

# INSTRUCTIONS 270353

## Surge-Trap® Type 1 SPD for NEMA Type 4X Applications



**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.

## INSTALLATION

### PANEL MOUNT AND WIRING

1. Turn off all power supplying this equipment.
2. Panel Mount: Punch out a 3/4" enclosure knockout from the panel or the mounting location as close as possible to the where the wires will terminate. Where other types of mounting are required, please consult the factory.
3. Insert a 3/4" close nipple to the Myers Hub provided and attached to the Surge-Trap® SPD. Insert SPD wires carefully through the knockout hole. Tighten a 3/4" steel conduit lock nut to secure the SPD to the enclosure (as shown in Figure 1).
4. Connect the wires as shown in the appropriate wiring diagram.



**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.
- Prior to installation, confirm that the Surge-Trap is rated for the correct voltage, current and frequency equivalent to the application.
- For use in NEMA Type 1 through 4X Applications.

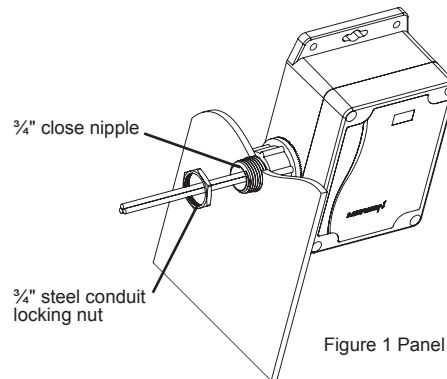


Figure 1 Panel Mount

5. Overcurrent Protection: Type 1 SPDs are UL Listed and tested to be self-protecting. They do not require upstream protection according to UL 1449 and Section 285 of the NEC. However, we recommend an upstream disconnect or breaker for maintenance and safety. Many switches and circuit breakers have limitations regarding more than one wire in a connector. Breaker manufacturers can provide information on the limitations of their available terminals. Where additional wires are prohibited under the same terminal, many times installing a new circuit breaker is convenient. Typical sizes are 15, 20 and 30 amps.
6. For optimal device performance, use shortest wire length of wire as possible. Cut off the excess wire instead of coiling it up. Avoid sharp bends.
7. Before energizing, installer shall verify service and separately derived system Neutral to Ground bonding jumper per the NEC requirements.

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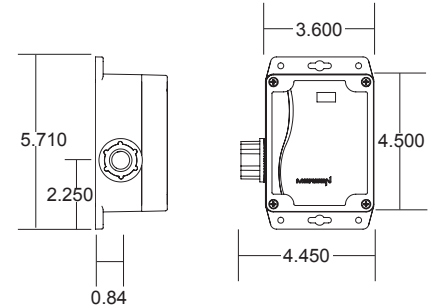


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## Surge-Trap® Type 1 SPD for NEMA Type 4X Applications

### PRODUCT CHARACTERISTICS

SPD Model	Nominal Voltage (V ac)	Phase	Modes	Freq (Hz)	SCCR	$I_n$	Wiring Diagrams
STT4X1201PG	120	1	N-G, L-N, L-G	50/60	200 kA	20 kA	A
STT4X240SPG	120/240	1S	L-N, L-L	50/60	200 kA	20 kA	B
STT4X2401PG	240	1	N-G, L-N, L-G	50/60	200 kA	20 kA	A
STT4X2083PYG	120/208	3Y	L-N, L-L	50/60	200 kA	20 kA	C
STT4X4803PYG	277/480	3Y	L-N, L-L	50/60	200 kA	10 kA	C
STT4X6003PYG	347/600	3Y	L-N, L-L	50/60	200 kA	10 kA	C
STT4X2403PDG	240	3D	L-G, L-L	50/60	200 kA	20 kA	D
STT4X4803PDG	480	3D	L-G, L-L	50/60	200 kA	10 kA	D

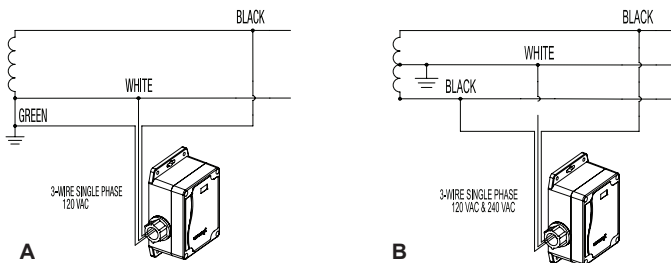


### WIRING DIAGRAMS

Surge-Trap SPD is to be used on solidly grounded systems ONLY!

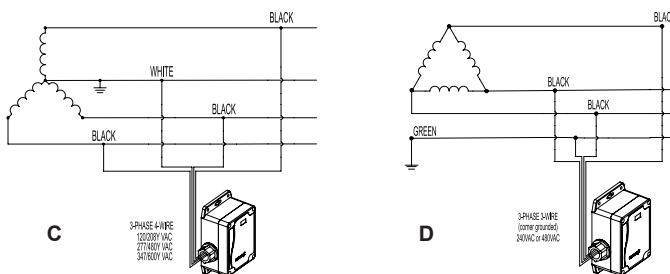
#### Single/Split Phase Systems (3 Wire)

Three wire system designed for protection of the modes as listed in the table above. Refer to the connection diagrams to ensure that the SPD you have chosen is appropriate for the application it is being installed into.



#### Three Phase Systems (4 Wire)

Four wire system designed for protection of the modes as listed in the table above. Refer to the connection diagrams to ensure that the SPD you have chosen is appropriate for the application it is being installed into.



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