

Surge Tracker™ ST2-50xxx

50 kA Per Phase / 50 kA Per Mode



The **Surge Tracker Series 2** Surge Protective Device (SPD) is designed to protect residential and small office/home offices. The ST2 allows for an easy, quick installation via parallel connection to the panel. The ST2 models equipped with advanced surge filtering (“C” suffix) are ideal for protecting homes with sensitive modern appliances and entertainment systems and offices computers. While the non-filtering units (“A” suffix) are ideal for installation at wells and pumps.



Features

- ◆ NEMA 4X rated watertight enclosure withstands outdoor/indoor environments
- ◆ Illuminated diagnostic LED indicates surge protection and power
- ◆ Easy, direct installation via metal hub
- ◆ Includes mounting feet

Applications

- ◆ Residential electrical panels
- ◆ Motors and HVAC equipment
- ◆ Small office/home office equipment
- ◆ Well pumps and sprinkler system panels



Specifications

Protection Modes:	1R1*/Y3W*/3Nx: L-G 1S1: L-N 1P1/2Nx: L-N, N-G <small>*For applications where neutral and ground are bonded at the electrical panel/installation location</small>
Surge Current Rating:	50 kA per Phase / 50 kA per mode
Nominal Discharge Current Rating (I_n):	20 kA
Short Circuit Current Rating:	200 kA

Physical Specifications

Enclosure	NEMA 4X Watertight
Conduit Size:	½” for 1R1 & 1P1 (Fig. 1) ¾” for Y3W (Fig. 2)
Temperature Rating:	-40°C to 80°C
Diagnostics:	Blue LED, normally on. When the LED is off check power and/or replace unit.

Standards and Certifications

SPD Type:	Type 1 / Type 2
Product Certifications	ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) <small>*Type 2 SPDs only</small>
Warranty:	5 Year Limited Warranty

Options

Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC
A	1	●	--	--
C	2	●	●	--
D2	2	●	●	●



MEASURED LIMITING VOLTAGE PERFORMANCE AND ELECTRICAL SPECIFICATIONS

ST2-50 Family

Voltage Code	Figure #	SPD Configuration (Wiring)	Mode	Maximum Continuous Operating Voltage (MCOV)	Voltage Protection Rating (VPR)	ANSI/IEEE C62.41.2, C62.45, C62.62 Measured Limiting Voltage Test Results (6" External Lead Length)	
						Category A 30 Ω 100 kHz Ring Wave 2 kV / 67 A @ 270° Phase Angle	
ST2-501R1A	1	120/240 V, Split Ø (2 wire + ground)	L-G L-L	150 300	700 1000	513 V 995 V	
ST2-501R1C	1	120/240 V, Split Ø (2 wire + ground)	L-G L-L	150 300	600 1200	538 V 40 V	
ST2-501R1D2	1	120/240 V, Split Ø (2 wire + ground)	L-G L-L	150 300	600 1200	538 V 40 V	
ST2-501P1A	1	120 V, Single Ø (2 wire + ground)	L-N L-G N-G	150 300 150	700 700 1200	595 V 957 V 409 V	
ST2-501P1C	1	120 V, Single Ø (2 wire + ground)	L-N L-G N-G	150 300 150	600 600 1200	41 V 590 V 423 V	
ST2-501S1A	1	120/240 V, Split Ø (3 wire + ground)	L-N L-L	150 300	700 1000	513 V 995 V	
ST2-501S1C	1	120/240 V, Split Ø (3 wire + ground)	L-N L-L	150 300	600 1200	38 V 55 V	
ST2-502N2A	2	240 V, Two Ø (2 wire + ground)	L-G L-L	320 640	1200 2500	1743 V 1810 V	
ST2-502N2C	2	240 V, Two Ø (2 wire + ground)	L-G L-L	320 640	1200 2500	1148 V 59 V	
ST2-503N4A	2	480 V, 3ØΔ (3 wire + ground)	L-G L-L	552 552	1800 4000	1701 V 1809 V	
ST2-503N4C	2	480 V, 3ØΔ (3 wire + ground)	L-G L-L	552 552	1800 4000	1732 V 69 V	
ST2-503N6A	2	600 V, 3ØΔ (3 wire + ground)	L-G L-L	690 690	3000 3000	1670 V 1657 V	
ST2-503N6C	2	600 V, 3ØΔ (3 wire + ground)	L-G L-L	690 690	3000 3000	NA NA	
ST2-50Y3WA	2	208Y/120 V, 3Ø WYE (3 wire + ground)	L-G L-L	150 300	600 1000	590 V 1101 V	
ST2-50Y3WC	2	208Y/120 V, 3Ø WYE (3 wire + ground)	L-G L-L	150 300	700 1500	581 V 55 V	

Measured Limiting Voltage (MLV) Test Parameters: Positive polarity, Category A: Line power applied, Category C: No line power applied, Voltages are peak (±10%). Measured Limiting Voltages are measured from the insertion point on the sine wave to the peak of the surge for powered tests. Each MLV is the average of the phases within that mode of protection. In order to duplicate the results, the specified mode of protection must be tested in all phases (except N-G) and averaged together. (Individual mode or shot results may vary by more than 10%. *Scope Settings: Time Base = 10 microseconds per division, Sampling Rate = 2.5 Giga-samples/sec, Bandwidth = 400 MHz (200 MHz for Cat C), Probes: Tektronix P5100/P6015A. These settings help to assure MLV results are accurate.* **All tests performed with 6" lead length (external to the enclosure), simulating actual installed performance.**

Figure 2 (Y3W)



Figure 1 (1R1, 1P1, 1S1)

