

Type 1 and 2 - DC Surge Protector for Photovoltaic DS60VGPV



The DS60VGPV is a heavy duty DC surge protection device (SPD) for high risk Photovoltaic installations up to 1200 Vdc. The DS60VGPV provides protection against the direct and indirect effects of lightning and has a unique "no leakage current" design.

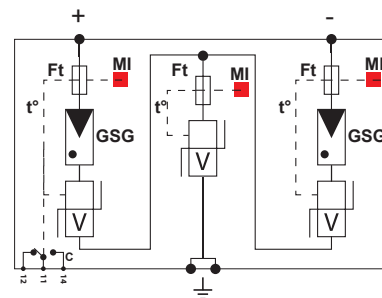
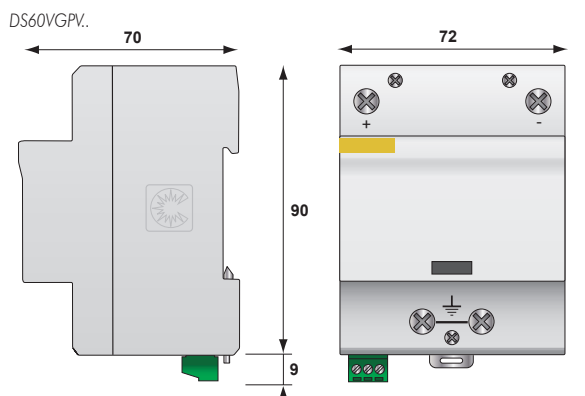
The DS60VGPV incorporates VG-Technology, CITEL's patented hybrid Gas-filled spark gap (GSG)/Metal Oxide Varistor (MOV) protection circuit which dramatically increases the life expectancy of the surge protector and creates no extra leakage and operating currents within the PV power system.

The internal heavy duty components allow high surge current handling (12.5 kA 10/350µs), reliable disconnection with specific thermal disconnectors and create no follow on current. These units have visual fault indicators and are equipped with remote signalization for real-time status indication

The DS60VGPV is a multi-pole robust base and protects both positive and negative wires to ground. It is installed in parallel with the PV power system and is mounted on a DIN rail for convenient mounting directly inside PV inverters or DC combiner boxes.

- **Type1 and 2 Surge Protector for Photovoltaic**
- **VG-Technology**
- **No leakage, no operating currents**
- **Improved life expectancy**
- **Impulse currents limp 12.5 kA/pole @ 10/350µs**
- **Common Mode and Differential protection**
- **Remote Signaling**

Dimensions and diagram



GSG: Gas-filled spark gap
V: High energy MOV
MI: Disconnection indicator
Ft: Thermal fuse
F: Thermal disconnection mechanism
C: Contact for remote signal

Characteristics

CITEL part number		DS60VGPV-500	DS60VGPV-1000
Network voltage	Uocsc	500 Vdc	1000 Vdc
Protection mode *		MC/MD	MC/MD
Max. operating voltage	Ucpv	600 Vdc	1200 Vdc
Operating current	Ic	none	none
Leakage current at Uc			
Follow current	If	none	none
Nominal discharge current	In	20 kA	20 kA
15 x 8/20 µs impulses			
Maximum discharge current	limp	12.5 kA	12.5 kA
10/350 µs withstand			
Max. Lightning current by pole	Imax	40 kA	40 kA
8/20µs withstand			
Protection level (at In)	Up	< 1.7 kV	< 2.8 kV
Protection level (at 5 kA)	Up	< 1.4 kV	< 2.3 kV
Disconnecter			
Thermal Disconnecter		internal	
Mechanical characteristics			
Dimensions		see diagram	
Connection		Screw terminal for 4-25 mm ² wire	
Disconnection indicator		1 mechanical indicator	
Remote signaling (DS60VGPVS)		250V/0.5 (AC) - 125V/3A (DC)	
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	International	Low Voltage SPD - Test Class II	
CSA C22.2	Canada	Class 90941 32	
UL1449 ed.3	USA	Type 4, Type 2 location - Pending	

*) MC = Common Mode (+/PE ou -/PE)
MD = Differential Mode (+/-)