

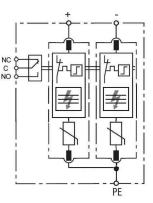
Class I + Class II (T1+T2), PV DC Surge Arresters PV50/600-V-C-S

The PV50 C is class I & class II (or T1+T2) prewired PV DC SPD designed for DC applications 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.

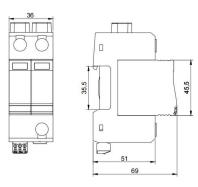
With built in PROSURGE high energy MOV, PV50 C ensures remarkable lightning current discharge capacity up to 7.5kA 10/350µs and high reliability.

The unique design of thermal protection provides quick thermal response and secure disconnection.





Basic Circuit Diagram



Dimension Drawing

TUV certified T1+ T2 DC SPD per IEC/EN 61643-31 standard.

18mm narrow model design, prewired two poles of V circuit for common mode protection

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 $7.5 kA \ 10/350 \mu s$

Surge current capability up to 50kA 8/20 $\!\mu s$

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 Edition, IEEE C62.41, CSA C22.2 standards



Class I + Class II (T1+T2), PV DC Surge Arresters PV50/600-V-C-S

Technical Data

In accordance with IEC/EN 61643-31; UL1449 5 th ; EN 50539-11 Category IEC/EU/VDE I II /1+2/ B+C Protection mode DC+ to DC -, DC+/- to PE Nominal Voltage (DC) Un COV Max. continuous operating voltage (DC) Ucpv 670V Nominal discharge current (8/20) In 20kA Max. discharge current (8/20) Imax 50kA Lightning impulse current (10/350) Iimp 4.5kA Voltage protection level DC+/- to PE Up DC+/- to PE DC+/- to PE DC+/- to PE 2.2kV Up COV Response time tA CS25ns Leakage Current lpe CA. Short-circuit Current lscpv 0.00A Operating temperature range - 40°C ~ + 85°C Altitude -500m ~ +4000m Cross-section of connection wire (max) Single-strand 35mm ² ; multi-strand 25mm ² Mounting 1920 Installation width 2 modules, DIN 43880 Thermal disconnector II externation Contact 0 Internal Green – normal; red - failure Remote alarm contact 4 Optional Approvals, Certifications TUV, CE Remote alarm contact type Solated Form C Switching capability Un/In CON Switching capability Un/In CON Suitching Capability	Part No.		PV50/ 600-V-C-(S)		
Protection modeDC+ to DC- , DC+/- to PENominal Voltage (DC)600VMax. continuous operating voltage (DC)CrowNominal discharge current (8/20)InMax. discharge current (8/20)ImaxSokASokALightning impulse current (10/350)Imp4.5kA2.2kVUpDC+/- to PE0.2 kV.0kVResponse timetAShort-circuit CurrentJDC+/- to DC -Ackage CurrentJpcOperating temperature range-40°C ~+ 85°CAltitude-500m ~+ 4000mCross-section of connection wire (max)Single-strand 35mm ² ; multi-strand 25mm ² Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	In accordance with		IEC/EN 61643-31; UL1449 5 th ; EN 50539-11		
Protection mode DC+ to DC-, DC+/- to PE Nominal Voltage (DC) 600V Max. continuous operating voltage (DC) Ucpv Nominal discharge current (8/20) In Max. discharge current (8/20) Imax Max. discharge current (8/20) Imax Max. discharge current (10/350) Imp Lightning impulse current (10/350) DC+/- to PE Voltage protection level DC+/- to PE DC+ to DC - 4.0kV Response time A Short-circuit Current Ipc + to DC - DC+ to DC - 4.0kV Response time C					
Nax. continuous operating voltage (DC)Ucpv670VNominal discharge current (8/20)In20kAMax. discharge current (8/20)Imax50kALightning impulse current (10/350)Iimp4.5kAVoltage protection levelDC+/- to PE2.2kVUpDC + to DC -4.0kVResponse time tA≤25nsLeakage Current lscpvOtheration (1000A)Operating temperature range-40°C ~ + 85°CAltitude-500m ~ +4000mCross-section of connection wire (max)Single-strand 35mm², multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeLsolated Form CSwitching capability Un/inAC: 250V/0.5ADCC: 250V/0.1A; 125V/0.2A; 75V/0.5A			DC+ to DC- , DC+/- to PE		
Nominal discharge current (8/20) In 20kA Max. discharge current (8/20) Imax 50kA Lightning impulse current (10/350) Iimp 4.5kA Voltage protection level DC+/- to PE 2.2kV Up DC+/- to DC - 4.0kV Response time th 50kA Leakage Current Ipe Short-circuit Current Iscp 000A Operating temperature range -40°C ~ + 85°C Altitude 50mm ~ +4000m Cross-section of connection wire (max) Single-strand 35mm²; multi-strand 25mm² 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 modules, DIN 43880 Thermal disconnector Internal Green – normal; red - failure Remote alarm contact Optional Approvals, Certifications TUV, CE Additional data for Remote Alarm Contacts Isolated Form C Switching capability Un/in AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Nominal Voltage (DC) Un		600V		
Max. discharge current (8/20)Imax50kALightning impulse current (10/350)Iimp4.5kAVoltage protection levelDC+/- to PE2.2kVUpDC + to DC -4.0kVResponse time tA<25ns	Max. continuous operating voltage (DC) Ucpv		670V		
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Voltage protection levelDC+/- to PE2.2kVUpDC + to DC -4.0kVResponse time tA<25ns	Max. discharge current (8/20) Imax		50kA		
UpDC + to DC -4.0kVResponse time tA<25ns	Lightning impulse current (10/350) limp		4.5kA		
UpDC + to DC -4.0kVResponse time tA<25ns		DC+/- to PE	2.2kV		
Leakage Current lpe<0.1mAShort-circuit Current lscpv1000AOperating temperature range-40°C ~ +85°CAltitude-500m ~ +4000mCross-section of connection wire (max)Single-strand 35mm²; multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAc: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A		DC + to DC -		4.0kV	
Short-circuit CurrentIscpv1000AOperating temperature range-40°C ~ + 85°CAltitude-500m ~ +4000mCross-section of connection wire (max)Single-strand 35mm²; multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAc: 250V/0.5ADc: 250V/0.1A; 125V/0.2A; 75V/0.5A	Response time tA		≤25ns		
Operating temperature range- 40°C ~ + 85°CAltitude-500m ~ +4000mCross-section of connection wire (max)Single-strand 35mm²; multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAc: 250V/0.5ADc: 250V/0.1A; 125V/0.2A; 75V/0.5A	Leakage Current Ipe		<0.1mA		
Altitude-500m ~ +4000mCross-section of connection wire (max)Single-strand 35mm²; multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Short-circuit Current Iscpv		1000A		
Cross-section of connection wire (max)Single-strand 35mm²; multi-strand 25mm²Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Operating temperature range		- 40ºC ~ + 85ºC		
Mounting35mm DIN-rail in accordance with EN 50022/DIN46277-3Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Altitude		-500m ~ +4000m		
Enclosure materialthermoplastic; extinguishing degree UL94 V-0Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAc: 250V/0.5ASwitching capability Un/InAc: 250V/0.5A	Cross-section of connection wire (max)		Single-strand 35mm ² ; multi-strand 25mm ²		
Degree of protectionIP20Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal ; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAc: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3		
Installation width2 modules, DIN 43880Thermal disconnectorInternal Green – normal; red - failureRemote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Enclosure material		thermoplastic; extinguishing degree UL94 V-0		
Thermal disconnector Internal Green – normal; red - failure Remote alarm contact Optional Approvals, Certifications TUV, CE Additional data for Remote Alarm Contacts Isolated Form C Switching capability Un/In AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Degree of protection		IP20		
Remote alarm contactOptionalApprovals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Installation width		2 modules, DIN 43880		
Approvals, CertificationsTUV, CEAdditional data for Remote Alarm ContactsIsolated Form CRemote alarm contact typeIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Thermal disconnector		Internal	Green – normal ; red - failure	
Additional data for Remote Alarm ContactsRemote alarm contact typeIsolated Form CSwitching capability Un/InAC: 250V/0.5ADC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Remote alarm contact		Optional		
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	Approvals, Certifications		TUV, CE		
Switching capability Un/In AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A	Additional data for Remote Ala	irm 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)	Cross-section of remote signaling wire		Max. 1.5mm ² (or # 16AWG)		