Overvoltage Protection Surge-Trap®

IEC Standard - AC Protection

Surge-Trap® Surge Protection Devices offers a patented fail-safe solution to protect against transient overvoltages.

Their superior thermal overload technology delivers higher safety ratings and protection.

Whatever they are disruptive, dissipative or destructive the damages caused by overvoltage transients are very harmful.

Surge-Trap® SPDs limit the amount of energy into the load at the lowest level avoiding the costly consequences induced by these damages.

Approvals

- IEC 61643-11 Class II
- EN 61643-11 Type 2
- RoHS Compliant

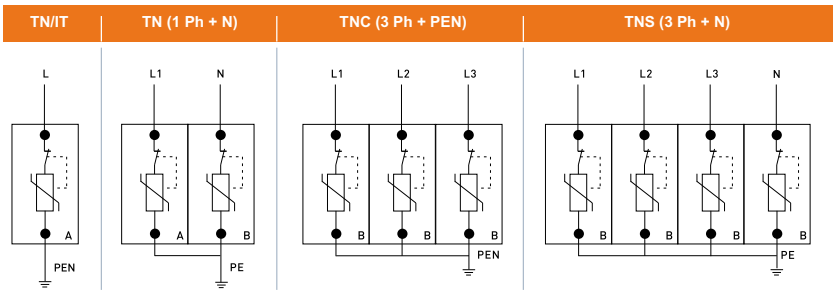
Benefits

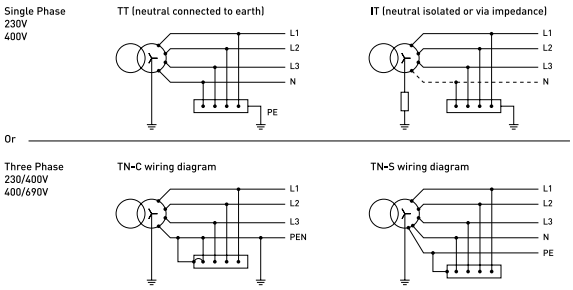
- Easy to install and retrofit
- Fully fail-safe protection
- World-class technology to enhance equipment and installations

Application

- AC Low Voltage Distribution
- Power supplies
- Industrial automation
- Motor controls and starter systems
- Power transfer equipment
- HVAC
- AC drives
- UPS systems
- IT/Data centers
- Medical equipement

Wiring diagrams





STP/ST	230	TNC	M
I	I	I	I
STP - Pluggable	Voltage	System Type	Auxiliary Microswitch
ST - Modular	230	TN - TN	Blank - No Microswitch
	400	IT - IT	M - Microswitch included
	600	TN1 - TN (1 Ph + N)	
	1000	TNC - TNC (3 Ph + PEN)	
		TNS - TNS (3 Ph + N)	
		PV - DC	

Rated Voltage (V)	Size	With indicator	Without indicator	Fuseholder
400	NH00	NH00GG40V125	-	BB002EPR
500	NH00	NH00GG50V125	-	BB002EPR
400	22x58 cylindrical	FR22GG40V125I	FR22GG40V125	CMS22

Surge-Trap® Pluggable SPDs
IEC Standard - AC Protection

Features

- DIN Rail mountable base 35mm
- IP20 finger-safe removable plug
- Visual indicator for plug replacement
- Internal TPMOV® (Thermal Protected Metal Oxide Varistor)
- Remote indicator (3-pin dry contact)
- Small footprint
- 25kA short-circuit withstand capability

Catalog Number	Reference Number	Rated Voltage (V)	No of Poles	System Type	Replacement Plug Part No
STP230TNM	H1011041C	230	1	TN	SP275E
STP400ITM	K1011043C	400	1	IT	SP510E
STP230TN1M	M1011045B	230	2	TN (1 Ph + N)	SP275E
STP230TNCM	R1011049A	230/400	3	TNC (3 Ph + PEN)	SP275E
STP230TNSM	T1011051A	230/400	4	TNS (3 Ph + N)	SP275E
STP400TNCM	E1029875A	400/690	3	TNC (3 Ph + PEN)	SP510HE
STP400TNSM	F1029876A	400/690	4	TNS (3 Ph + N)	SP510HE

IEC Surge-Trap® Pluggable range DIN-Rail SPD offering

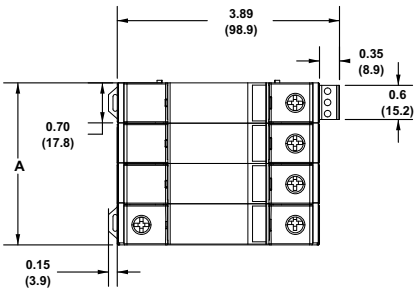
Catalog Number	Reference Number	Rated Voltage (V)	No of Poles	MCOV (U_c) L-PE	MCOV (U_c) L-N	MCOV (U_c) N-PE	MCOV (U_c) L-L	Voltage Protection Level (Up @ 20 kA), (kV)	Electrical strength (kV)	Freq (Hz)
STP230TNM	H1011041C	230	1	275	N/A	N/A	N/A	< 1.5	2.2	50/60
STP400ITM	K1011043C	400	1	510	N/A	N/A	N/A	< 2.0	2.2	50/60
STP230TN1M	M1011045B	230	2	275	550	275	N/A	< 1.5	2.2	50/60
STP230TNCM	R1011049A	230	3	275	N/A	N/A	550	< 1.5	2.2	50/60
STP230TNSM	T1011051A	230	4	275	550	275	550	< 1.5	2.2	50/60
STP400TNCM	E1029875A	400	3	510	510	N/A	1020	< 2.0	2.2	50/60
STP400TNSM	F1029876A	400	4	510	1020	510	1020	< 2.0	2.2	50/60

Environmental & Physical characteristics

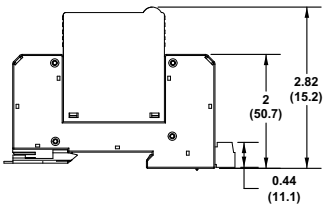
- Operating and storage temperature (C°): -25 to 60
- Response time (ta) (ns): <25
- Cross section solid (mm²): 6 to 35
- Cross section flexible (mm²): 4 to 25
- Terminal torque (N.m): 3.5 max
- Enclosure material: UL 94 V0
- Insulation resistance (MOhms): >10
- Recommended gG 125A fuse for IEC applications (contact us).

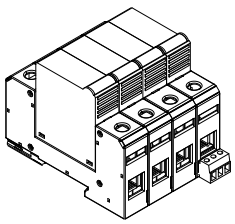
Catalog Number	Rated Voltage (V)	Nom. Discharge Current (In, 8/20, kA)	Max. Discharge Current (Imax, 8/20, kA)	ISCCR (kA)
STP230TNM	230	20	40	25
STP400ITM	400	10	40	25
STP230TN1M	230	20	40	25
STP230TNCM	230	20	40	25
STP230TNSM	230	20	40	25
STP400TNCM	400	20	40	25
STP400TNSM	400	20	40	25

Dimensional diagrams: inches and mm

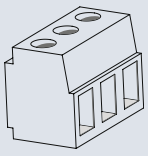


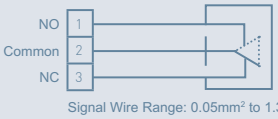
Poles	A (mm)
1	18.03
2	36.06
3	54.10
4	72.13





Surge-Trap® Microswitch Diagram





Signal Wire Range: 0.05mm² to 1.31mm²

- Terminal Torque 0.25N.m max
- Cont. between Comm + NO = Product Offline, Not Protected
- Cont. between Comm + NC = Product Offline, Protected

Surge-Trap® Modular SPDs
IEC Standard - AC Protection

Features

- DIN Rail mountable base 35mm
- IP20 finger-safe
- Internal TPMOV® (Thermal Protected Metal Oxide Varistor)
- Small footprint
- 25kA short-circuit withstand capability

Catalog Number	Reference Number	Rated Voltage (V)	No of Poles	System Type
ST230TN	E1011061C	230	1	TN
ST400IT	G1011063C	400	1	IT
ST230TN1	J1011065B	230/400	2	TN (1 Ph + N)
ST230TNC	N1011069A	230/400	3	TNC (3 Ph + PEN)
ST230TNS	Q1011071A	230/400	4	TNS (3 Ph + N)

In option: M for microswitch, e.g: ST230TNM refer drawing page 7

IEC Surge-Trap® Modular range DIN-Rail SPD offering

Catalog Number	Reference Number	Rated Voltage (V)	No of Poles	MCOV (U_c) L-PE	MCOV (U_c) L-N	MCOV (U_c) N-PE	MCOV (U_c) L-L	Voltage Protection Level (Up @ 20 kA), (kV)	Electrical strength (kV)	Freq (Hz)
ST230TN	E1011061C	230	1	270	N/A	N/A	N/A	< 1.5	3.3	50/60
ST400IT	G1011063C	400	1	510	N/A	N/A	N/A	< 2.0	3.3	50/60
ST230TN1	J1011065B	230	2	270	540	270	N/A	< 1.5	3.3	50/60
ST230TNC	N1011069A	230	3	270	N/A	N/A	540	< 1.5	3.3	50/60
ST230TNS	Q1011071A	230	4	270	540	270	540	< 1.5	3.3	50/60

In option: M for microswitch, e.g:ST230TNM refer drawing page 7

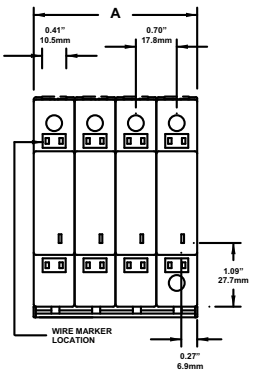
Environmental & Physical characteristics

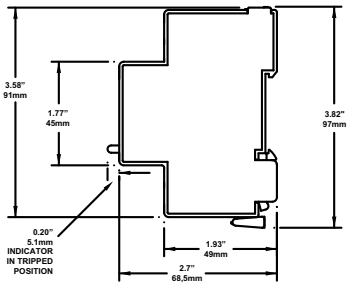
- Operating and storage temperature (C°): -25 to 60
- Response time (ta) (ns): <25
- Cross section solid (mm²): 2.5 to 16
- Cross section flexible (mm²): 1.5 to 10
- Terminal torque (N.m): 1.7
- Enclosure material: UL 94 V0
- Insulation resistance (MOhms): >10
- Recommended gG 125A fuse for IEC applications (contact us)

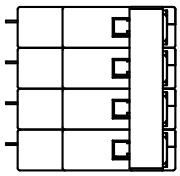
Catalog Number	Rated Voltage (V)	Nom. Discharge Current (In, 8/20, kA)	Max. Discharge Current (Imax, 8/20, kA)	ISCCR (kA)
ST230TN	230	20	40	25
ST400IT	400	10	40	25
ST230TN1	230	20	40	25
ST230TNC	230	20	40	25
ST230TNS	230	20	40	25

In option: M for microswitch, e.g:ST230TNM refer drawing page 7

Dimensional diagrams: inches and mm







Poles	A (mm)
1	17.8
2	35.5
3	53.3
4	71.0