

Type Overview

Product Group

SPSurge Protection

Product Family

Z	Combined testclass SPD for 40 mm busbar	T1T2T3
H	Combined testclass SPD for critical infrastructure	T1T2
B	Combined test class SPD for applications with an established lightning protection system	T1T2
C	Class 2 tested (some types are additional class 3 tested)	T2T3
E	Class 2 tested SPD to fulfill minimum requirements	T2
D	Class 3 tested SPD to protect sensitive devices in a fixed installation	T3
PV	Test class 2 and combined test class SPD for PV applications	T1T2

Test Class

T1	Required, if an external lightning protection system is established
T2	Minimum requirement if no external lightning protection system is established
T3	Protection for sensitive device in a fixed installation

Continuous operational voltage (Uc)

The SPD is non-conductive up to this voltage level!
This value is set by national regulations an is dependent on the connected supply system.

Connection Types

CT1	1+0 / 2+0 / 3+0 / 4+0	SPD between line and PE
CT2	1+1 (NPE) / 3+1 (NPE)	SPD between line and neutral connection Additional SPD between neutral and PE

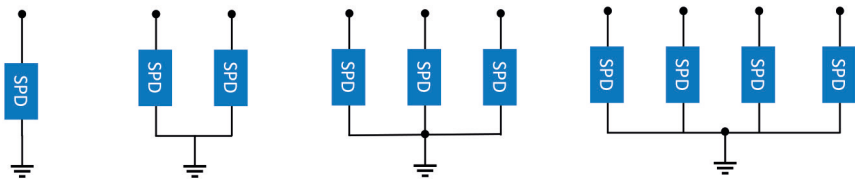
Product Suffix

AX	Auxiliary contact is fitted to the SPD
BB	SPD is pre-fitted with a busbar
H	Higher impulse discharge rating (Iimp)
OS	Special SPZT-S types without fused outgoing power supply

SP B T12 - 280 - 3+NPE / BB

Connection of SPDs

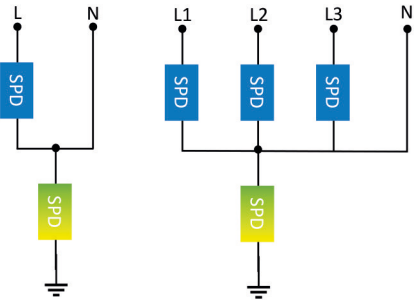
Connection Type 1 (CT1)



SPD between every live connection and earth potential!

- To be fitted in-front of an RCD
- The „3+0” connection is used in TN-C and TN-C-S systems (if the PEN connection is established within 0.5 m)
- 2+0 / 4+0 connections are used in TN-S systems, given that no RCD is in-front of the SPD

Connection Type 2 (CT2)



An additional SPD is installed between neutral and protective earth (galvanic separation is ensured).

- Can be installed behind an RCD (various conditions need to be met)
- 1+1 connection suited for TN-C-S and TT networks (single phase)
- 3+1 suited for TN-C-S and TT systems (three phase)
- Easy application due to the possibility to be fitted in front or after an RCD (dependent on supply network, test class and type of RCD)

Connection of an SPD after an RCD

- It is not recommended (or forbidden by local regulations) to install a test class 1 tested SPD after an RCD
- The minimum surge current capabilities for an RCD in-front of an SPD shall be 3 kA (established by type S/G/F/B RCDs)
- Please be aware that even a surge current proof RCD can trip if an SPD is placed in series
- Connecting neutral and protective Earth behind an RCD is forbidden. Galvanic separation is needed (1+1/3+1 connection)

