

Surge-Trap® Pluggable STPT1+2 Series - 5kA PV

SURGE PROTECTION FOR SOLAR-PHOTOVOLTAIC SYSTEMS

DC POWER LINE PROTECTION



STP T1+2 5 PV is the PHOTOVOLTAIC range of combined Type 1+2/ Class I+II devices intended for discharging lightning currents (10/350 μ s) and protecting against induced voltage surges (8/20 μ s), in accordance with EN 50539-11 and IEC 61643-31 standards. These products provide advanced protection to photovoltaic systems by utilizing Mersen's optimized dynamic thermal disconnection system, which does not require additional overcurrent protection (back-up fuse) due to its high short-circuit withstand rating. The devices are suitable for all PV applications: large-scale and rooftop. The series includes specific multipole products for multiple MPPT inverters.

TECHNICAL DATA OVERVIEW

Class	Type 1+2 IEC 61643-31, Type 1+2 EN 50539-11
Voltage Range DC	1000 ... 1500 VDC
I _{scpv}	10000 A
Body Material	PA6 CT1; V-0
System type	Y PV, multiple MPPT
Number of Poles	3, 5, 8
Format	Pluggable
Temperature range	-40 ... 85 ° C
Rigid wire Section	6 ... 35 mm ²
Response Time	25 ns

FEATURES & BENEFITS

- Lightning impulse current (10/350 μ s): 5kA
- Maximum discharge current (8/20 μ s): 40 kA
- Nominal discharge current (8/20 μ s): 15 kA, 20 kA
- U_{cpv}: 1060 Vdc, 1500 Vdc
- I_{scpv}: 10 kA (EN 50539-11), no back-up fuse required
- DIN-rail mountable, plug-in format
- Multiple MPPT specific products
- Visual and remote end of life indicators
- Reversible chassis to allow cable entry from above or below
- Mechanically coded cartridges to avoid cartridge replacement errors

APPLICATIONS

- Photovoltaic

STANDARDS

- EN 50539-11
- IEC 61643-31



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PRODUCT RANGE



STPT12-5K1000V-YPVM

Large-scale and rooftop PV

Catalog number	Item number	Number of poles/ phases	Ucpv	Iscpv	I _{imp} (10/350)	I _{max} (8/20)	I _n (8/20)	U _p at I _n	Remote	Cartridge No L-N
YPV										
STPT12-5K1000V-YPV	83120167	3	1060 VDC	10 kA	5 kA	40 kA	20 kA	≤ 4 kV	No	SP12-5K1000V-PV
STPT12-5K1000V-YPVM	83120168	3	1060 VDC	10 kA	5 kA	40 kA	20 kA	≤ 4 kV	Yes	SP12-5K1000V-PV
STPT12-5K1500V-YPV	83120193	3	1500 VDC	10 A	5 kA	40 kA	15 A	≤ 5 kV	No	SP12-5K1500V-PV
STPT12-5K1500V-YPVM	83120194	3	1500 VDC	10 A	5 kA	40 kA	15 A	≤ 5 kV	Yes	SP12-5K1500V-PV



STPT12-5K1000V-8YPVM

Multipole for multiple MPPT inverters

Catalog number	Item number	Number of poles/ phases	Ucpv	Iscpv	I _{imp} (10/350)	I _{max} (8/20)	I _n (8/20)	U _p at I _n	Remote	Cartridge No L-N
Multiple MPPT										
STPT12-5K1000V-5YPVM	83120192	5	1060 VDC	10 kA	5 kA	40 kA	20 kA	≤ 4 kV	Yes	SP12-5K1000V-PV
STPT12-5K1000V-8YPVM	83120190	8	1060 VDC	10 kA	5 kA	40 kA	20 kA	≤ 4 kV	Yes	SP12-5K1000V-PV



SP12-5K1000V-PV

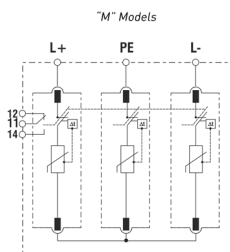
Replacement cartridges

Catalog number	Item number	Ucpv	Iscpv	I _{imp} (10/350)	I _{max} (8/20)	I _n (8/20)	U _p at I _n
SP12-5K1000V-PV	83120011	530 VDC	10 kA	5 kA	40 kA	20 kA	≤ 2 kV
SP12-5K1500V-PV	83120023	750 VDC	10 A	5 kA	40 kA	15 A	≤ 2.5 kV

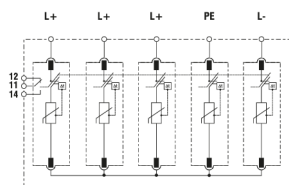
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ELECTRICAL DIAGRAMS

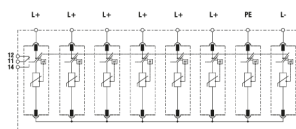
Y PV



5Y PV

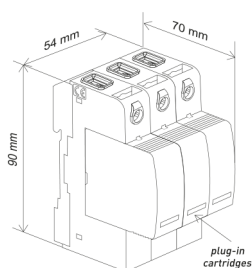


8Y PV

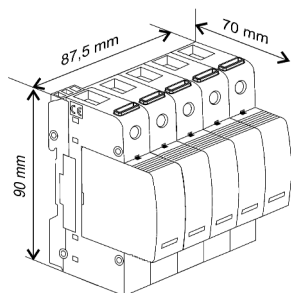


DIMENSIONS

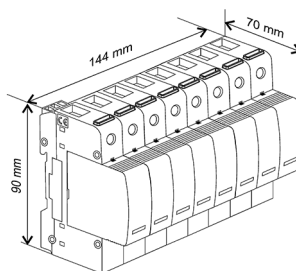
3 Poles



5 Poles



8 Poles



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