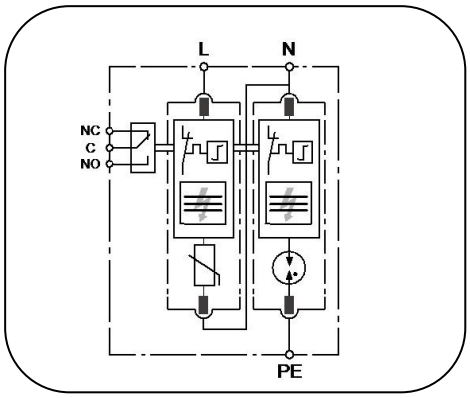
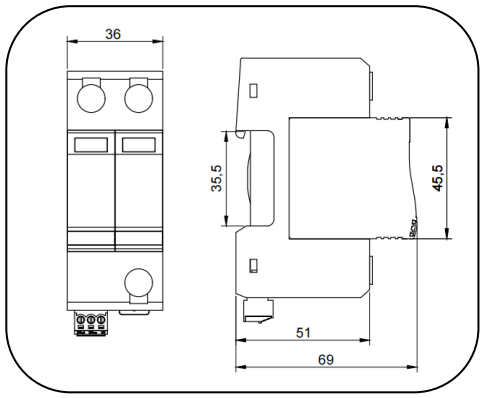
Class I + Class II (T1+T2), Two poles Surge Arresters

DS50/…-(V+T)



Basic circuit diagram



Dimension drawing

The DS50 V+T is class I & class II (or T1+T2) prewired two poles SPD designed for low-voltage power system lightning current & surge protection, used at the boundaries from lightning protection zone 0_B -2 and higher.

With built in PROSURGE high energy MOV and GDT, DS50 V+T ensures remarkable lightning current discharge capacity up to 7.5kA 10/350μs (L-N), 12.5kA 10/350μs (N-PE) and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

- TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard.
- Prewired two poles SPD (“1+1” circuit) for use in single phase
- Unique thermal disconnector design provides quick thermal response and secure disconnection
- Lightning current capacity up to 7.5kA 10/350μs (L-N), 12.5kA 10/350μs (N-PE)
- ➢ Surge current capability up to 50kA 8/20μs
- Low voltage protection level
- High short-circuit current rating up to 25kArms, suitable for application in most AC power system.
- 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 UL1449 5th, IEEE C62.41,CSA C22.2 standards

Technical data

Part No.		DS50/150-(V+T) (-S)	DS50/180-(V+T) (-S)	DS50/275-(V+T) (-S)	DS50/320-(V+T) (-S)	DS50/350-(V+T) (-S)	DS50/385-(V+T) (-S)
In accordance with		IEC/EN 61643-11:2011; UL1449 5th					
Category IEC/EU/VDE		I+ II /1+2/ B+C					
Protection mode		L-N ,N-PE					
Max. continuous operating voltage(AC) Uc	L-N	150V	180V	275V	320V	350V	385V
	N-PE	150V	150V	255V	255V	255V	255V
Nominal discharge current (8/20) In		20kA					
Max. discharge current (8/20) Imax		50kA					
Lightning impulse current (10/350) limp	L-N	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA
	N-PE	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA
Voltage protection level Up	L-N	0.8kV	1.0kV	1.2kV	1.4kV	1.5kV	1.8kV
	N-PE	1.5kV	1.5kV	1.5kV	1.5kV	1.5kV	1.5kV
Response time tA	L-N	≤25ns					
	N-PE	≤100ns					
Temporary overvoltage TOV U_T Withstand mode	L-N	174V/5s	228V/5s	335V/5s	335V/5s	403V/5s	403V/5s
	N-PE	1200V/200ms	1200V/200ms	1200V/200ms	1200V/200ms	1200V/200ms	1200V/200ms
Follow current & interrupt rating Ifi	N-PE	100A					
Leakage current Ipe		<0.1mA					
Short-circuit current rating Isscr		25kArms					
Backup fuse(only required if not already provided in mains)		≤125A gL/gG					
Operating temperature range		-40ºC ~ +85ºC					
Altitude		-500m ~ +4000m					
Cross-section of connection wire (max)		Single-strand 35mm^2; multi-strand 25mm^2					
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		2 module, DIN 43880					
Thermal disconnector		Internal Green – normal ; red - failure					
Remote alarm contact		Optional					
Approvals, Certifications		TUV, CE					
Additional data for Remote Alarm Contacts							
Remote alarm contact type		Isolated Form C					
Switching capability Un/In		AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A					
Cross-section of remote signaling wire (max)		1.5mm^2(or # 16AWG)					