# SURGE-TRAP®
# STZ-R SERIES
# INTERNAL SPD

## NEMA DEVICES FOR ANSI/UL 1449 TYPE 1 AND 2 APPLICATIONS

### RATINGS:

- **Volts ($U_n$):** 120-480VAC

- **Nominal Discharge Current Rating ($I_n$):** 20kA

- **Surge Capacity (per phase):** 100, 150, 200, 300, 450kA

- **Short-Circuit Current Rating (SCCR):** 200kA

- **Optional EMI/RFI Filter:** Up to -50dB from 10kHz to 100MHz

For facility-wide surge protection internal to existing equipment such as switchgear, panelboards, or motor control centers, the Surge-Trap® Type 1 STZ-R Series is the obvious choice. The STZ-R series features surge capacities up to 450kA designed with Mersen's industry-leading TPMOV® technology inside making it the safest and most reliable product on the market. Ideal for OEMs and panel builders, this internal SPD can be installed on the line or load side of the service entrance.

### FEATURES AND BENEFITS:
- SPD intended to be installed internal to existing switchgear, panelboards, motor control centers, etc.
- Available with accessory **Option A** for basic features (LED status indicators) and **Option B** for standard features (EMI/RFI filter, surge counter, Audible alarm and dry contacts)
- Local or remote human machine interface (HMI) which can be rotated 90 degrees depending on desired cable entry location
- Up to 10 Modes of Protection (L-N, L-L, L-G, N-G)
- 15-year warranty

### APPROVALS:

- ANSI/UL 1449 4th Edition, Type 1 SPD, File E210793

- CSA C22.2, Type 1 SPD

- ANSI/IEEE C62.41.1, C62.41.2, C62.45

- UL96A Lightning Protection

- RoHS Compliant

UL LISTED   CSA   RoHS

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## GENERAL PRODUCT SPECIFICATIONS

| | | | |
|---|---|---|---|
| Mounting: | Mounting feet | Relative Humidity Range: | 0 to 95% non-condensing |
| Wiring: | Wire Lugs for 6-10 AWG copper | Visual LED End-of-Life Indicator: | Green = 67 to 100% Life |
| Flammability: | UL94-5VA | | Yellow = 34 to 66% Life |
| Operating & Storage Temperature: | -40℃ to +85℃ | | Red = 0 to 33% Life |
| | | Frequency: | 50-60Hz |

| CATALOG NUMBER (INCLUDES SUFFIXES*) | SYSTEM VOLTAGE AND CONFIGURATION | $I_n$ | MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV, $U_c$) | | | | VOLTAGE PROTECTION RATING (VPR) (UL 1449, 6kA, 3kV) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L-N | L-G | L-L | N-G* | L-N | L-G | L-L | N-G* |
| STZ240S… | 240/120V Split Phase | 20kA | 150 | 150 | 300 | 150 | 700 | 700 | 1000 | 700 |
| STZ208Y… | 208/120V 3-Phase WYE | 20kA | 150 | 150 | 300 | 150 | 700 | 700 | 1000 | 700 |
| STZ480Y… | 480/277V 3-Phase WYE | 20kA | 320 | 320 | 640 | 150 | 1200 | 1200 | 2000 | 700 |
| STZ120D… | 120V 3-Phase DELTA | 20kA | - | 150 | 300 | - | - | 700 | 1000 | - |
| STZ240D… | 240V 3-Phase DELTA | 20kA | - | 320 | 640 | - | - | 1200 | 2000 | - |
| STZ480D… | 480V 3-Phase DELTA & HRG WYE | 20kA | - | 550 | 1100 | - | - | 1800 | 3000 | - |

*Part Number Selector (Don't see what you need? Please contact the factory.)

| STZ | 480Y | 30 | B | R | U |
|---|---|---|---|---|---|
| **Model Series** | **Voltage and System Configuration** | **Surge Capacity** | **Package** | **Enclosure** | **Disconnect** |
| STZ | **240S:** 240/120V Split<br>**120D:** 120V DELTA<br>**208Y:** 208/120V WYE<br>**480Y:** 480/277V WYE<br>**240D:** 240V DELTA<br>**480D:** 480V DELTA & HRG WYE | **10:** 100kA<br>**15:** 150kA<br>**20:** 200kA<br>**30:** 300kA<br>**45:** 450kA | **A: Basic**<br>LED Status Indicators<br>Phase Loss Indication<br>**B: Standard**<br>LED Status Indicators<br>Phase Loss Indication<br>Audible Alarm<br>Form C Dry Contacts<br>EMI/RFI Filter<br>Surge Counter | **Q:** Internal SPD without HMI<br>**R:** Internal SPD with HMI | **U:** UL98 Switch<br>**BLANK:** None |

Human-Machine Interface (HMI)

Option A: Basic

Option B: Standard



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## Optional Form C Dry Contact and Audible Alarm (Included with Option B)

**Form C Dry Contact**
  125VAC, 1A Resistive
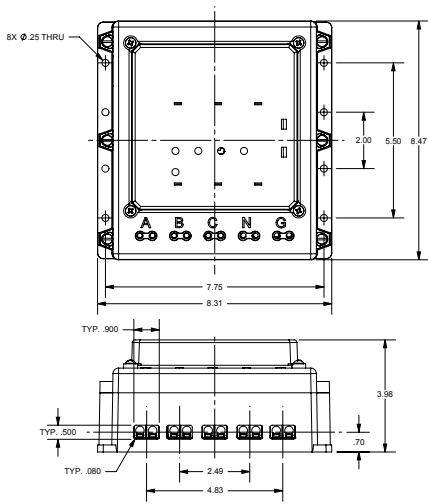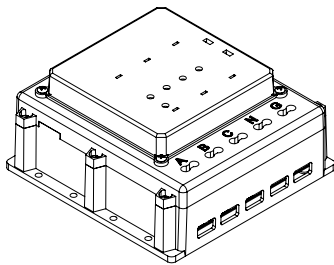  30VDC, 2A General Purpose

  COM = Common
  NO = Normally Open
  NC = Normally Closed

**Audible Alarm**
  Alarm sounds when any protection is lost.



## Dimensions and Mounting Configurations

### Without Disconnect Switch
### 12x12 Enclosure



### With Disconnect Switch
### 16x12 Enclosure