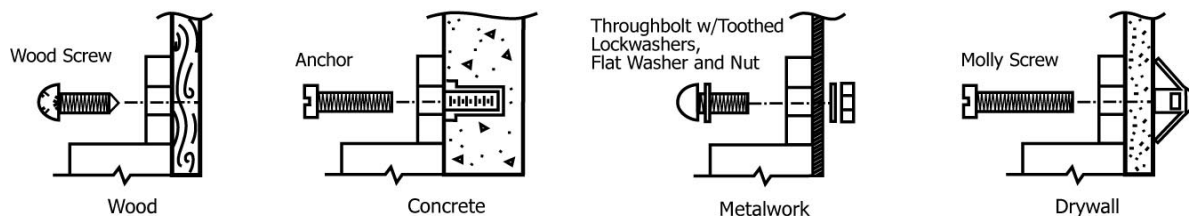
| Voltage Configuration | Power Service | Description     | Wiring Diagrams Page |
|-----------------------|---------------|-----------------|----------------------|
| PT160-240D            | 240VAC        | 3ph, 3W+G Delta | 2                    |
| PT160-480D            | 480VAC        | 3ph, 3W+G Delta | 2                    |
| PT160-600D            | 600VAC        | 3ph, 3W+G Delta | 2                    |

### 2. Disconnect Power before Installation

All wiring to be done in accordance with National Electric Code and local codes by qualified electricians.

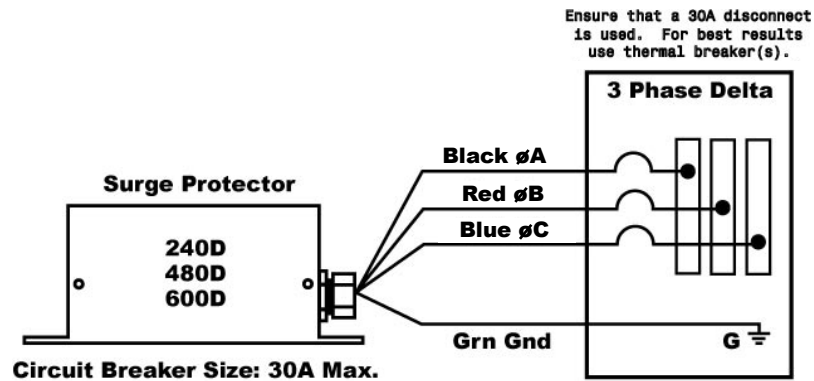
### 3. Mounting

For best performance, mount protector as close to service panel as possible and cut back wires as short as possible. Do not leave service loops. Secure unit to mounting surface. Use proper fasteners as indicated (Fasteners not supplied.)



## 4. Wiring Diagram

For best performance, conductors should be tightly taped together and as short as possible for the entire run.



## 5. Powering up the Protector.

Upon power up, the front panel will show the following:

### For PT160 Delta models without the Event Counter (“-EC”) option:

- a. All Green LEDs are illuminated. NOTE: The green, front panel LEDs continuously monitor the status of the protection circuits. If a surge component is damaged and/or if a fuse operates, the appropriate LED(s) will extinguish and the relay will change state.
- b. On the top of the unit, two green LEDs are illuminated (indicating power to the relay coils).

See Figure 1 on following page.

If any other condition is observed, remove power and contact MCG at 1-800-851-1508 for assistance.

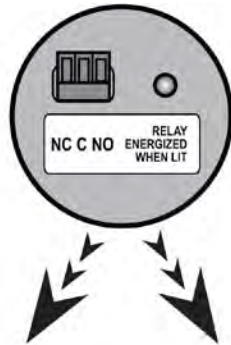
### For PT160 Delta with the Event Counter (“-EC”) option:

- a. All Green LEDs are illuminated. NOTE: The green, front panel LEDs continuously monitor the status of the protection circuits. If a surge component is damaged and/or if a fuse operates, the appropriate LED(s) will extinguish and the relay will change state.
- b. On the top of the unit, two green LEDs are illuminated (indicating power to the relay coils).
- c. Counter will read “0” or a nonzero value. If desired, see step 6 for counter reset instructions.

See Figure 1 and 2.

If any other condition is observed, remove power and contact MCG at 1-800-851-1508 for assistance.

**Fig. 1:** Green LEDs are illuminated. On the top of the unit, two green LEDs are illuminated (indicating power to the relay coils.)



**Fig. 2:** Upon startup for the -EC models, counter should read zero. If a non-zero is displayed, the counter can be reset by following Step 6. If the counter is blank, contact MCG Support at 1-800-851-1508.



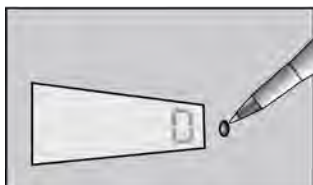
## 6. Counter Reset Feature (Models with “-EC” option)

This feature resets the surge counter back to zero. The counter reset feature is generally only exercised at time of installation, where power up may have caused an event. A monthly log is recommended to keep track of transient occurrences. See figure 3.

To reset event counter:

- a. Locate “Counter Reset” location on front panel.
- b. Using a ball point pen, insert pen into hole and press reset button.
- c. Observe counter indicating “0”.

**Fig. 3:** Counter Reset on front panel can be reset with the tip of a ball point pen.

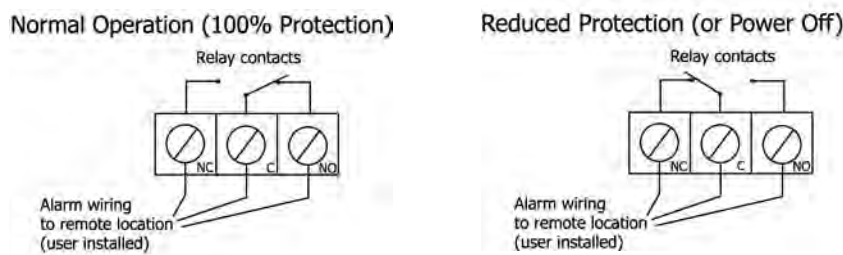


## 7. Remote Relay Feature

This feature enables you to operate a remote beeper/indicator light for monitoring the surge protector status from a remote location. It can also be connected to a building monitoring system as the relays provide Normally Closed or Normally Open contacts.

**RELAY FUNCTION:** The relays are always energized unless power is removed or a reduced protection scenario exists. The two sets of relay contacts may be wired in series using the NO + C contacts (which are shorted during normal operation) or they may be wired in parallel using NC + C contacts (which are open during normal operation). See figure 4.

Fig. 4: Relay Function:



NOTE: Each relay monitors one of the two protection assemblies.

To access remote relay terminal blocks:

- The remote relay terminal blocks are located on the side of the protector. There are 3 terminals, each labeled NC (Normally Closed), C (Common), and NO (Normally Open). These are 1 Form C contacts rated at 1A, 30VDC or 0.5A, 125VAC. Maximum switched power: 30W/60VA.
- Remove power to protector. Pull out the pluggable terminal block. Connect remote monitoring circuit (user supplied) to the appropriate terminals using a small flathead screwdriver.
- Remember that under normal operating conditions (power on and full protection present), the NO – C contacts will be closed (short circuit) and the NC-C contacts will be open.
- Plug in terminal block and power up unit.
- Observe that external circuit is functioning properly.

## 8. Troubleshooting and Maintenance

MCG surge protectors do not require any periodic maintenance. However, if any of the front panel green LEDs extinguish, a reduced protection situation exists and the protector should be returned for service. If this occurs, contact MCG sales at 1-800-851-1508.

# 9. Dimensions for Model PT160D

*Dimensional units are expressed in inches and millimeters.*

