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 µs) and protecting against induced voltage surges (8/20 µs), 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 DC	1000 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 mm²
Response Time	25 ns

FEATURES & BENEFITS

- Lightning impulse current (10/350 us): 5kA
- Maximum discharge current (8/20µs): 40 kA
- Nominal discharge current (8/20µs): 20 kA
- Ucpv: 1060 Vdc
- Iscpv: 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	I_{scpv}	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

STPT12-5K1000V-8YPVM

Multipole for multiple MPPT inverters

Catalog number	Item number	Number of poles/ phases	Ucpv	I_{scpv}	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	I_{scpv}	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

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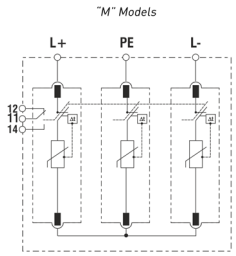
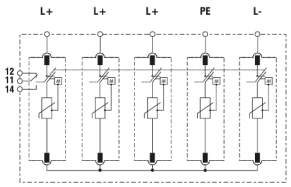
ELECTRICAL DIAGRAMS

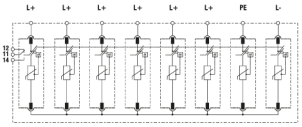
Y PV



5Y PV

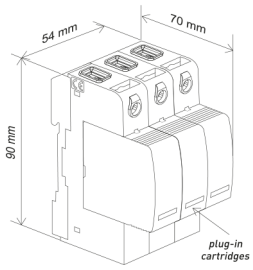


8Y PV

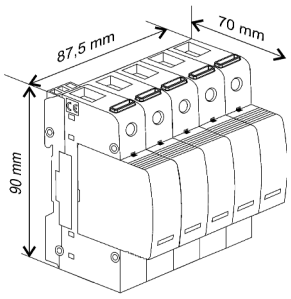


DIMENSIONS

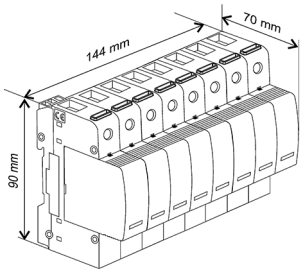
3 Poles



5 Poles



8 Poles



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