

Surge-Trap[®] Modular SPD

DIN-rail Style Modular SPD

Surge-Trap[®] Modular Surge Protective Device (SPD) is a no-fuse, fail-safe surge suppressor featuring Mersen's patented T_{PMOV}[®] technology inside. The modular SPD is UL 1449 Third Edition approved. It is DIN-rail mountable featuring a fail-safe self-protected design, visual indicator and a small footprint. A remote indicator option provides status to critical control circuitry. The Surge-Trap Modular SPD has a high short circuit rating and a thermally protected MOV, which eliminates the need for additional overcurrent protection devices.

Features/Benefits

- Easy installation or retrofit
- DIN-rail mountable
- Fail-safe, self-protected design
- Remote indicator (optional)
- Visual indicator
- IP20 finger-safe design
- Small footprint
- No additional overcurrent protection devices required

Applications:

- AC/DC distribution
- Power supplies
- Industrial automation
- Telecommunications
- Motor controls and starter systems
- Programmable logic controller (PLC) applications
- Power transfer equipment
- HVAC applications
- AC drives
- UPS systems
- Security systems
- IT/Data centers
- Medical equipment



Ratings:

Volts : 120V to 690V AC
: 600V to 1000V DC
(PV only)

Nominal discharge current
: 20kA (most models)

Max Discharge Current
: 50kA per phase

SCCR : 200kA

Operating & storage temp
: -40°C to +85°C

Wiring range:
: #6 to #14AWG

General Product Specifications

Short-Circuit Current Rating	200 kA
Maximum Discharge Current (I _{max})	50 kA
Frequency	50-60 Hz
Response Time	<25 ns
Visual End of Life Indicator	RED = End of Life
Remote End of Life Indicator	NO/NC Dry Contact
Wire Range	6-14AWG Solid / Stranded CU
Terminal Torque	14.75 lbs-in
Mounting	35mm DIN-Rail
Degree of Protection	IP 20
Product Warranty	2 years
Flammability	UL94 V0
IEEE Location Category	A or B
Operating & Storage Temperature	- 40°C to + 85°C

Approvals:

- UL 1449 Third Edition Recognized, File E210793
- Type 1 Component Assembly
- IEC 61643, CE
- RoHS Compliant
- ANSI/IEEE C62.41



Surge-Trap[®] Modular SPD

1-POLE, SINGLE-Phase, 2-Wire

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST1201PG(M)	120	180	180	-	-	500	500	-	-	20
ST2301PG(M)	240	270	270	-	-	800	800	-	-	20
ST2771PG(M)	277	320	320	-	-	900	900	-	-	20

2-POLE, SPLIT-Phase, 3-Wire

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST208SPG(M)	120/208	180	180	-	360	500	500	-	900	20
ST240SPG(M)	120/240	180	180	-	360	500	500	-	900	20
ST480SPG(M)	240/480	270	270	-	540	800	800	-	1500	20

3-POLE, 3-Phase DELTA, 3-Wire

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST2403PD(M)	240	-	-	-	270	-	-	-	1000	20
ST4803PD(M)	480	-	-	-	550	-	-	-	3000	20

3-POLE, 3-Phase DELTA, 4-Wire

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST2403PDG(M)	240	270	270	-	540	800	800	-	1500	20
ST4803PDG(M)	480	550	550	-	1100	1500	1500	-	3000	20

3-POLE, 3-Phase WYE, 4-Wire

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST2083PYG(M)	120/208	180	180	-	360	500	500	-	900	20
ST4803PYG(M)	277/480	320	320	-	640	900	900	-	1800	20
ST6003PYG(M)	347/600	420	420	-	840	1200	1200	-	2000	20
ST6903PYG(M)	400/690	510	510	-	1020	1500	1500	-	3000	20

4-POLE, 3-Phase WYE, 5-Wire, Including N-G Mode

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				I _n (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
ST2083PY(M)	120/208	180	360	180	360	500	900	500	900	20
ST4803PY(M)	277/480	320	470	150	640	1000	1500	500	1800	20
ST6003PY(M)	347/600	420	690	270	840	1500	2500	800	2500	20
ST6903PY(M)	400/690	1020	510	510	1020	3000	1500	1500	3000	20

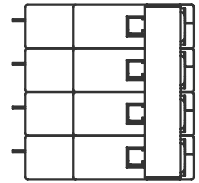
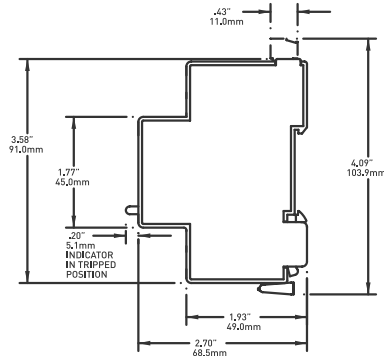
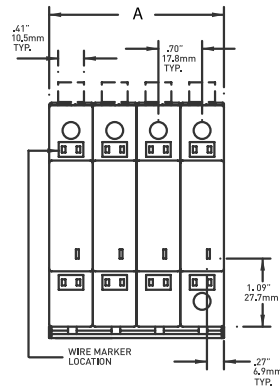
PHOTOVOLTAIC (SOLAR), 2-POLE and 3-POLE, 3-Wire

Catalog No	Nominal Voltage (VDC)	No. of poles	Maximum Continuous Operating Voltage, U _{ov} (VDC)	Voltage Protection Level, U _n (VDC)	I _n (kA)	SCCR, I _{scwpv} (kA)
ST600PV(M)	600	2	720	<1.5k	20	10
ST600YPV(M)	600	3	750	<2.4k	20	10
ST1000PV(M)	1000	3	1250	<3.0k	20	10

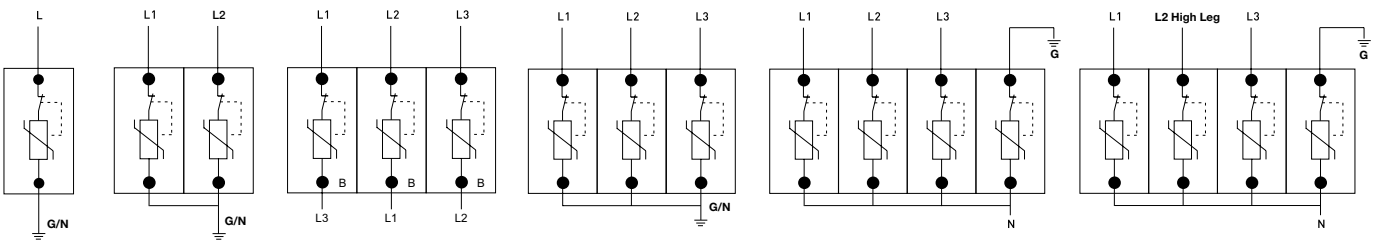
Surge-Trap[®] Modular SPD

Dimensions

Poles	in	A mm
1 Pole	0.70	17.8
2 Pole	1.39	35.5
3 Pole	2.10	53.3
4 Pole	2.80	71.0



Wiring Diagrams



**1-POLE,
SINGLE-
Phase,
2-Wire**

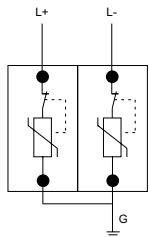
**2-POLE,
SPLIT-Phase,
3-Wire**

**3-POLE,
3-Phase DELTA,
3-Wire**

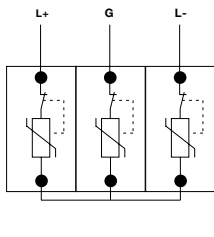
**3-POLE,
3-Phase DELTA,
3-Phase WYE,
4-Wire**

**4-POLE,
3-Phase WYE,
5-Wire**

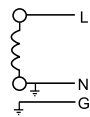
**4-POLE,
3-Phase DELTA HIGH-LEG,
5-Wire**



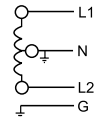
**2-POLE
PHOTOVOLTAIC**



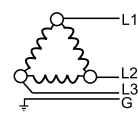
**3-POLE
PHOTOVOLTAIC**



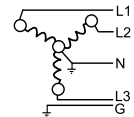
Single Phase
2 Wire + Ground



Split Phase
3 Wire + Ground

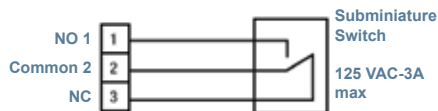
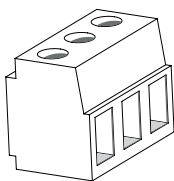


3 Phase Delta
3 Wire + Ground



3 Phase Wye
4 Wire + Ground

Remote Status Indicator



Signal Wire Range	#16 to #30 AWG
Terminal Torque	2.2 lb-in
Cont. between Comm + NO	Product Offline, Not Protected
Cont. between Comm + NC	Product Online, Protected

For remote indication, add "M" to the end of the catalog number. For example, ST4803PYGM.