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Surge-Trap® Pluggable STPT23 Series - 20kA

SURGE PROTECTION FOR POWER LINES

DIN-RAIL IEC TYPE 2+3 / CLASS II+III

STP T23 20 is the series of combined Type 2+3/Class II+III devices for discharging voltage surges while providing a very fine voltage protection level, in accordance with EN/IEC 61643-11. Suitable as the final stage of protection in panels with Type 2 protection devices installed upstream such as STP T2 40 SPDs. These SPDs should be installed as close as possible to the equipment being protected.

TECHNICAL DATA OVERVIEW

Class	Type 2+3 / Class II+III
U_n	120/208V, 230/400V, 277/480V
Imax	20 kA
I_n (8/20)	10 kA
Isccr	25 kA
Combined discharge voltage Uoc	10 kV
Body Material	PA66 CT1; V-0
System type	TT, TNS, TNC, IT
Number of Poles	1,2,3,4
Format	Pluggable
IP Code	20
Back-up fuse	63 A gG
Stranded wire Section	6 ... 25 mm²
Rigid wire Section	6 ... 35 mm²
Response Time	25 ns
EMI filter differential mode	< 0 db

FEATURES & BENEFITS

- Maximum discharge current (8/20µs): 20kA per phase
- Nominal discharge current (8/20µs): 10kA per phase
- Combined voltage pulse Uoc (1.2/50µs): 10kV
- TNS, TNC, TT and IT networks
- Un(L-N/L-L): 120/208V, 230/400V, 277/480V and 400/690V
- PLC friendly solutions (LCF) for Power Line Communications
- 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: 63 A gG

APPLICATIONS

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

STANDARDS

- IEC 61643-11
- EN 61643-11

CE RoHS

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

STPT23-20K320V-1PM

1 Pole

Catalog number	Item number	U_n	U_c	I_{max} (8/20)	I_n (8/20)	U_{oc}	U_p at I_n	Remote	Cartridge No L-N	Cartridge No N-PE
L-N (1Ph)										
STPT23-20K150V-1P	83230100	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	No	SP23-20K150V	-
STPT23-20K150V-1PM	83230101	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	Yes	SP23-20K150V	-
STPT23-20K320V-1P	83230102	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	No	SP23-20K320V	-
STPT23-20K320V-1PM	83230103	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	Yes	SP23-20K320V	-
N-PE (N)										
STPT23-20K-N	83230106	Neutral	255 V	20 kA	10 kA	10 kV	≤ 1.5 kV	No	-	SP23-20K-N

STPT23-20K320V-2PM

2 Poles

Catalog number	Item number	U_n	U_c	I_{max} (8/20)	I_n (8/20)	U_{oc}	U_p at I_n	Remote	Cartridge No L-N	Cartridge No N-PE
TT (1Ph+N)										
STPT23-20K150V-2PG	83230108	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K150V	SP23-20K-N
STPT23-20K150V-2PGM	83230109	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K150V	SP23-20K-N
STPT23-20K275V-2PG-LF	83230110	230 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K275V-LF	SP23-20K-N
STPT23-20K275V-2PG-LFM	83230111	230 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K275V-LF	SP23-20K-N
STPT23-20K320V-2PG	83230112	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K320V	SP23-20K-N
STPT23-20K320V-2PGM	83230113	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K320V	SP23-20K-N
TNS (1Ph+N)										
STPT23-20K150V-2P	83230114	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	No	SP23-20K150V	-
STPT23-20K150V-2PM	83230115	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	Yes	SP23-20K150V	-
STPT23-20K275V-2P-LF	83230134	230 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	No	SP23-20K275V-LF	-
STPT23-20K275V-2P-LFM	83230135	230 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	Yes	SP23-20K275V-LF	-
STPT23-20K320V-2P	83230116	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	No	SP23-20K320V	-
STPT23-20K320V-2PM	83230117	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	Yes	SP23-20K320V	-

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

STPT23-20K320V-3PM

3 Poles

Catalog number	Item number	U_n	U_c	I_{max} (8/20)	I_n (8/20)	U_{oc}	U_p at I_n	Remote	Cartridge No L-N
TNC (3Ph)									
STPT23-20K150V-3P	83230118	120 / 208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	No	SP23-20K150V
STPT23-20K150V-3PM	83230119	120 / 208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	Yes	SP23-20K150V
STPT23-20K275V-3P-LF	83230120	230 / 400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	No	SP23-20K275V-LF
STPT23-20K275V-3P-LFM	83230121	230 / 400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	Yes	SP23-20K275V-LF
STPT23-20K320V-3P	83230122	230 / 400 VAC 277 / 480 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	No	SP23-20K320V
STPT23-20K320V-3PM	83230123	230 / 400 VAC 277 / 480 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	Yes	SP23-20K320V

STPT23-20K320V-4PM

4 Poles

Catalog number	Item number	U_n	U_c	I_{max} (8/20)	I_n (8/20)	U_{oc}	U_p at I_n	Remote	Cartridge No L-N	Cartridge No N-PE
TT (3Ph+N)										
STPT23-20K150V-4PG	83230124	120/208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K150V	SP23-20K-N
STPT23-20K150V-4PGM	83230125	120/208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K150V	SP23-20K-N
STPT23-20K275V-4PG-LF	83230126	230/400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K275V-LF	SP23-20K-N
STPT23-20K275V-4PG-LFM	83230127	230/400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K275V-LF	SP23-20K-N
STPT23-20K320V-4PG	83230128	230/400 VAC 277/400 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	No	SP23-20K320V	SP23-20K-N
STPT23-20K320V-4PGM	83230129	230/400 VAC 277/400 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV (L-N) ≤ 1.5 kV (N-PE)	Yes	SP23-20K320V	SP23-20K-N
TNS (3Ph+N)										
STPT23-20K150V-4P	83230130	120/208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	No	SP23-20K150V	-
STPT23-20K150V-4PM	83230131	120/208 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV	Yes	SP23-20K150V	-
STPT23-20K275V-4P-LF	83230136	230/400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	No	SP23-20K275V-LF	-
STPT23-20K275V-4P-LFM	83230137	230/400 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV	Yes	SP23-20K275V-LF	-
STPT23-20K320V-4P	83230132	230/400 VAC 277/400 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	No	SP23-20K320V	-
STPT23-20K320V-4PM	83230133	230/400 VAC 277/400 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV	Yes	SP23-20K320V	-

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

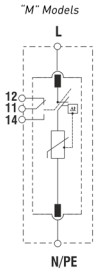
SP23-20K320V

Replacement cartridges

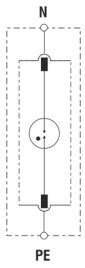
Catalog number	Item number	U_n	U_c	I_{max} (8/20)	I_n (8/20)	U_{oc}	U_p at I_n
L-N							
SP23-20K150V	83230001	120 VAC	150 V	20 kA	10 kA	10 kV	≤ 0.8 kV
SP23-20K275V-LF	83230003	230 VAC	275 V	20 kA	10 kA	10 kV	≤ 1.5 kV
SP23-20K320V	83230002	230 VAC 277 VAC	320 V	20 kA	10 kA	10 kV	≤ 1.4 kV
N-PE							
SP23-20K-N	83230000	Neutral	255 V	20 kA	10 kA	10 kV	≤ 1.5 kV

ELECTRICAL DIAGRAMS

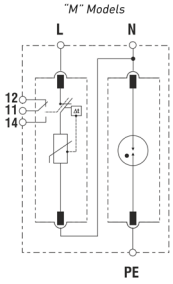
L-N (1Ph)



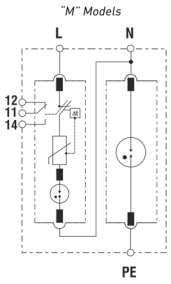
N-PE (N)



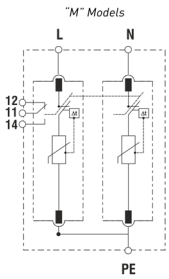
TT (1Ph+N) - 2PG



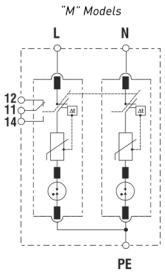
TT LF (1Ph+N) - 2PG



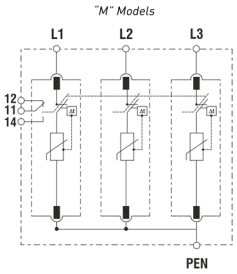
TNS (1Ph+N) - 2P



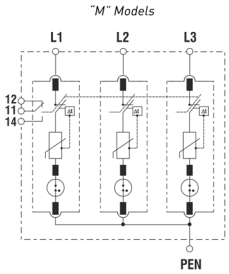
TNS LF (1Ph+N) - 2P



TNC (3Ph) - 3P



TNC LF (3Ph) - 3P



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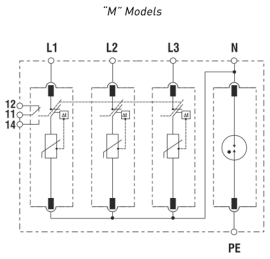
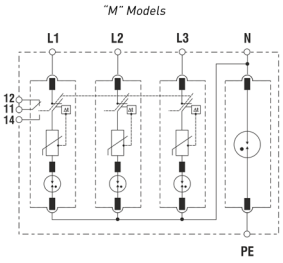
ELECTRICAL DIAGRAMS

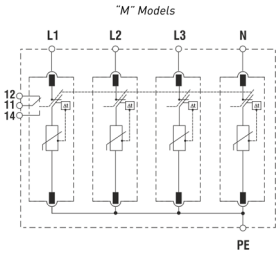
TT (3Ph+N) - 4PG



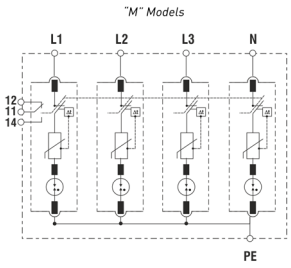
TT LF (3Ph+N) - 4PG



TNS (3Ph+N) - 4P

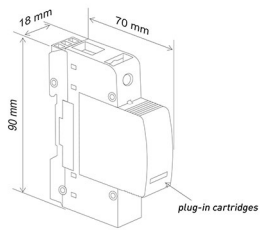


TNS LF (3Ph+N) - 4P

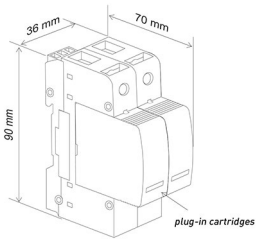


DIMENSIONS

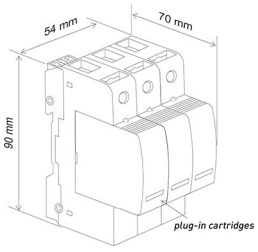
1 Pole



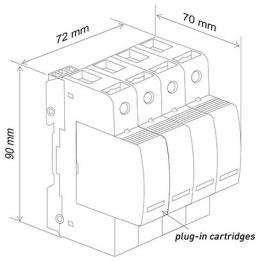
2 Poles



3 Poles



4 Poles



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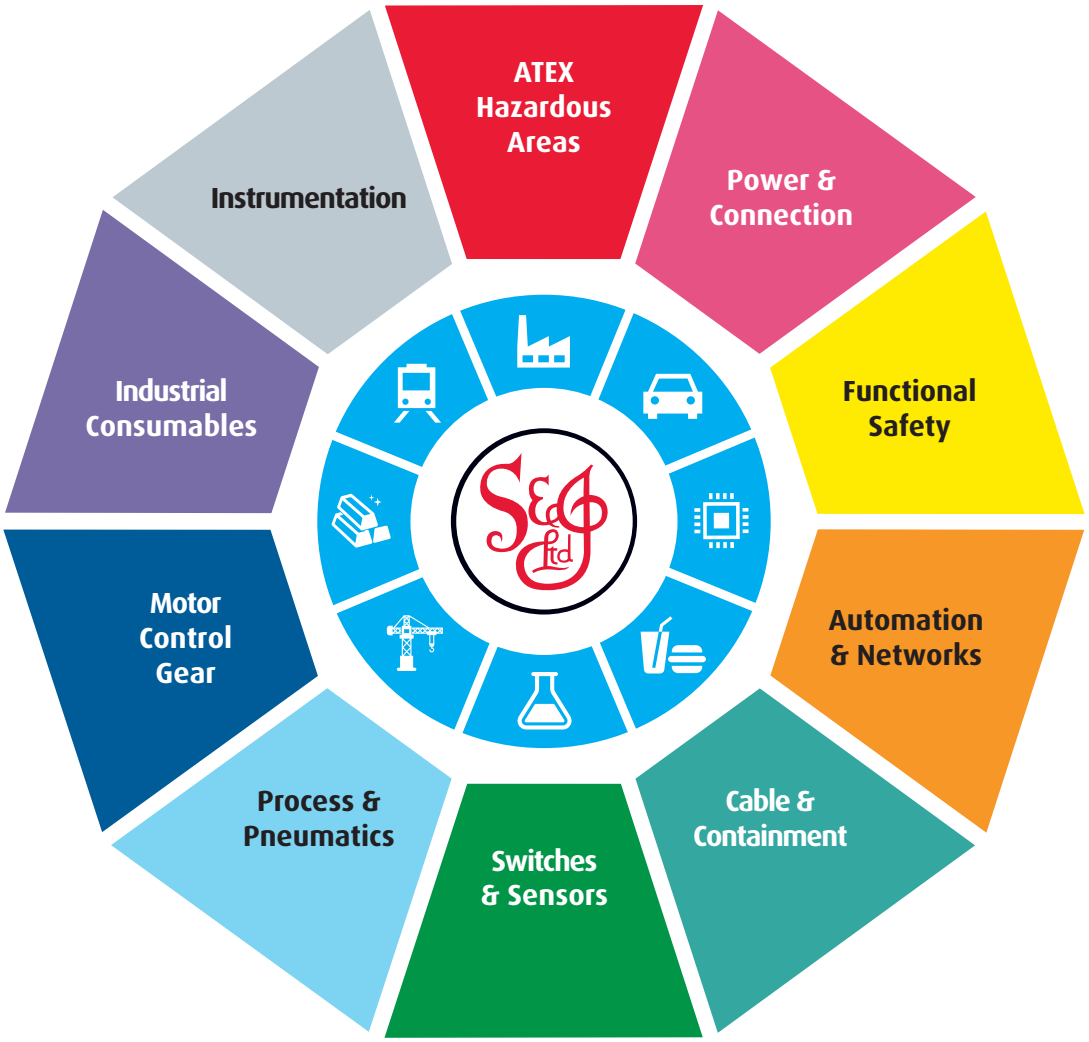

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