Class I&II, T1+T2, PV DC Surge Arresters Iimp 7.5kA

The PV50 series is class I & class II (or T1+T2) single pole PV DC SPD designed for DC application such as PV/ Photovoltaic system dc-side protection, especially for location of high risk exposure or LPZ 0-2 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.

With built in PROSURGE high energy MOV, PV50 ensures remarkable lightning current discharge capacity up to 7.5kA 10/350μs and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection

It is a din-rail designed surge protective device featuring Prosurge's global patented design of thermally protected MOV with special arc-extinguish device (TPAE technology), providing fast and reliable protection for various power supply systems.

Features

- TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.
- 18mm narrow model design
- Application in Photovoltaic (PV) systems and other DC power system like charging system for electric vehicles etc.
- Unique thermal disconnector design
- Lightning current capacity up to 7.5kA 10/350μs
- Surge current capability up to 50kA 8/20μs
- Low voltage protection level
- Degradation failure indication and optional remote signal contact.
- Pluggable module for easy replacement without the need to remove system wiring.
- Wide operating temperature -40° C ~85° C
- 35mm DIN-rail mounting
- Comply with EN 50539-11,UL1449 5th, IEEE C62.41,CSA C22.2 standards

PV50/xxx-V-S

PV50/xxx-V-C-S

PV50/xxx-V-CD-S

General Product Specification

Category IEC/VDE	Class I + Class II/Type 1 + Type 2
Short-circuit Current, Iscpv	1000A
Leakage Current, Ipe	<0.1mA
Thermal disconnector	Internal: green - normal ; red - failure
Wire Range	Single-strand 35mm^2; multi-strand 25mm^2
Mounting	35mm DIN-Rail
Degree of Protection	IP 20
Flammability	UL94 V0
Operating & Storage Temperature	-40ºC ~ +85ºC
Remote alarm contact*	NO/C/NC, Isolated Form C
Remote alarm contact capability Un/In	AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A
Remote alarm contact connecting wire	Max. 1.5mm^2 or # 16AWG

*SPD part No. with “-S” means with remote signal alarm; part No. without “-S” means no remote signal alarm.

Parameters

Model name	Mode of protection	SPD design technology	U_{CPV}(Vdc)
PV50/48-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	55
PV50/75-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	100
PV50/100-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	125
PV50/150-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	170
PV50/200-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	225
PV50/300-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	350
PV50/400-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	460
PV50/500-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	560
PV50/600-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	670
PV50/750-V(-S)	+/- to PE, or + to -	T1+T2, Voltage limiting	800
PV50/48-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	55
PV50/75-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	100
PV50/100-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	125
PV50/150-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	170
PV50/200-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	225
PV50/300-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	350
PV50/400-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	460
PV50/500-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	560
PV50/600-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	670
PV50/750-V-C(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	800

PV50/100-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	110
PV50/200-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	250
PV50/300-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	340
PV50/400-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	450
PV50/600-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	700
PV50/800-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	920
PV50/1000-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	1120
PV50/1200-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	1340
PV50/1500-V-CD(-S)	+/- to PE, + to -	T1+T2, Voltage limiting	1500

Model name	I_n (kA)	I_{max} (kA)	I_{imp} (kA)	U_P (kV)
PV50/48-V(-S)	20	50	7.5	0.6
PV50/75-V(-S)	20	50	7.5	0.6
PV50/100-V(-S)	20	50	7.5	0.7
PV50/150-V(-S)	20	50	7.5	0.8
PV50/200-V(-S)	20	50	7.5	1.0
PV50/300-V(-S)	20	50	7.5	1.2
PV50/400-V(-S)	20	50	7.5	1.5
PV50/500-V(-S)	20	50	6	2.0
PV50/600-V(-S)	20	50	4.5	2.2
PV50/750-V(-S)	20	50	4.5	2.5
PV50/48-V-C(-S)	20	50	7.5	0.6 (+/- to PE) 1.0(+ to -)
PV50/75-V-C(-S)	20	50	7.5	0.6 (+/- to PE) 1.0(+ to -)
PV50/100-V-C(-S)	20	50	7.5	0.7 (+/- to PE) 1.2 (+ to -)
PV50/150-V-C(-S)	20	50	7.5	0.8 (+/- to PE) 1.5 (+ to -)
PV50/200-V-C(-S)	20	50	7.5	1.0(+/- to PE) 2.0(+ to -)
PV50/300-V-C(-S)	20	50	7.5	1.2(+/- to PE) 2.2(+ to -)
PV50/400-V-C(-S)	20	50	7.5	1.5(+/- to PE) 2.8(+ to -)
PV50/500-V-C(-S)	20	50	6	2.0(+/- to PE) 3.5(+ to -)
PV50/600-V-C(-S)	20	50	4.5	2.2(+/- to PE) 4.0(+ to -)

PV50/750-V-C(-S)	20	50	4.5	2.5(+/- to PE) 4.5(+ to -)
PV50/100-V-CD(-S)	20	50	4.5	1.0
PV50/200-V-CD(-S)	20	50	7.5	1.2
PV50/300-V-CD(-S)	20	50	7.5	1.5
PV50/400-V-CD(-S)	20	50	7.5	2.0
PV50/600-V-CD(-S)	20	50	7.5	2.5
PV50/800-V-CD(-S)	20	50	7.5	2.8
PV50/1000-V-CD(-S)	20	50	6	3.5
PV50/1200-V-CD(-S)	20	50	4.5	4.0
PV50/1500-V-CD(-S)	20	50	4.5	4.5