

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. 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, 400/690V |
| I_{max} | 20 kA |
| I_n (8/20) | 10 kA |
| Combined discharge voltage U_{oc} | 10 kV |
| Body Material | PA66 CT1; V-0 |
| System type | TT, TNS, TNC, IT |
| Number of Poles | 1,2,3,4 |
| Format | Pluggable |
| I_{cc} | 25 kA |
| IP Code | 20 |
| Back-up fuse | 63 A gG |
| Stranded wire Section | 6 ... 25 mm ² |
| Rigid wire Section | 6 ... 35 mm ² |
| Response Time | 25 ns |

FEATURES & BENEFITS

- Maximum discharge current (8/20 μ s): 20kA per phase
- Nominal discharge current (8/20 μ s): 10kA per phase
- Combined voltage pulse U_{oc} (1.2/50 μ s): 10kV
- TNS, TNC, TT and IT networks
- U_n (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



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 | | Weight |
|--------------------|-------------|--------------------|----------------|----------------------------|--------------------------|-----------------|----------------------------------|--------|--------------|------------|---------|
| | | | | | | | | | L-N | 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 | - | 0.12 kg |
| STPT23-20K150V-1PM | 83230101 | 120 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0,8 kV | Yes | SP23-20K150V | - | 0.13 kg |
| STPT23-20K320V-1P | 83230102 | 230 VAC 277 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1,4 kV | No | SP23-20K320V | - | 0.12 kg |
| STPT23-20K320V-1PM | 83230103 | 230 VAC 277 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1,4 kV | Yes | SP23-20K320V | - | 0.13 kg |
| STPT23-20K440V-1P | 83230104 | 400 VAC | 440 V | 20 kA | 10 kA | 10 kV | ≤ 2 kV | No | SP23-20K440V | - | 0.13 kg |
| STPT23-20K440V-1PM | 83230105 | 400 VAC | 440 V | 20 kA | 10 kA | 10 kV | ≤ 2 kV | Yes | SP23-20K440V | - | 0.13 kg |
| N-PE (N) | | | | | | | | | | | |
| STPT23-20K-N | 83230106 | Neutral | 255 V | 20 kA | 10 kA | 10 kV | ≤ 1,5 kV | No | - | SP23-20K-N | 0.11 kg |

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

2 Poles

STPT23-20K320V-2PM

| 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 | | Weight |
|------------------------|-------------|--------------------|----------------|----------------------------|--------------------------|-----------------|-----------------------------------|--------|-----------------|------------|---------|
| | | | | | | | | | L-N | 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 | 0.2 kg |
| 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 | 0.21 kg |
| 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 | 0.22 kg |
| 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 | 0.23 kg |
| 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 | 0.21 kg |
| 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 | 0.22 kg |
| TNS (1Ph+N) | | | | | | | | | | | |
| STPT23-20K150V-2P | 83230114 | 120 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | No | SP23-20K150V | - | 0.21 kg |
| STPT23-20K150V-2PM | 83230115 | 120 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | Yes | SP23-20K150V | - | 0.22 kg |
| STPT23-20K275V-2P-LF | 83230134 | 230 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | No | SP23-20K275V-LF | - | 0.22 kg |
| STPT23-20K275V-2P-LFM | 83230135 | 230 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | Yes | SP23-20K275V-LF | - | 0.23 kg |
| STPT23-20K320V-2P | 83230116 | 230 VAC 277 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | No | SP23-20K320V | - | 0.22 kg |
| STPT23-20K320V-2PM | 83230117 | 230 VAC 277 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | Yes | SP23-20K320V | - | 0.25 kg |

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

3 Poles

STPT23-20K320V-3PM

| 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 | Weight |
|-----------------------|-------------|--------------------|-------|---------------------|--------------|----------|----------------|--------|---------------------|---------|
| TNC (3Ph) | | | | | | | | | | |
| STPT23-20K150V-3P | 83230118 | 208 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | No | SP23-20K150V | 0.31 kg |
| STPT23-20K150V-3PM | 83230119 | 208 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | Yes | SP23-20K150V | 0.32 kg |
| STPT23-20K275V-3P-LF | 83230120 | 400 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | No | SP23-20K275V-LF | 0.3 kg |
| STPT23-20K275V-3P-LFM | 83230121 | 400 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | Yes | SP23-20K275V-LF | 0.31 kg |
| STPT23-20K320V-3P | 83230122 | 400 VAC 480 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | No | SP23-20K320V | 0.32 kg |
| STPT23-20K320V-3PM | 83230123 | 400 VAC 480 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | Yes | SP23-20K320V | 0.33 kg |

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Surge-Trap® Pluggable STPT23 Series - 20kA

PRODUCT RANGE

4 Poles

STPT23-20K320V-4PM

| Catalog number | Item number | U _n | U _c | I _{max} (8/20) | I _n (8/20) | U _{oc} | U _p at I _n | Re- mote | Cartridge No | | Weight |
|------------------------|-------------|----------------------------------|----------------|----------------------------|--------------------------|-----------------|-----------------------------------|-------------|-----------------|------------|---------|
| | | | | | | | | | L-N | 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 | 0.41 kg |
| 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 | 0.42 kg |
| 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 | 0.46 kg |
| 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 | 0.46 kg |
| 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 | 0.41 kg |
| 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 | 0.42 kg |
| TNS (3Ph+N) | | | | | | | | | | | |
| STPT23-20K150V-4P | 83230130 | 120/208 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | No | SP23-20K150V | - | 0.42 kg |
| STPT23-20K150V-4PM | 83230131 | 120/208 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | Yes | SP23-20K150V | - | 0.42 kg |
| STPT23-20K275V-4P-LF | 83230136 | 230/400 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | No | SP23-20K275V-LF | - | 0.44 kg |
| STPT23-20K275V-4P-LFM | 83230137 | 230/400 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | Yes | SP23-20K275V-LF | - | 0.46 kg |
| STPT23-20K320V-4P | 83230132 | 230/400 VAC 277/400 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | No | SP23-20K320V | - | 0.42 kg |
| STPT23-20K320V-4PM | 83230133 | 230/400 VAC 277/400 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | Yes | SP23-20K320V | - | 0.42 kg |

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PRODUCT RANGE

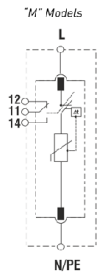
Replacement cartridges

SP23-20K320V

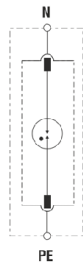
| Catalog number | Item number | U_n | U_c | I_{max} (8/20) | I_n (8/20) | U_{oc} | U_p at I_n | Weight |
|-----------------|-------------|--------------------|-------|------------------|--------------|----------|----------------|--------|
| L-N | | | | | | | | |
| SP23-20K150V | 83230001 | 120 VAC | 150 V | 20 kA | 10 kA | 10 kV | ≤ 0.8 kV | 80 g |
| SP23-20K275V-LF | 83230003 | 230 VAC | 275 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | 80 g |
| SP23-20K320V | 83230002 | 230 VAC 277 VAC | 320 V | 20 kA | 10 kA | 10 kV | ≤ 1.4 kV | 80 g |
| SP23-20K440V | 83230004 | 400 VAC | 440 V | 20 kA | 10 kA | 10 kV | ≤ 2 kV | 80 g |
| N-PE | | | | | | | | |
| SP23-20K-N | 83230000 | Neutral | 255 V | 20 kA | 10 kA | 10 kV | ≤ 1.5 kV | 80 g |

ELECTRICAL DIAGRAMS

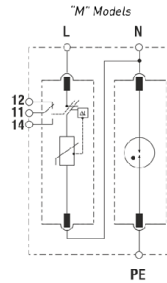
L-N (1Ph)



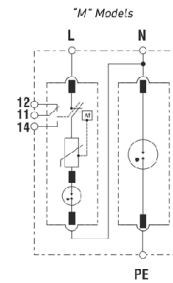
N-PE (N)



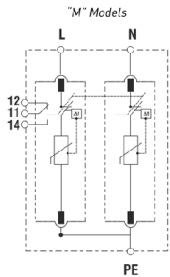
TT (1Ph+N) - 2PG



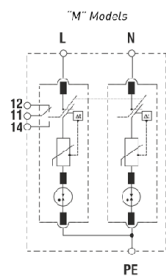
TT LF (1Ph+N) - 2PG



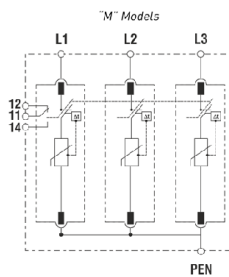
TNS (1Ph+N) - 2P



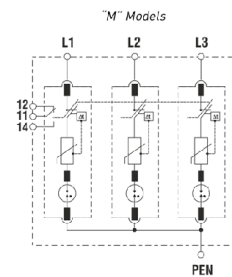
TNS LF (1Ph+N) - 2P



TNC (3Ph) - 3P



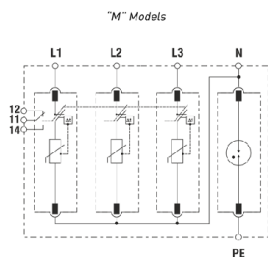
TNC LF (3Ph) - 3P



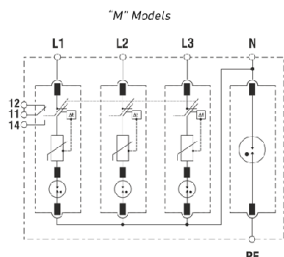
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ELECTRICAL DIAGRAMS

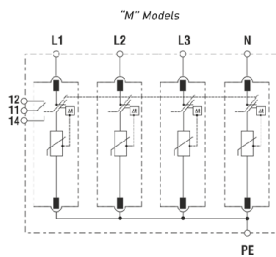
TT (3Ph+N) - 4PG



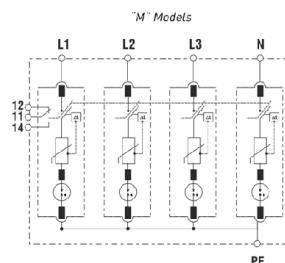
TT LF (3Ph+N) - 4PG



TNS (3Ph+N) - 4P

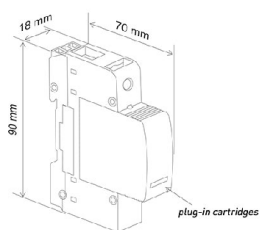


TNS LF (3Ph+N) - 4P

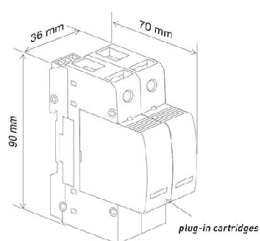


DIMENSIONS

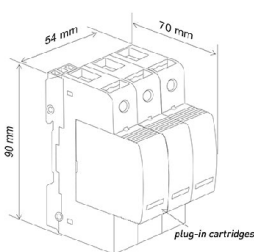
1 Pole



2 Poles



3 Poles



4 Poles

