

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

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

RSP-T1T2-DC 9/3P



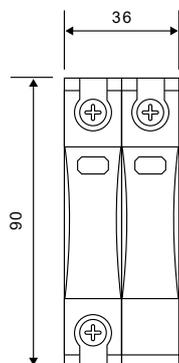
RSP-T2-DC/2P



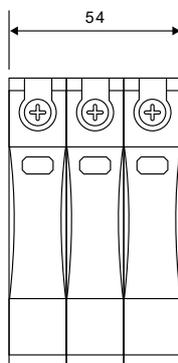
- Category IEC / EN / VDE: class I+II, II / type 1+2, 2 / B+C, C photovoltaic systems (connection box, inverter)
- Location of use: (+)-PE, (-)-PE, (+)-(-) MOV modular (replaceable module) green/red flag
- Modes of protection: (+)-PE, (-)-PE, (+)-(-) MOV modular (replaceable module) green/red flag
- Protection elements: MOV modular (replaceable module) green/red flag
- Cover: modular (replaceable module) green/red flag
- 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
<b>Electrical data</b>				
Number of poles	3	3	2	3
Max. continuous operating voltage $U_c$	1000 V DC			
Nom. discharge current (8/20 $\mu$ s) $I_n$	20 kA		20 kA	
Max. discharge current (8/20 $\mu$ s) $I_{max}$	50 kA		40 kA	
Lightning impulse current (10/350 $\mu$ s) $I_{imp}$	7 kA		-	
Impulse discharge current (10/350 $\mu$ s) $I_{imp}$	9 kA	6,25 kA	-	
Total current (10/350 $\mu$ s) $I_{total}$	18 kA	12,5 kA	-	
Voltage protection level $U_p$	4,5 kV		4 kV	
Response time $t_A$	$\leq 100 \text{ ns}$		$\leq 25 \text{ ns}$	
Max. backup fuse (L) (L-L')	200 A gL/gG 125 A gL/gG		- 125 A gL/gG	
<b>General data</b>				
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 mm <sup>2</sup> (solid) / 50 mm <sup>2</sup> (flexible)		1,5...25 mm <sup>2</sup> (solid) / 35 mm <sup>2</sup> (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

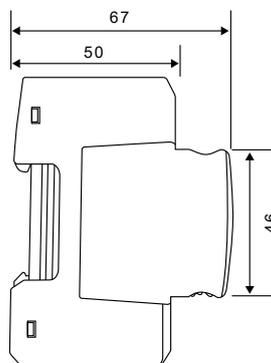
## Dimensions



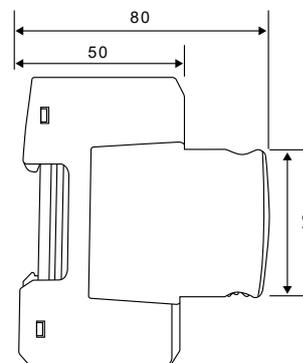
RSP-T2-DC/2P



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

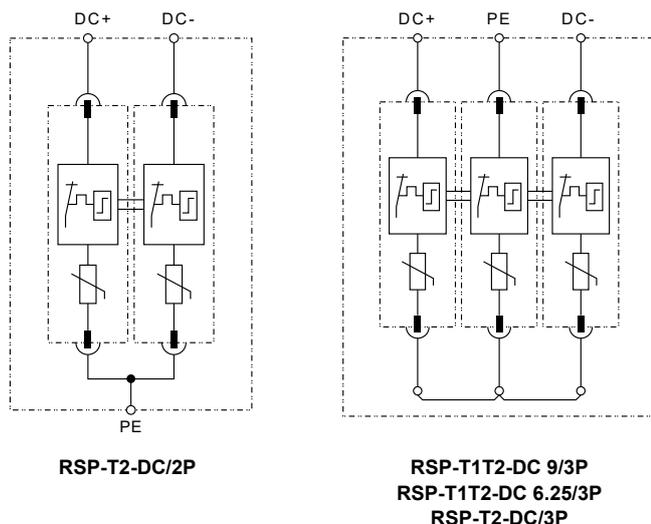


RSP-T1T2-DC 9/3P

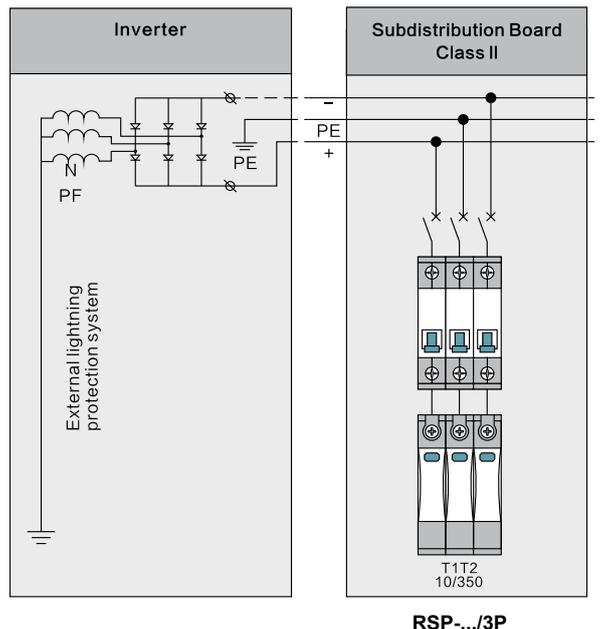
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## Connection diagrams



## TN-S system



## 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 failure 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 safety 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  $\mu\text{s}$  and/or 10/35  $\mu\text{s}$  current specification, therefore, installers can specify the type accordingly with the SPD surge & lightning current requirement.