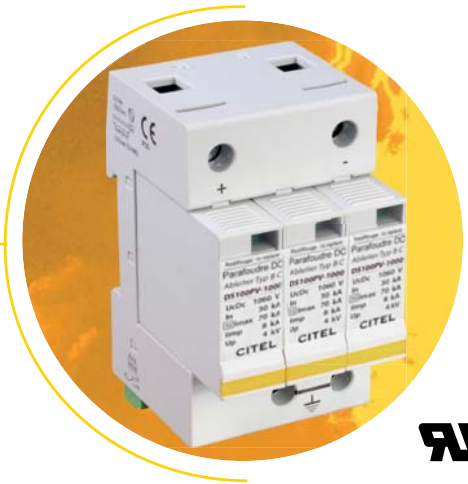
Heavy Duty DC Surge Protector for Photovoltaic

DS100PV



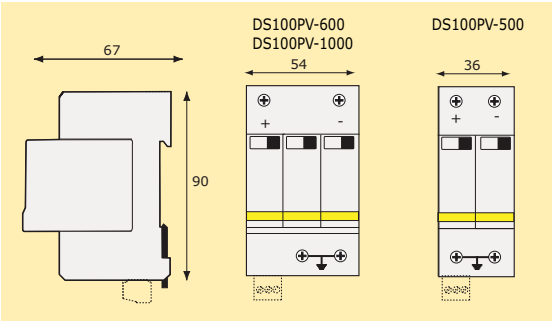
DS100PV is a DC Surge Protection Device (SPD) for high risk DC power applications. The DS100PV provides protection against the direct and indirect effects of lightning.

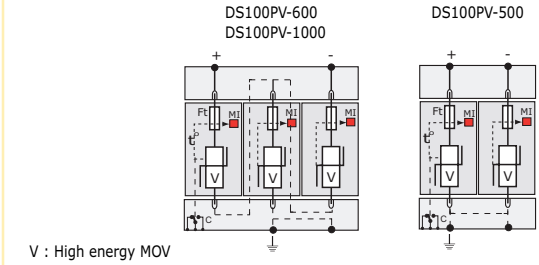
The DS100PV is a multi-pole module protecting both positive and negative to ground and is available for DC power system voltages of 500, 600 and 1000 Vdc. It is installed in parallel with the power system and is mounted on a din rail for application directly inside an Inverter or DC combiner box.
The DS100PV incorporates redundant Metal Oxide Varistor (MOV) protection circuit and specific DC thermal fuses that allows for high surge current handling 100kA 8/20us and reliable disconnection. These units have visual fault indicators, replaceable protection modules and are available with optional remote signalization (DS100PVS-xxx).

Available Options

- Polycarbonate Enclosure, NEMA 4X
  Part# CDS100PV-xxx
- 40A Fused Disconnect
  Part# CDS100PV-xxx-40

Dimensions and Diagram (in mm)





V : High energy MOV
Ft : Thermal fuse
t° : Thermal disconnection mechanism
C : Contact for remote signal (Option DS100PVS)

Characteristics

CITEL part number		DS100PV-500	DS100PV-600	DS100PV-1000
Network voltage		500 Vdc	600 Vdc	1000 Vdc
Redundancy		Yes	Yes	Yes
Max. Operating Voltage	(Uc)	530 Vdc	715 Vdc	1060 Vdc
Operating current Leakage current at Uc	(Ic)	< 0.1 mA	< 0.1 mA	< 0.1 mA
IEC/UL Nominal discharge current (In) 15 x 8/20 µs impulses		30/20 kA	30/20 kA	30/20 kA
Maximum discharge current tenue max. 10/350 µs	(Iimp)	8 kA	8 kA	8 kA
Max. Lightning current by pole tenue max. 8/20 µs	(Imax)	70 kA	70 kA	70 kA
Follow current	(If)	none	none	none
Protection level (at In)	(Up)	1.8 kV	2.5 kV	3.6 kV
Residual voltage at 5 kA		1.7 kV	1.8 kV	3 kV
Thermal Disconnector		internal		
Dimensions		see diagram		
Connection		by screw terminals : #4 AWG MAX		
Disconnection indicator		1 mechanical indicator by pole		
Remote signaling		Option DS100PVS - output on changeover contact		
Mounting		symmetrical rail 35 mm		
Operating temperature		-40/+85 °C		
Protection class		IP20		
Housing material		Thermoplastic UL94-V0		
Standards compliance				
NF EN 61643-11	France	Parafoudre Basse Tension - Essais Classe II		
IEC 61643-1	Intl	Low Voltage SPD - Test Class II		
CSA C22.2	Canada	Class 90941 32		
UL1449 3rd Edition	USA	Type 4, Type 2 Location		

Note 1 MC =Common Mode (+/PE or -/PE) and MC/MD = Common Mode and Differential Mode (+/-)

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