Surge-Trap® Pluggable STPT12 Series - 12.5kA

SURGE PROTECTION FOR POWER LINES

DIN-RAIL IEC TYPE 1+2 / CLASS I+II



STP T12 12.5 is the series of combined Type 1+2/Class I+II devices for discharging lightning currents and protecting against voltage surges, in accordance with EN/IEC 61643. Suitable as the first step of protection in incoming power supply panels and areas with exposure to the atmosphere, where installations are usually provided with an external lightning protection system.

TECHNICAL DATA OVERVIEW

Class	Type 1+2 / Class I+II
U_n	60V, 120/208V, 230/400V, 277/480V, 400/690V
Iimp	12.5 kA
Imax	50 kA
I_n (8/20)	20 kA
Body Material	PA66 CT1; V-0
System type	TT, TNS, TNC, IT
Number of Poles	1,2,3,4
Format	Pluggable
Temperature range	-40 ... 80 ° C
I_{cc}	25 kA
IP Code	20
Back-up fuse	200 A gG
Stranded wire Section	6 ... 25 mm²
Rigid wire Section	6 ... 35 mm²

FEATURES & BENEFITS

- Lightning impulse current (10/350µs): 12.5kA per phase
- Maximum discharge current (8/20µs): 50kA per phase
- Nominal discharge current (8/20µs): 20kA per phase
- TNS, TNC, TT and IT networks
- Un(L-N/L-L): 60V, 120/208V, 230/400V, 277/480V and 400/690V
- DIN-rail mountable, plug-in format
- 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
- Back-up fuse: 200 A gG

APPLICATIONS

- Industry and automation
- Commercial and residential installations
- Telecom & IT & Data Centers
- Water treatment
- Smart grid & LV Metering
- Photovoltaic & wind

STANDARDS

- IEC 61643-11
- EN 61643-11

CE

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PRODUCT RANGE



STPT12-12K275V-1PM

1 Pole

Catalog number	Item number	U_n	U_c	I_{imp} (10/350)	I_{max} (8/20)	I_n (8/20)	U_p at I_n	Remote	Cartridge No L-N	Cartridge No N-PE	Weight
L-N (1Ph)											
STPT12-12K150V-1P	83120100	120 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	No	SP12-12K150V	-	0.16 kg
STPT12-12K150V-1PM	83120101	120 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	Yes	SP12-12K150V	-	0.16 kg
STPT12-12K275V-1P	83120102	230 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	No	SP12-12K275V	-	0.19 kg
STPT12-12K275V-1PM	83120103	230 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	Yes	SP12-12K275V	-	0.19 kg
STPT12-12K320V-1P	83120104	277 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	No	SP12-12K320V	-	0.19 kg
STPT12-12K320V-1PM	83120105	277 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	Yes	SP12-12K320V	-	0.20 kg
STPT12-12K440V-1P	83120106	400 VAC	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	No	SP12-12K440V	-	0.20 kg
STPT12-12K440V-1PM	83120107	400 VAC	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	Yes	SP12-12K440V	-	0.20 kg
N-PE (N)											
STPT12-25K-N	83120108	Neutral	255 V	25 kA	50 kA	25 kA	≤ 1.5 kV	No	-	SP12-25K-N	0.13 kg
STPT12-50K-N	83120110	Neutral	255 V	50 kA	50 kA	50 kA	≤ 1.5 kV	No	-	SP12-50K-N	0.16 kg

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PRODUCT RANGE



STPT12-12K275V-2PGM

2 Poles

Catalog number	Item number	U_n	U_c	I_{imp} (10/350)	I_{max} (8/20)	I_n (8/20)	U_p at I_n	Remote	Cartridge No		Weight
									L-N	N-PE	
TT (1Ph+N)											
STPT12-12K150V-2PG	83120112	120 VAC	150 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K150V	SP12-25K-N	0.26 kg
STPT12-12K150V-2PGM	83120113	120 VAC	150 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K150V	SP12-25K-N	0.27 kg
STPT12-12K275V-2PG	83120114	230 VAC	275 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1.3 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K275V	SP12-25K-N	0.29 kg
STPT12-12K275V-2PGM	83120115	230 VAC	275 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1.3 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K275V	SP12-25K-N	0.30 kg
STPT12-12K320V-2PG	83120116	277 VAC	320 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K320V	SP12-25K-N	0.29 kg
STPT12-12K320V-2PGM	83120117	277 VAC	320 V	12.5 kA (L-N) 25 kA (N-PE)	50 kA	20 kA	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K320V	SP12-25K-N	0.30 kg
TNS (1Ph+N)											
STPT12-12K75V-2P	83120126	60 VAC	75 V	12.5 kA	50 kA	20 kA	≤ 0.65 kV	No	SP12-12K75V	-	0.35 kg
STPT12-12K75V-2PM	83120127	60 VAC	75 V	12.5 kA	50 kA	20 kA	≤ 0.65 kV	Yes	SP12-12K75V	-	0.35 kg
STPT12-12K150V-2P	83120118	120 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	No	SP12-12K150V	-	0.35 kg
STPT12-12K150V-2PM	83120119	120 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	Yes	SP12-12K150V	-	0.35 kg
STPT12-12K275V-2P	83120120	230 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	No	SP12-12K275V	-	0.35 kg
STPT12-12K275V-2PM	83120121	230 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	Yes	SP12-12K275V	-	0.35 kg
STPT12-12K320V-2P	83120122	277 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	No	SP12-12K320V	-	0.35 kg
STPT12-12K320V-2PM	83120123	277 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	Yes	SP12-12K320V	-	0.35 kg
IT (1Ph+N) TNS (1Ph+N)											
STPT12-12K440V-2P	83120124	230 VAC (IT) 400 VAC (TNS)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	No	SP12-12K440V	-	0.35 kg
STPT12-12K440V-2PM	83120125	230 VAC (IT) 400 VAC (TNS)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	Yes	SP12-12K440V	-	0.38 kg

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Surge-Trap® Pluggable STPT12 Series - 12.5kA

PRODUCT RANGE



STPT12-12K275V-3PM

3 Poles

Catalog number	Item number	U_n	U_c	I_{imp} (10/350)	I_{max} (8/20)	I_n (8/20)	U_p at I_n	Remote	Cartridge No L-N	Weight
TNC (3Ph)										
STPT12-12K150V-3P	83120128	208 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	No	SP12-12K150V	0.44 kg
STPT12-12K150V-3PM	83120129	208 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	Yes	SP12-12K150V	0.44 kg
STPT12-12K275V-3P	83120130	400 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	No	SP12-12K275V	0.51 kg
STPT12-12K275V-3PM	83120131	400 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	Yes	SP12-12K275V	0.52 kg
STPT12-12K320V-3P	83120132	480 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	No	SP12-12K320V	0.51 kg
STPT12-12K320V-3PM	83120133	480 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	Yes	SP12-12K320V	0.52 kg
IT (3Ph) TNC (3Ph)										
STPT12-12K440V-3P	83120134	400 VAC (IT) 690 VAC (TNC)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	No	SP12-12K440V	0.51 kg
STPT12-12K440V-3PM	83120135	400 VAC (IT) 690 VAC (TNC)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	Yes	SP12-12K440V	0.52 kg

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PRODUCT RANGE



STPT12-12K275V-4PM

4 Poles

Catalog number	Item number	U_n	U_c	I_{imp} (10/350)	I_{max} (8/20)	I_n (8/20)	U_p at I_n	Remote	Cartridge No L-N	Cartridge No N-PE	Weight
TT (3Ph+N)											
STPT12-12K150V-4PG	83120136	120/208 VAC	150 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K150V	SP12-50K-N	0.66 kg
STPT12-12K150V-4PGM	83120137	120/208 VAC	150 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K150V	SP12-50K-N	0.69 kg
STPT12-12K275V-4PG	83120138	230/400 VAC	275 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1.3 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K275V	SP12-50K-N	0.65 kg
STPT12-12K275V-4PGM	83120139	230/400 VAC	275 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1.3 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K275V	SP12-50K-N	0.66 kg
STPT12-12K320V-4PG	83120140	277/480 VAC	320 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP12-12K320V	SP12-50K-N	0.65 kg
STPT12-12K320V-4PGM	83120141	277/480 VAC	320 V	12.5 kA (L-N) 50 kA (N-PE)	50 kA	20 kA	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP12-12K320V	SP12-50K-N	0.66 kg
TNS (3Ph+N)											
STPT12-12K150V-4P	83120142	120/208 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	No	SP12-12K150V	-	0.66 kg
STPT12-12K150V-4PM	83120143	120/208 VAC	150 V	12.5 kA	50 kA	20 kA	≤ 1 kV	Yes	SP12-12K150V	-	0.69 kg
STPT12-12K275V-4P	83120144	230/400 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	No	SP12-12K275V	-	0.66 kg
STPT12-12K275V-4PM	83120145	230/400 VAC	275 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	Yes	SP12-12K275V	-	0.67 kg
STPT12-12K320V-4P	83120146	277/480 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	No	SP12-12K320V	-	0.66 kg
STPT12-12K320V-4PM	83120147	277/480 VAC	320 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	Yes	SP12-12K320V	-	0.69 kg
IT (3Ph) TNS (3Ph+N)											
STPT12-12K440V-4P	83120148	230/400 VAC (IT) 400/690 VAC (TNS)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	No	SP12-12K440V	-	0.66 kg
STPT12-12K440V-4PM	83120149	230/400 VAC (IT) 400/690 VAC (TNS)	440 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	Yes	SP12-12K440V	-	0.69 kg

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Surge-Trap® Pluggable STPT12 Series - 12.5kA

PRODUCT RANGE



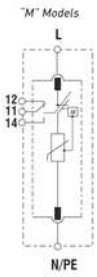
SP12-12K275V

Replacement cartridges

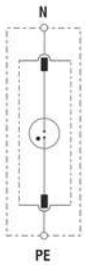
Catalog number	Item number	U_n	U_c	I_{imp} (10/350)	I_{max} (8/20)	I_n (8/20)	U_p at I_n	Remote	Weight
L-N									
SP12-12K75V	83120000	400	75 V	12.5 kA	50 kA	20 kA	≤ 1.8 kV	No	0.1 kg
SP12-12K150V	83120001	60	150 V	12.5 kA	50 kA	20 kA	≤ 0.65 kV	No	0.1 kg
SP12-12K275V	83120002	120	275 V	12.5 kA	50 kA	20 kA	≤ 1 kV	No	0.1 kg
SP12-12K320V	83120003	230	320 V	12.5 kA	50 kA	20 kA	≤ 1.3 kV	No	0.1 kg
SP12-12K440V	83120004	277	440 V	12.5 kA	50 kA	20 kA	≤ 1.4 kV	No	1.5 kg
N-PE									
SP12-25K-N	83120005	Neutral	255 V	25 kA	50 kA	25 kA	≤ 1.5 kV	No	0.1 kg
SP12-50K-N	83120006	Neutral	255 V	50 kA	50 kA	50 kA	≤ 1.5 kV	No	0.1 kg

ELECTRICAL DIAGRAMS

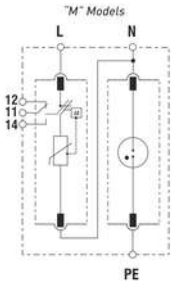
L-N (1Ph)



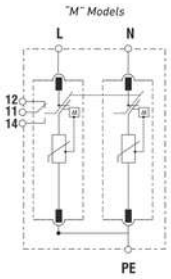
N-PE (N)



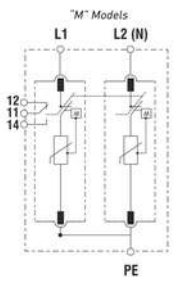
TT (1Ph+N) - 2PG



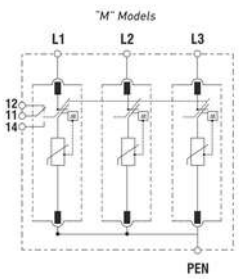
TNS (1Ph+N) - 2P



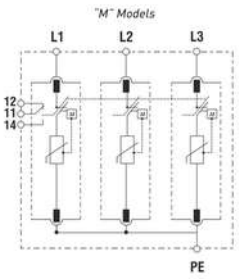
IT (1Ph+N) - 2P



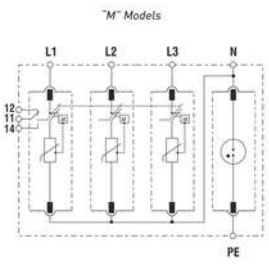
TNC (3Ph) - 3P



IT (3Ph) - 3P



TT (3Ph+N) - 4PG



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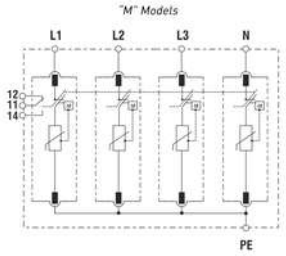
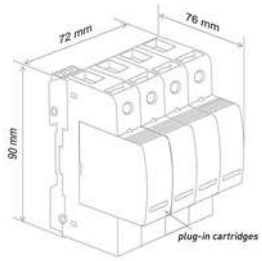
ELECTRICAL DIAGRAMS

TNS (3Ph+N) - 4P

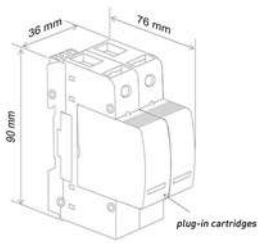


DIMENSIONS

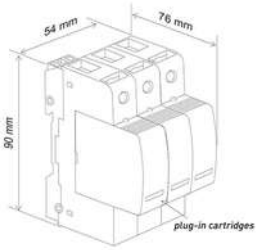
1 Pole



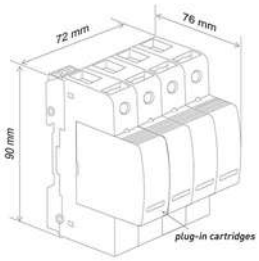
2 Poles



3 Poles



4 Poles



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