RSP-PV...

2,3-pole surge arresters for photovoltaic systems, I_{max} = 50 kA/pole

RSP-PV4.5-600-2P

RSP-PV4.5-1500-3P

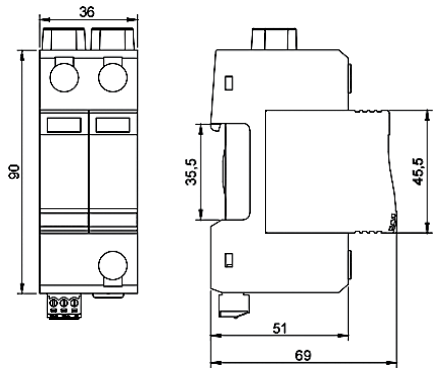
- Category IEC / EN / VDE: class I+II / type 1+2 / B+C
- Location of use: connection box, inverter
- Network systems: photovoltaic
- Modes of protection: (+/-)-PE, (+)-(–)
- Protection elements: MOV
- Cover: modular (replaceable module)
- Mechanical status indicator: green/red flag
- Compliance with standards: IEC 61643-31:2018, ISO 9001, CE, RoHS

Type of arrester		RSP-PV4.5 -600-2P	RSP-PV6.0 -1000-3P	RSP-PV4.5 -1200-3P	RSP-PV4.5 -1500-3P
Electrical data					
Number of poles		2		3	
Nominal voltage	U_n	600 V DC	1 000 V DC	1 200 V DC	1 500 V DC
Max. continuous operating voltage	U_{cpv}	670 V DC	1 120 V DC	1 340 V DC	1 500 V DC
Nom. discharge current (8/20 µs)	I_n	20 kA	20 kA	20 kA	20 kA
Max. discharge current (8/20 µs)	I_{max}	50 kA	50 kA	50 kA	50 kA
Impulse discharge current (10/350 µs)	I_{imp}	4,5 kA	6 kA	4,5 kA	4,5 kA
Voltage protection level	U_p	2,2 kV (+/-)-PE 4,0 kV (+)-(-)	3,5 kV (+/-)-PE, (+)-(-)	4,0 kV (+/-)-PE, (+)-(-)	4,5 kV (+/-)-PE, (+)-(-)
Response time	t_A	≤ 25 ns			
Short-circuit current rating	I_{scpv}	1 kA			
Leakage current	I_{pe}	< 0,1 mA			
Thermal protection		internal disconnector inspection window (green: normal, red: failure)			
General data					
Ambient temperature (operating)	T_a	-40...+85 °C			
Operating altitude		-500...4 000 m			
Cross section of cables connected to terminals		35 mm² (single core) / 25 mm² (multi-core)			
Terminal tightening moment		max. 4,5 Nm			
Mounting		direct mounting on 35 mm rail mount (EN 60715)			
Cover protection category		IP 20 (built-in, EN 60529)			
Cover material		thermoplastic; extinguishing degree V-0 (UL 94)			
Dimensions (L x W x H) [mm]		90 x 36 x 69	89,7 x 54 x 64		
Weight		296 g	369 g	378 g	386 g
Remote fault signalisation					
Type of contact		potential-free (isolated contact 1 CO)			
Switching capability of contact		0,5 A / 250 V AC 0,1 A / 250 V DC, 0,2 A / 125 V DC, 0,5 A / 75 V DC			
Cross section of cables connected to terminals		1,5 mm² (wire single core)			

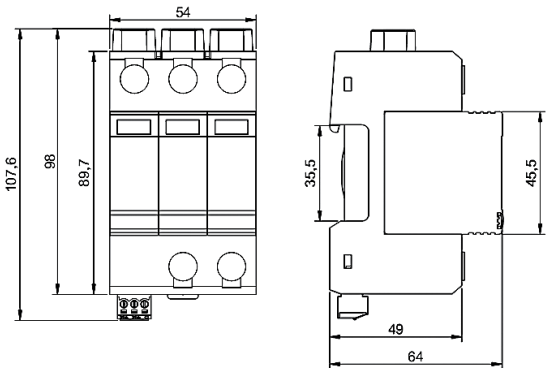
04.03.2025

Export Sales Department phone +48 68 47 90 832, 951 • e-mail: export@relpol.com.pl

Dimensions

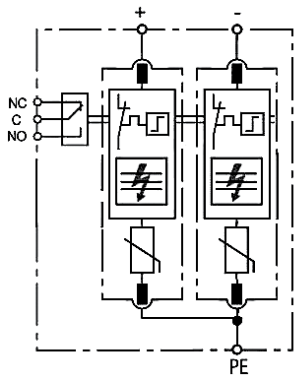


RSP-PV...-2P

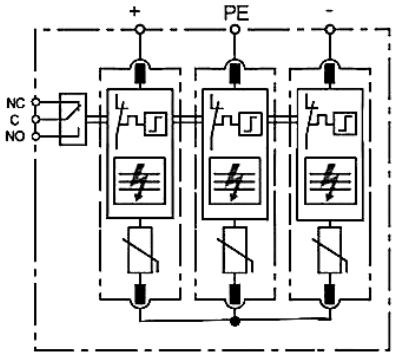


RSP-PV...-3P

Connection diagrams



RSP-PV...-2P



RSP-PV...-3P

Features:
- designed according to IEC/EN 61643-31, EN 50539-11,
- unique thermal disconnector design provides quick thermal response and secure disconnection,
- high lightning current discharge capacity up to 6 kA (10/350 µs), surge current capability up to 50 kA (8/20 µs),
- short-circuit current rating up to 1 kA, suitable for application in most DC power systems - in solar system (photovoltaic power supply system), charging system for electric vehicles etc., low voltage protection level, high reliability,
- anti-vibration module locking system with release button,
- pluggable module for easy replacement without the need to remove system wiring,
- degradation failure indication window and remote signal contact.

Series description:
- **RSP-PV-...** is the class I+II SPD for DC application 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; is suit for the main-distribution board,
- high energy MOVs are employed to provide stable lightning & surge protection service with no follow current; notable feature is dual module redundancy for one pole, two individual MOV protection modules in parallel in one pole SPD with two indication windows, so that the SPD could keep on working in spite of one protection module fails or one indication windows turns to red - that will help to realize the uninterrupted surge protection, since user can replace the failure models according to the timing and the condition,
- must be installed in parallel on the DC networks to be protected and provide common and different modes protection; installed location are recommended at both ends of the DC power supply line (solar panel side and inverter/converter side), especially if the line routing is external and long.

Types for reference:
- **RSP-PV4.5-600-2P**: combined, two-pole SPD (prewired of V circuit for common mode protection) - for PV systems,
- **RSP-PV6.0-1000-3P**, **RSP-PV4.5-1200-3P**, **RSP-PV4.5-1500-3P**: combined, three-pole SPD (prewired of V circuit for common mode protection) - for PV systems.