

Surge Protection

DC surge protective devices - SAPV Series

- Specifically designed for photovoltaic systems, DC application.
- According to standard EN 50539-11.
- Surge protective device Type 2 / Class II (IEC 61643-31).
- Suitable for protection against induced overvoltages (tested at 8/20 μ s).
- Discharger elements made with Metal Oxide Varistor technology (MOV).
- Pluggable solution, to facilitate maintenance. With mechanical coding system which identify the different plugs (cartridge), to avoid possible replacement errors.
- Integrated disconnection system capable of disconnecting the SPD at the end of its operating life time (OCFM).
- Local signaling of the operating status condition, available on the front side.
- Remote signaling of the operating status condition, with changeover relay.
- Without back-up fuse for short circuit current (I_{SCPV}) up to 1000A.
- IP20 degree, on terminals.
- Fixing on DIN rail.
- Indoor installation.



DC

Surge Protective Devices



Technical data

	SAPV060T2		SAPV060T2R		SAPV100T2		SAPV100T2R	
Standards								
Applicable Standards			EN 50539-11 / IEC 61643-31			EN 50539-11 / IEC 61643-31		
Technical data								
Residual current	I_{FE}	μA	< 500 (Iac/dc)			< 500 (Iac/dc)		
Permanent current for PV application	I_{CPV}	μA	< 500 (Iac/dc)			< 500 (Iac/dc)		
Maximum continuous operating voltage	U_{CPV}	V (dc)	600			1040		
Nominal discharge current (8/20 μs)	I_n	kA	18			18		
Maximum discharge current (8/20 μs)	I_{max}	kA	40			40		
Total discharge current (8/20 μs)	I_{total}	kA	40			40		
Reference voltage (1 mA)	U_{REF}	V (dc)	860			1500		
Short-circuit current without back-up fuse	I_{SCPV}	kA	1			1		
Voltage protection level	U_p	kV	< 2,7			< 3,5		
Remote signaling relay - Electrical parameters			-	230 Vac - 1A 24 Vdc - 1A	-	230 Vac - 1A 24 Vdc - 1A		
Functional data								
SPD typology			Type 2 / Class II			Type 2 / Class II		
Protection technology			Metal Oxide Varistor (MOV)			Metal Oxide Varistor (MOV)		
Protection mode			L+ / PE, L / PE (common mode) L+ / L- (differential mode)			L+ / PE, L / PE (common mode) L+ / L- (differential mode)		
Typical response time	t_A	ns	< 25			< 25		
Thermal protection			Yes			Yes		
SPD failure mode			Open circuit (OCFM)			Open circuit (OCFM)		
Operating status signaling			Local, through display indicator (GREEN - Service; RED - End of lifetime)			Local, through display indicator (GREEN - Service; RED - End of lifetime)		
Mechanical characteristics								
Protection degree			IP20			IP20		
Number of ports		Nr.	1			1		
Maximum dimensions (W-D-H)		mm	53 x 74 x 94,6	53 x 74 x 99	53 x 74 x 94,6	53 x 74 x 99		
Fixing			DIN rail			DIN rail		
Enclosure material			UL-V0 (non-spread and self-extinguishing characteristics)			UL-V0 (non-spread and self-extinguishing characteristics)		
Weight		g	276	283	315	322		
Connection terminals		mm^2	4 \div 25			4 \div 25		
Cross-sectional area of conductors		AWG	11 \div 4			11 \div 4		
Connection terminals - Tightening torque		Nm	3 (\pm 10%)			3 (\pm 10%)		
Remote signaling relay		mm^2	1,5			1,5		
Cross-sectional area of conductors		AWG	15			15		
Remote signaling relay - Tightening torque		Nm	0,4 (\pm 10%)			0,4 (\pm 10%)		
Ambient conditions								
Humidity		%HR	5 \div 95			5 \div 95		
Operating temperature	T_U	$^{\circ}\text{C}$	-40 \div +70			-40 \div +70		
Installation			Indoor			Indoor		
Accessories								
Replacement plug			SAXCPV060			SAXCPV100		

SAPV Series

TYPE 2

Maximum continuous operating voltage U_{CPV} : 600 Vdc

Bremas SPD T2 600V 40kA



Maximum continuous operating voltage	Nominal discharge current (8/20 μ s)	Maximum discharge current (8/20 μ s)	Voltage protection level	Code	Remote signaling
U_{CPV} (Vdc)	I_n (kA)	I_{max} (kA)	U_p (kV)		
600	18	40	< 2,7	SAPV060T2	No
600	18	40	< 2,7	SAPV060T2R	Yes

Maximum continuous operating voltage U_{CPV} : 1040 Vdc

Bremas SPD T2 1040V 40kA



Maximum continuous operating voltage	Nominal discharge current (8/20 μ s)	Maximum discharge current (8/20 μ s)	Voltage protection level	Code	Remote signaling
U_{CPV} (Vdc)	I_n (kA)	I_{max} (kA)	U_p (kV)		
1040	18	40	< 3,5	SAPV100T2	No
1040	18	40	< 3,5	SAPV100T2R	Yes

Accessories

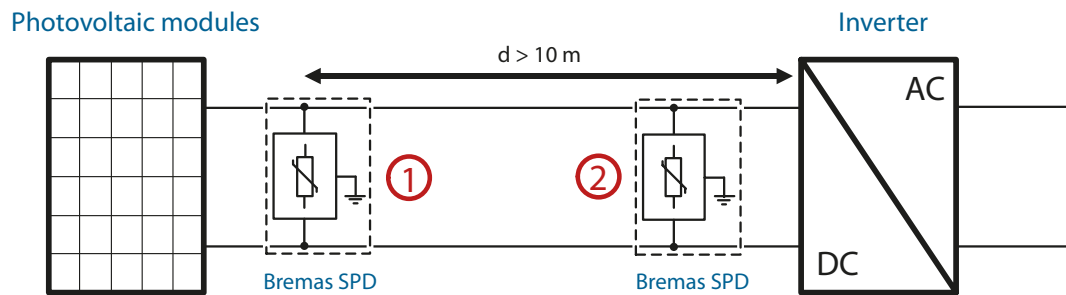
Replacement plug



Maximum continuous operating voltage	Nominal discharge current (8/20 μ s)	Maximum discharge current (8/20 μ s)	Code	Description
U_{CPV} (Vdc)	I_n (kA)	I_{max} (kA)		
600	18	40	SAXCPV060	For Bremas SPD type SAPV060...
1040	18	40	SAXCPV100	For Bremas SPD type SAPV100...

Features

Distances



If $d < 10\text{ m}$, the Brema SPD ② is not required

Dimensions

Data in mm

