

# INSTRUCTIONS 730302 Rev. B

## Surge-Trap® Modular & Pluggable Systems - IEC Type 2 SPDs



**DANGER**

### Hazard of Electric Shock, Burn or Explosion

- This equipment must be installed and serviced only by qualified electrical personnel in accordance with national and local electrical codes.
- Turn off all power supplying this equipment before working on equipment.
- Always use a properly rated voltage-sensing device to confirm power is off.
- Replace all devices, doors and covers before restoring power to this equipment.
- Do not apply petroleum-based products to non-metallic parts.

Improper installation or misapplication of these devices may result in serious injury to the installer and/or damage to electrical system or related equipment. Protective eye wear and clothing should be worn whenever working around hazardous voltages.

Failure to follow these instructions could result in serious injury or death.



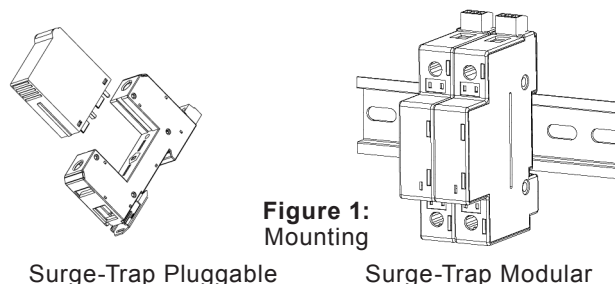
**CAUTION**

- Do not attempt to open or tamper the Surge-Trap device in any way as this may compromise performance and will void the warranty.
- Megger and hi-potential tests may damage the device. Disconnect all power supplying the equipment and isolate the Surge-Trap device before testing.
- Install for point-of-use. Surge-Trap can be used for Type 2 or 3 / Class II or III applications according to IEC 61643-1.
- Prior to installation, confirm that the Surge-Trap is rated for the correct voltage, current and frequency equivalent to the application.
- Surge-Trap must be installed within an enclosure or control cabinet.
- Operating and storage temperature of this device must be within -40°C and +85°C.



### 1. Mounting

Surge-Trap is designed to mount onto a 35mm DIN rail or top-hat rail (standard EN 50022, BS 5584) set in the horizontal position. To install, first hook the line side over the 35mm DIN rail and then push in the load side until the spring loaded mounting clip “clicks” onto the rail with the Surge-Trap label text shown in the upright position reading left to right (See Figure 1).

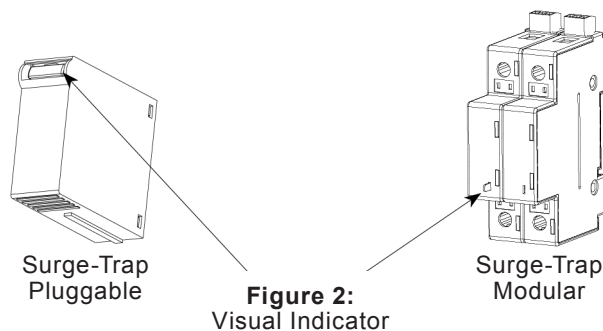


**Figure 1:**  
Mounting

### 2. Replacement / Removal

**Surge-Trap Pluggable** - If the blown RED indicator tab is visible on any of the multiple pole units. To remove, pull the plug out, discard it and replace it with a new one by pushing it into the place of the blown one. The “click” indicates that the plug is set in its place (See Figure 2).

**Surge-Trap Modular** - If the blown indicator tab is visible on any of the multiple pole units, then the entire unit has reached the end of its life and must be replaced. To remove, push up on the unit and rock the top off the 35mm DIN rail (See Figure 2).



**Figure 2:**  
Visual Indicator

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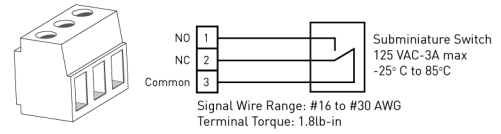
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### 3. Auxiliary Micro-Switch Installation (Optional)

Remote signaling is available on all Surge-Trap products that specify a remote indicator. #16 – #30 AWG signal wire may be used. Maximum torque rating for the terminal screw is 1.80 in-lb. The maximum continuous current rating for the remote indicator is 3A. If applicable, install signal wiring as shown in Figure 3.

Figure 3: Microswitch



### 4. Wire Installation

#6 – #14 AWG, 60/750C Copper wire shall be used. Maximum torque to be applied to terminal screws is 2.0 newton-meter (14.75 in-lb). Strip back wire insulation 6mm (1/4").

Interconnecting wire should be kept at minimum length. Wire bending radius should be > 100mm (4"). Do not loop or twist interconnecting wire. Failure to meet these requirements will result in higher let-through voltages.

Surge-Trap is normally installed in parallel with the load or the electrical system wiring.

Determine electrical voltage configuration and proper modes of protection and install wiring as shown in Figure 4.

**NOTE:** Surge-Trap SPD does not require any additional overcurrent protection.

Figure 4: Wiring Diagram - Photovoltaic (PV)

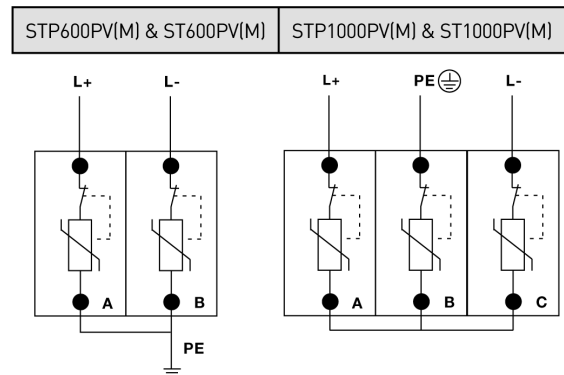
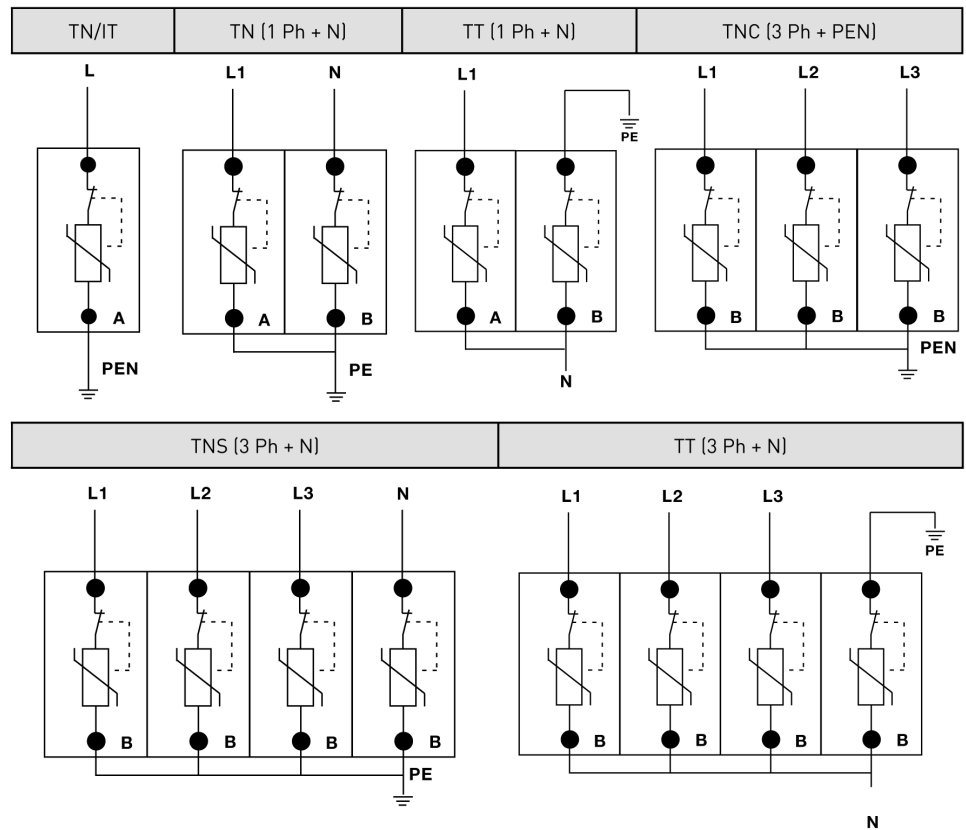


Figure 4: Wiring Diagram



IEC61643-1 Class 2

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