

# Surge-Trap® Pluggable SPD

## DIN-rail Style Pluggable SPD

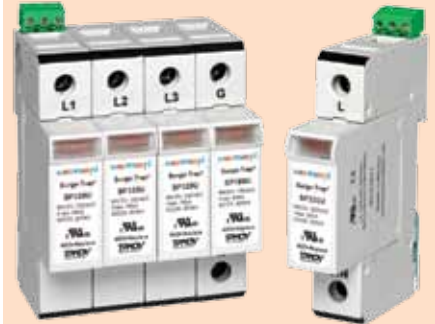
Surge-Trap® Pluggable Surge Protective Device (SPD) is a no-fuse, fail-safe surge suppressor featuring Mersen's patented TPMOV® technology inside. The pluggable SPD is UL 1449 Third Edition approved. It is DIN-rail mountable featuring a fail-safe self-protected design, visual indicator and a small footprint. A remote indicator option provides status to critical control circuits. The Surge-Trap Pluggable SPD has a high short circuit current 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
- Visual indicator
- IP20 finger-safe design
- Small footprint
- No additional overcurrent protection devices required
- Easy to replace modules
- Two-year warranty

### Applications:

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



### Ratings

- Volts** : 120V to 690V AC  
: 600V to 1200V 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 (Imax)	50 kA
Frequency	50-60 Hz
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<sup>®</sup> Pluggable SPD

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

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				Replacement Plug L1	I <sub>n</sub> (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L		
STP1201PGM	120	180	180	-	-	600	600	-	-	SP180U	20
STP2301PGM	240	275	275	-	-	900	900	-	-	SP275U	20
STP2771PGM	277	320	320	-	-	1000	1000	-	-	SP320U	20
STP3471PGM	347	420	420	-	-	1500	1500	-	-	SP420U	10
STP6001PGM*	600	650	650	-	-	2000	2000	-	-	SP660U	10

\*SCCR = 42kA

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

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				Replacement Plug L1, L2	I <sub>n</sub> (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L		
STP240SPGM	120/240	180	180	-	360	600	600	-	1200	SP180U	20
STP480SPGM	240/480	275	275	-	550	900	900	-	1800	SP275U	20

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

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				Replacement Plug L1, L2, L3	I <sub>n</sub> (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L		
STP2403PDGM	240	275	275	-	550	900	900	-	1800	SP275U	20
STP4803PDGM	480	550	550	-	1100	1800	1800	-	3000	SP550U	10

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

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				Replacement Plug L1, L2, L3	I <sub>n</sub> (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L		
STP2083PYGM	120/208	180	180	-	360	600	600	-	1200	SP180U	20
STP4803PYGM	277/480	320	320	-	640	1000	1000	-	1800	SP320U	20
STP6003PYGM	347/600	420	420	-	840	1500	1500	-	2500	SP420U	10
STP6903PYGM	400/690	440	440	-	880	1500	1500	-	2500	SP440U	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)				Replacement Plug		I <sub>n</sub> (kA)
		L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	L1, L2, L3	N-G	
STP2083PYM	120/208	180	180	180	360	600	1200	600	1200	SP180U	SP180U	20
STP4803PYM	277/480	320	500	180	640	1000	1500	600	1800	SP320U	SP180U	20
STP6003PYM	347/600	420	695	275	840	1500	2000	600	2500	SP420U	SP275U	10
STP6903PYM	400/690	440	760	320	880	1500	2000	1000	2500	SP440U	SP320U	20

## 4-POLE, 3-Phase DELTA HIGH-LEG, 5-Wire, Including N-G Mode

Catalog No	Nominal Voltage (VAC)	Maximum Continuous Operating Voltage, MCOV (VAC)				Voltage Protection Rating, VPR (VAC)				Replacement Plug			I <sub>n</sub> (kA)
		L-L/L-G	L-N/N-G	H-L/H-G	H-N	L-L/L-G	L-N/N-G	H-L/H-G	H-N	L1, L3	L2	N-G	
STP2403PHM	120/240	360	180	455	275	1200	600	1500	900	SP180U	SP275U	SP180U	20
STP4803PHM	240/480	550/455	275/180	825/730	550	1.8k/1.5k	900/600	2.5k/2.0k	1800	SP275U	SP550U	SP180U	10

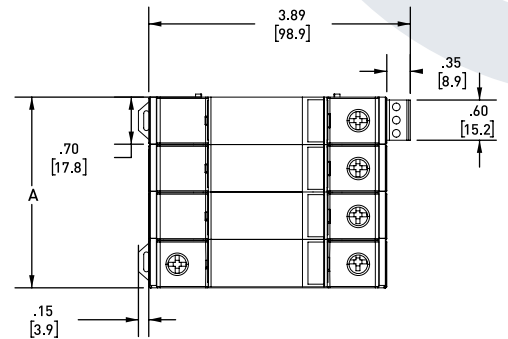
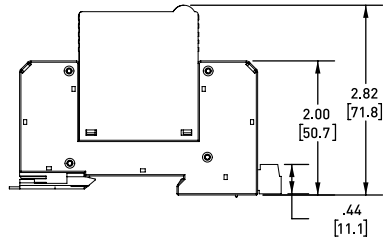
## PHOTOVOLTAIC (SOLAR), 2-POLE and 3-POLE, 3-Wire

Catalog No	Nominal Voltage (VDC)	No. of poles	Maximum Continuous Operating Voltage, U <sub>cpv</sub> (VDC)	Voltage Protection Level, U <sub>p</sub> (VDC)	Replacement Plug	SCCR, I <sub>scwpv</sub> (kA)	I <sub>n</sub> (kA)
STP600PVM	600	2	750	< 2.0k	SP745PV	10	20
STP600YPVM	600	3	750	< 3.0k	SP420PV	10	20
STP1000YPVM	1000	3	1250	< 4.0k	SP670PV	10	20
STP1200YPVM	1200	3	1500	< 5.0k	SP745PV	2	20

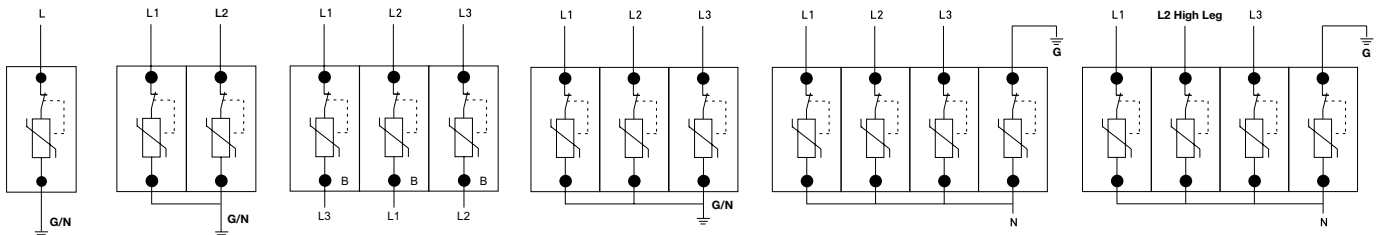
# Surge-Trap<sup>®</sup> Pluggable SPD

## Dimensions

Poles	in	A	mm
1 Pole	0.71		18.03
2 Pole	1.42		36.06
3 Pole	2.13		54.10
4 Pole	2.84		72.13



## Wiring Diagrams



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

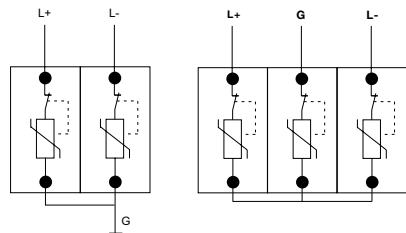
**2-POLE, SPLIT-Phase, 3-Wire**

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

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

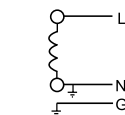
**4-POLE, 3-Phase WYE, 5-Wire**

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

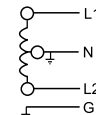


**2-POLE PHOTOVOLTAIC**

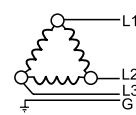
**3-POLE PHOTOVOLTAIC**



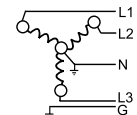
Single Phase  
2 Wire + Ground



Split Phase  
3 Wire + Ground

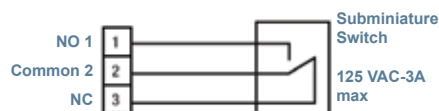
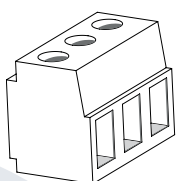


3 Phase Delta  
3 Wire + Ground



3 Phase Wye  
4 Wire + Ground

## Remote Status Indicator



Subminiature  
Switch  
125 VAC-3A  
max

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

Remote indication comes standard with all STP, Surge-Trap Pluggable units.