

# Surge-Trap<sup>®</sup> STZ Series

Surge Protective Device

## SURGE PROTECTION

## PANEL MOUNT SPD FOR UL 1449 TYPE 1 AND 2 APPLICATIONS



The Surge-Trap Type 1 STZ Series is Mersen's premium-featured surge option to be installed at service entrance locations and for protection of the most critical loads. Designed with industry leading Mersen TPMOV<sup>®</sup> Technology, the STZ series is ideal for industrial and commercial environments. Does not require additional overcurrent protection. The STZ series has mounting options (internal and external/in enclosure) suitable for both new construction and retrofit applications.

Technical Data Overview	
Surge Current Rating ( $I_{max}$ )	100, 150, 200, 300, 450kA <sup>(1)</sup>
System Voltage	120VAC-600VAC
Nominal discharge current ( $I_n$ ) (8x20 $\mu$ s)	20kA
Short Circuit Current Rating (SCCR)	200kA
Nominal power frequency	50 Hz or 60 Hz
Response Time	Less than 1 nanosecond (one per phase)
Mounting	- Externally Mounted Panel - Internally Mounted for Panel integration
Enclosure Options	NEMA 1 / 12 / 3R / 4 / 4X Stainless Steel
EMI/RFI Filter	Up to -50dB from 10kHz to 100MHz
Wiring	Wire Lugs for 6-10 AWG copper
Flammability	UL94-5VA
Operating & Storage Temperature	- 40°F (40°C) to + 185°F (85°C)
Visual Status Indicator LED	Green = 67 to 100% Life Yellow = 34 to 66% Life Red = 0 to 33% Life
Remote Status Indicator	Form C Dry Contacts
<sup>(1)</sup> 450kA Surge Capacity not available for 380Y, 480D, and 600Y voltage configurations.	

## FEATURES/BENEFITS

- The field-replaceable SPD module mounts in any orientation to reduce lead length and optimize performance
- Standard features include LED phase loss indication, EMI/RFI filter, surge counter, dry contacts and audible alarm with silence button
- Optional disconnect switch
- Up to 10 modes of protection
- 15-year warranty

## APPLICATIONS

- Service entrance locations
- OEM's Automatic Transfer Switch panel integration
- Switchboards
- Data centers
- Any critical application that requires a high level of protection

## APPROVALS/STANDARDS

- ANSI/UL 1449 5th Edition, Type 1 SPD, File E210793
- CSA C22.2, Type 1 SPD
- UL96A Lightning Protection
- RoHS Compliant



## PART NUMBER SELECTOR

Don't see what you need? Please contact Technical Services.

STZ Series	480Y Voltage and System Configuration	30 Surge Capacity	B Standard Features	1 Enclosure	T Disconnect Switch
STZ	<b>240S:</b> 240/120V Split <b>208Y:</b> 208/120V WYE <b>380Y:</b> 380/220V WYE <b>480Y:</b> 480/277V WYE <b>240D:</b> 240V DELTA <b>480D:</b> 480V DELTA & HRG WYE <b>600Y:</b> 600/347V WYE	<b>10:</b> 100kA <b>15:</b> 150kA <b>20:</b> 200kA <b>30:</b> 300kA <b>45:</b> 450kA <sup>[1]</sup>	LED Status Indicators Phase Loss Indication Audible Alarm Form C Dry Contacts EMI/RFI Filter Surge Counter	<b>1:</b> NEMA 1/12/3R/4 <b>X:</b> NEMA 4X Stainless Steel <b>Q:</b> Field-replaceable module <b>R:</b> Without enclosure for internal mounting	<b>BLANK:</b> None <b>T:</b> UL 98 switch with door mounted handle on enclosed units <sup>[2]</sup> <b>U:</b> UL 98 switch with shaft and door mountable switch handle for internally mounted units

Example Part Number:

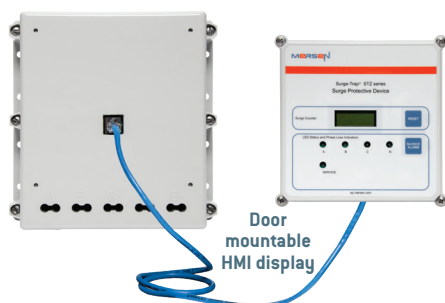
**STZ 480Y 20 B 1 T**

[1] 450kA Surge Capacity not available for 380Y, 480D, and 600Y voltage configurations.

[2] The enclosure dimensions for units with the disconnect switch option are larger than those without. Please refer to the dimensions on the next page.

[3] For door mounting HMI display, Options R and RU additional communication cable (5 ft.) is provided.

### Option "R" for Internal Mounting<sup>[3]</sup>



### Option "1" for External Mounting

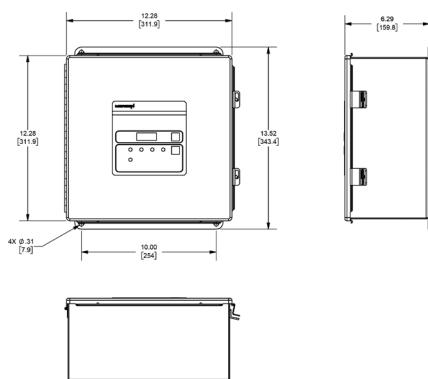


## VOLTAGE SPECIFICATIONS

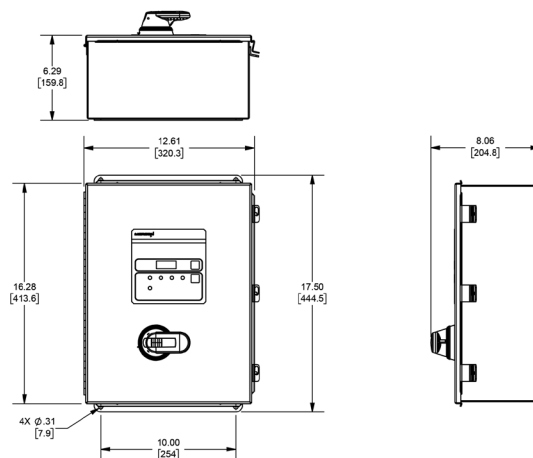
Part Number	System Voltage and Configuration	Maximum Continuous Operating Voltage (MCOV, U <sub>c</sub> )				ANSI/UL 1449 5th Edition voltage protection ratings - VPR							
		L-N	L-G	L-L	N-G	Without Integral Switch				With Integral Switch [U]			
						L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
STZ240S__B [1 or X]__	240/120V Split Phase	150	150	276	150	800	800	1200	700	800	900	1200	800
STZ208Y__B [1 or X]__	208/120V 3-Phase WYE	150	150	239	150	800	800	1200	700	800	900	1200	800
STZ480Y__B [1 or X]__	480/277V 3-Phase WYE	320	320	552	150	1500	1200	2000	700	1500	1500	2000	800
STZ240D__B [1 or X]__	240V 3-Phase DELTA	-	320	320	-	-	1200	2000	-	-	1200	2000	-
STZ380Y__B [Q or R]__	380/220 3-Phase WYE	552	320	320	150	2000	1200	1200	600	2000	1500	1500	800
STZ380Y__B [1 or X]__	380/220 3-Phase WYE	552	320	320	150	2000	1500	1200	700	2000	1500	1500	800
STZ480D__B [1 or X]__	480V 3-Phase DELTA & HRG WYE	690	420	420	150	2500	1500	1500	600	2500	1500	1500	800
STZ240S__B [Q or R]__	240/120V Split Phase	690	420	420	150	2500	1500	1500	700	2500	1500	1500	800
STZ208Y__B [Q or R]__	208/120V 3-Phase WYE	150	150	276	150	700	700	1000	600	800	900	1200	800
STZ480Y__B [Q or R]__	480/277V 3-Phase WYE	320	320	552	150	1200	1200	2000	600	1500	1500	2000	800
STZ240D__B [Q or R]__	240V 3-Phase DELTA	-	320	320	-	-	1200	2000	-	-	1200	2500	-
STZ480D__B [Q or R]__	480V 3-Phase DELTA & HRG WYE	-	552	552	-	-	1800	4000	-	-	1800	4000	-
STZ600Y__B [Q or R]__	600/347 3-Phase WYE	690	420	420	150	2500	1500	1500	600	2500	1500	1500	800
STZ600Y__B [1 or X]__	600/347 3-Phase WYE	690	420	420	150	2500	1500	1500	700	2500	1500	1500	800

## DIMENSIONS AND MOUNTING CONFIGURATIONS

### ENCLOSURE OPTIONS 1 or X - External Mounting

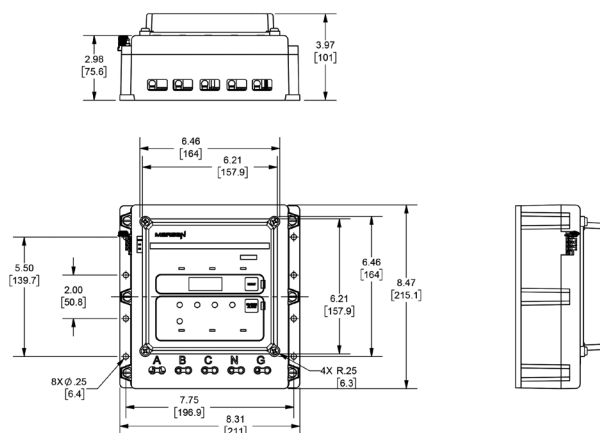


Without Disconnect Switch

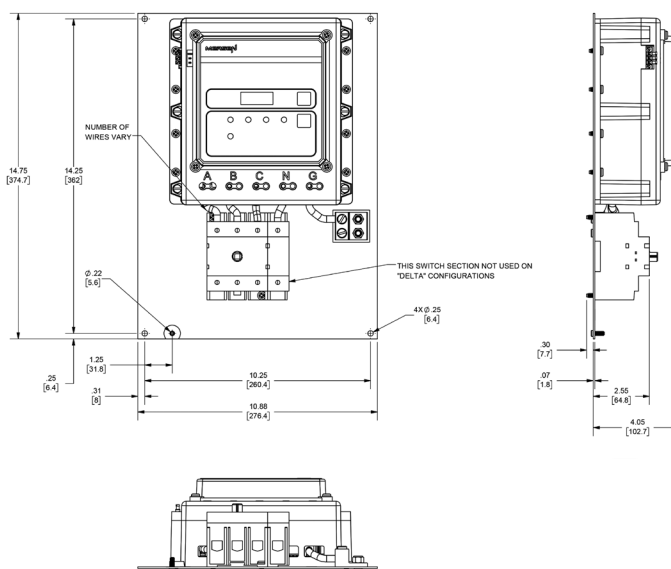


With Disconnect Switch

### ENCLOSURE OPTIONS R - Internal Mounting

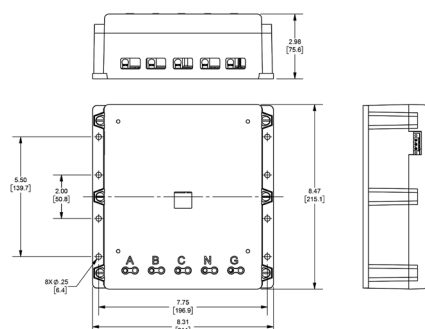


Without Disconnect Switch



With Disconnect Switch

### ENCLOSURE OPTIONS Q - Field-replaceable Module



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[STZ208Y10B1](#) [STZ240D15B1T](#) [STZ208Y20BRU](#) [STZ240D20B1T](#) [STZ240D30B1T](#) [STZ240D45BX](#) [STZ240S10BX](#)  
[STZ240S45BQ](#) [STZ480Y20B1T](#) [STZ480Y45B1T](#) [STZ240S15BX](#) [STZ480D10BQ](#) [STZ480D30BRU](#)  
[STZ480Y10BRU](#) [STZ480Y30B1T](#) [STZ208Y10BRU](#)