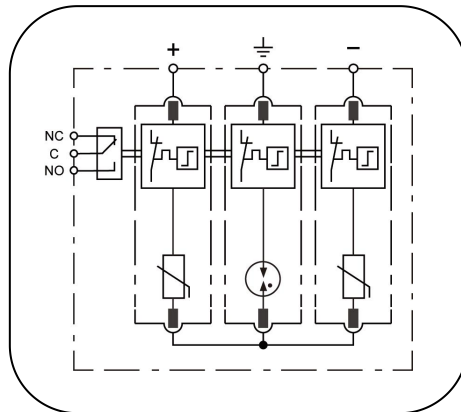
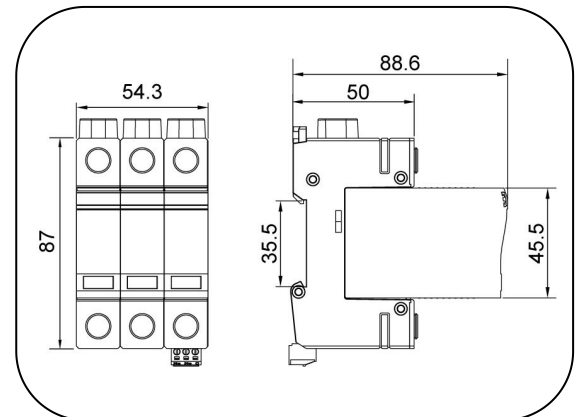


## Class I /T1, DC Surge Arresters

### DB12.5/xxxx-V2T-CD(-S)



Basic circuit diagram



Dimension drawing

The DB12.5 V2T is class I (or T1 ) prewired DC SPD designed for DC application such as electric vehicle(EV) charging station, energy storage etc. to against the damaging from surges and spikes caused by lightning and other electrical sources.

With built in PROSURGE high energy MOV & Gas Tube, DB12.5 V2T ensures remarkable total impulse current discharge capacity up to 15kA 10/350 $\mu$ s and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

- Class I/T1 DC SPD per IEC/EN 61643-1/31/41 standard
- 18mm narrow model design, prewired three poles of Y circuit for common mode & differential mode protection
- Application in DC power system like electric vehicle(EV) charging station system ,energy storage system etc
- Unique thermal disconnecter design
- Total impulse current discharge capacity up to 15kA 10/350 $\mu$ s
- Surge current capability up to 60kA 8/20 $\mu$ s per pole
- High short-circuit current rating up to 50kA
- Higher TOV withstand performance
- Galvanic separation between DC+/DC- and GND conductor, no leakage current to ground
- Low voltage protection level
- 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 IEC61643-1/11/31/41, EN 50539-11, UL1449 5th, IEEE C62.41, CSA C22.2 standards

## POWER SUPPLY SYSTEM

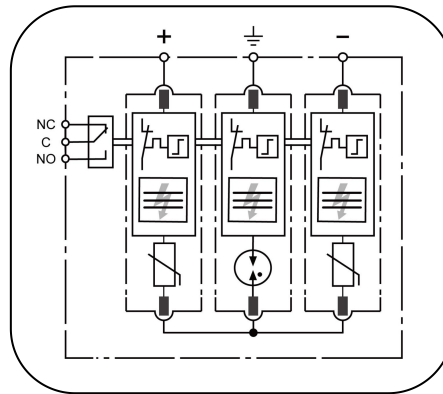
### Technical data

Part No.		DB12.5/xxxx-V2T-CD(-S)			
		800	1000	1200	1500
In accordance with		IEC/EN 61643-1/11/31/41; UL1449 5th; EN 50539-11			
Category IEC/EU/VDE		I/T1/B			
Protection mode		DC+ to DC- , DC+/- to GND			
Nominal Voltage (DC) $U_n$		800V	1000V	1200V	1500V
Max. continuous operating voltage (DC) $U_c$	DC+ to DC-	800V	1000V	1200V	1500V
	DC+/- to GND	800V	1000V	1200V	1500V
Nominal discharge current (8/20) $I_n$		20kA			
Max. discharge current (8/20) $I_{max}$		60kA			
Lightning impulse current (10/350) $I_{imp}$		8kA	6.25kA	5kA	4kA
Total discharge current (8/20) $I_{total}$		100kA	100kA	100kA	100kA
Total impulse current (10/350) $I_{total}$		15kA	12.5kA	10kA	8kA
Voltage protection level $U_p$	DC+ to DC-	4.5kV	4.8kV	5.3kV	5.8kV
	DC+/- to GND	2.3kV	2.5kV	2.8kV	3.0kV
Short-circuit Current rating $I_{scrr}$		50kA			
Response time $t_A$	DC+ to DC-	≤25ns			
	DC+/- to GND	≤100ns			
Leakage current (DC+/- to GND)		No			
Operating temperature range		- 40°C ~ + 85°C			
Altitude		-500m ~ +4000m			
Cross-section of connection wire (max)		Single-strand 35mm <sup>2</sup> ; multi-strand 25mm <sup>2</sup>			
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3			
Enclosure material		thermoplastic; extinguishing degree UL94 V-0			
Degree of protection		IP20			
Installation width		3 modules, DIN 43880			
Thermal disconnecter		Internal    Green – normal ; red - failure			
Remote alarm contact		Optional			
Approvals, Certifications		CE			
Additional data for Remote Alarm Contacts					
Remote alarm contact type		Isolated Form C			
Switching capability $U_n/I_n$		AC: 250V/0.5A	DC: 250V/0.1A; 125V/0.2A; 75V/0.5A		
Cross-section of remote signaling wire		Max. 1.5mm <sup>2</sup> (or # 16AWG)			

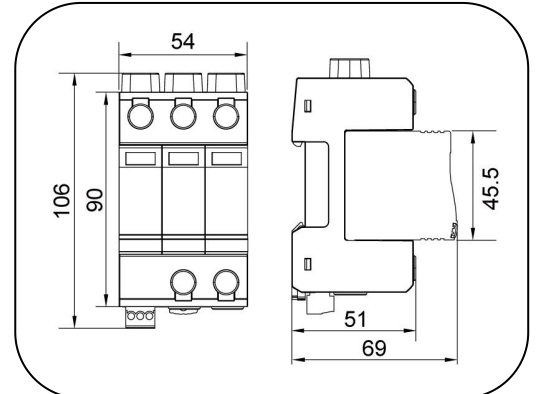
## POWER SUPPLY SYSTEM

### Class II /T2, DC Surge Arresters

#### DP50/xxxx-V2T-CD(-S)



Basic circuit diagram



Dimension drawing

The DP50 V2T is class II (or T2 ) prewired DC SPD designed for DC application such as electric vehicle(EV) charging station,energy storage etc. to against the damaging from surges and spikes caused by lightning and other electrical sources.

With built in PROSURGE high energy MOV & Gas Tube, DP50 V2T ensures remarkable surge current discharge capacity up to 50kA 8/20 $\mu$ s and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

- Class II/T2 DC SPD per IEC/EN 61643-1/31/41 standard
- Prewired three poles of Y circuit for common mode & differential mode protection
- Application in DC power system like electric vehicle(EV) charging station system, energy storage system etc
- Unique thermal disconnecter design
- Total discharge current capacity up to 100kA 8/20 $\mu$ s
- Surge current capability up to 50kA 8/20 $\mu$ s per pole
- High short-circuit current rating up to 25kA
- Higher TOV withstand performance
- Galvanic separation between DC+/DC- and GND conductor, no leakage current to ground
- Low voltage protection level
- 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 IEC61643-1/11/31/41,EN 50539-11,UL1449 5th, IEEE C62.41,CSA C22.2 standards

**Technical data**

Part No.		DP50/xxxx-V2T-CD(-S)			
		800	1000	1200	1500
In accordance with		IEC/EN 61643-1/11/31/41; UL1449 5th; EN 50539-11			
Category IEC/EU/VDE		II/T2/C			
Protection mode		DC+ to DC- , DC+/- to GND			
Nominal Voltage (DC) $U_n$		800V	1000V	1200V	1500V
Max. continuous operating voltage (DC) $U_c$	DC+ to DC-	800V	1000V	1200V	1500V
	DC+/- to GND	800V	1000V	1200V	1500V
Nominal discharge current (8/20) $I_n$		20kA			
Max. discharge current (8/20) $I_{max}$		50kA	50kA	45kA	45kA
Total discharge current (8/20) $I_{total}$		100kA	100kA	80kA	80kA
Voltage protection level $U_p$	DC+ to DC-	4.5kV	4.8kV	5.3kV	5.8kV
	DC+/- to GND	2.3kV	2.5kV	2.8kV	3.0kV
Short-circuit Current rating $I_{scrr}$		25kA			
Response time $t_A$	DC+ to DC-	≤25ns			
	DC+/- to GND	≤100ns			
Leakage current (DC+/- to GND)		No			
Operating temperature range		- 40°C ~ + 85°C			
Altitude		-500m ~ +4000m			
Cross-section of connection wire (max)		Single-strand 35mm <sup>2</sup> ; multi-strand 25mm <sup>2</sup>			
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3			
Enclosure material		thermoplastic; extinguishing degree UL94 V-0			
Degree of protection		IP20			
Installation width		3 modules, DIN 43880			
Thermal disconnecter		Internal    Green – normal ; red - failure			
Remote alarm contact		Optional			
Approvals, Certifications		CE			
Additional data for Remote Alarm Contacts					
Remote alarm contact type		Isolated Form C			
Switching capability $U_n/I_n$		AC: 250V/0.5A		DC: 250V/0.1A; 125V/0.2A; 75V/0.5A	
Cross-section of remote signaling wire		Max. 1.5mm <sup>2</sup> (or # 16AWG)			