RSP-T...-DC.../...

2,3-pole surge arresters for photovoltaic systems, I_{max} = 40, 50 kA/pole

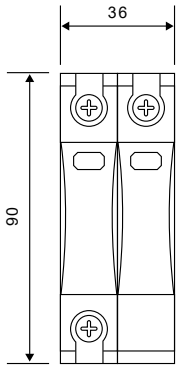
RSP-T1T2-DC 9/3P

RSP-T2-DC/3P

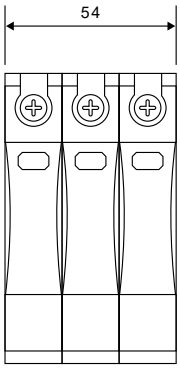
- Category IEC / EN / VDE: class I+II, II / type 1+2, 2 / B+C, C
- Location of use: photovoltaic systems (connection box, inverter)
- Modes of protection: (+)-PE, (–)-PE, (+)-(–)
- Protection elements: MOV
- Cover: modular (replaceable module)
- Mechanical status indicator: green/red flag
- Compliance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

Type of arrester		RSP-T1T2 -DC 9/3P	RSP-T1T2 -DC 6.25/3P	RSP-T2 -DC/2P	RSP-T2 -DC/3P
Electrical data					
Number of poles		3	3	2	3
Max. continuous operating voltage	U_c	1000 V DC			
Nom. discharge current (8/20 µs)	I_n	20 kA		20 kA	
Max. discharge current (8/20 µs)	I_{max}	50 kA		40 kA	
Lightning impulse current (10/350 µs)	I_{imp}	7 kA		–	
Impulse discharge current (10/350 µs)	I_{imp}	9 kA	6,25 kA	–	
Total current (10/350 µs)	I_{total}	18 kA	12,5 kA	–	
Voltage protection level	U_p	4,5 kV		4 kV	
Response time	t_A	≤ 100 ns		≤ 25 ns	
Max. backup fuse (L) (L-L')		200 A gL/gG 125 A gL/gG		– 125 A gL/gG	
General data					
Ambient temperature (operating)	T_a	-40...+80 °C (parallel wiring) / -40...+60 °C (through wiring)		-40...+80 °C	
Cross section of cables connected to terminals		35 mm² (solid) / 50 mm² (flexible)		1,5...25 mm² (solid) / 35 mm² (flexible)	
Terminal tightening moment		max. 4,5 Nm			
Mounting		direct mounting on 35 mm rail mount (EN 60715)			
Cover protection category		IP 20 (EN 60529)			
Cover material		thermoplastic; extinguishing degree UL 94 V-0			
Dimensions (L x W x H) [mm]		90 x 54 x 80	90 x 54 x 67	90 x 36 x 67	90 x 54 x 67
Weight		288 g	288 g	206 g	283 g

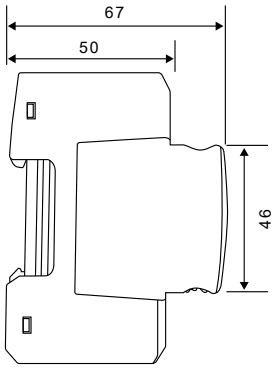
Dimensions



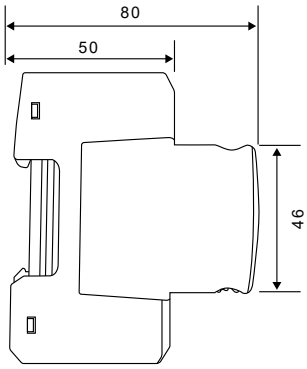
RSP-T2-DC/2P



RSP-T1T2-DC 9/3P
RSP-T1T2-DC 6.25/3P
RSP-T2-DC/3P



RSP-T1T2-DC 6.25/3P
RSP-T2-DC/2P
RSP-T2-DC/3P



RSP-T1T2-DC 9/3P

02.09.2024

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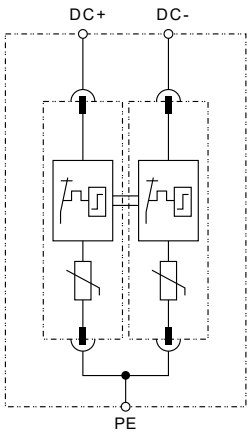
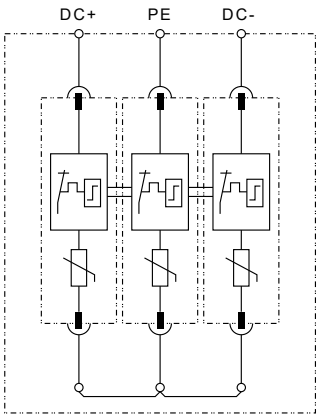
Connection diagrams

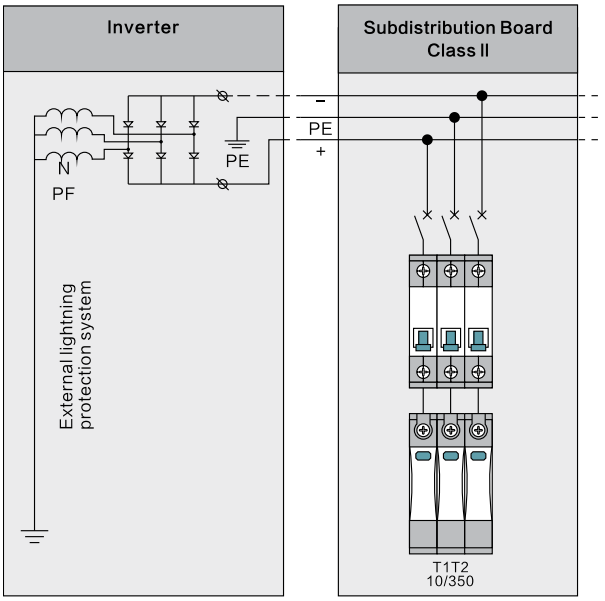


RSP-T2-DC/2P



RSP-T1T2-DC 9/3P
RSP-T1T2-DC 6.25/3P
RSP-T2-DC/3P

TN-S system



RSP-.../3P

Applications:
- for protecting low voltage equipment against lightning and surge damages,
- for installation in conformity with the lightning protection zones concept at LPZ 0-1,
- designed according to IEC 61643-31:2018.

Features:
- surge protective devices protect against lightning surge voltages in solar system (photovoltaic power supply system),
- these units must be installed in parallel on the DC networks to be protected and provide common and different modes protection,
- its 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.

Series description:
- **RSP-T...-DC.../...** is the class I+II, II SPD for low voltage power supply system,
- mainly installed at main distribution cabinet,
- SPD are equipped with high energy MOVs equipped with specific thermal disconnectors and related fallure indicators,
- note: all SPD used in power supply system should always add backup fuse or CCT breaker.

Important notes:
- the device may only be connected and installed by an electrically skilled person conforming to notional standards and safely regulations,
- fous fuse must be installed at the upstream of the SPD or the lightning arrester for power supply system to make sure that the protected system has double protection,
- the value of the fuse used in a SPD system should be conformed to:
  - the value of the fuse should not be larger than the max. withstand capacity of the SPD's backup fuse value,
  - under the status of the max, current in the power supply & close loop circuit available current, the fuse should aable to disconnect when overloaded or short-circuited,
  - thken the above into consideration, the fuse should be able to conduct the maximum surge discharge of the SPD,
- most fuse & circuit breaker manufacturers can quote/have quoted 8/20 µs and/or 10/35 µs current specification, therefore, installers can specify the type accordingly with the SPD surge & lightning current requirement.