

# PRT-PV-1000 - Type 2 surge arrester



2908900

<https://www.phoenixcontact.com/us/products/2908900>

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Integrated onboard lightning arrester in accordance with Type 2/Class II for MPPT protection of single and multiple circuits

## Commercial data

Item number	2908900
Packing unit	10 pc
Minimum order quantity	1 pc
Product key	CL134D
GTIN	4055626354804
Weight per piece (including packing)	77.12 g
Weight per piece (excluding packing)	77.12 g
Country of origin	CN

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## Technical data

### Product properties

Product type	PV arrester
Product family	PRINTRAB
EN type	T2
Type	PCB onboard surge protector
Distance between live and grounded parts	8.2 mm
Environment	Indoor
Installation location of the disconnect device	Internal
Accessibility	Accessible
End-of-life mode	OCM

### Insulation characteristics

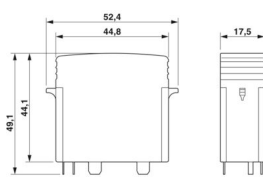
Overvoltage category	II
Pollution degree	2

### Electrical properties

#### Indicator/remote signaling

Connection name	NC/NO
Switching function	normal/deterioration
Operating voltage	30 V AC 30 V DC
Operating current	1 A AC 1 A DC

### Dimensions

Dimensional drawing	
Width	17.5 mm
Height	52.4 mm
Depth	49 mm

### Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6-FR
Material group	I
Housing material	PA 6.6-FR

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## Protective circuit

Protective conductor current $I_{PE}$	$\leq 100 \mu\text{A}$
Standby power consumption $P_C$	$\leq 125 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu\text{s}$	40 kA
Total discharge current $I_{Total}$ (8/20) $\mu\text{s}$	40 kA
Voltage protection level $U_p$	$\leq 1.9 \text{ kV}$ (single item)
	$\leq 3.75 \text{ kV}$ (2 serial connections)
Residual voltage $U_{res}$	$\leq 1.9 \text{ kV}$ (at $I_n$ )
	$\leq 2.4 \text{ kV}$ (at 40 kA)
Response time $t_A$	$\leq 25 \text{ ns}$

## Protective circuit DC voltage side (DC)

Maximum continuous operating voltage $U_{CPV}$	585 V DC (single item)
	1170 V DC (2 serial connections)
Short-circuit current rating $I_{SCPV}$	2000 A
Open-circuit voltage $U_{OCSTC}$	$\leq 485 \text{ V DC}$ (single item)
	$\leq 970 \text{ V DC}$ (2 serial connections)
Maximum discharge current $I_{max}$ (8/20) $\mu\text{s}$	40 kA
Response time $t_A$	$\leq 25 \text{ ns}$
Total discharge current $I_{Total}$ (8/20) $\mu\text{s}$	40 kA
Insulation resistance $R_{iso}$	$> 5 \text{ G}\Omega$ (at 500 V DC)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$	20 kA
Continuous operating current $I_{CPV}$	$< 100 \mu\text{A}$
Maximum continuous operating voltage $U_{CPV}$	585 V DC (single item)
	1170 V DC (2 serial connections)
Short-circuit current rating $I_{SCPV}$	2000 A
Residual voltage $U_{res}$	$\leq 1.9 \text{ kV}$ (at $I_n$ )
	$\leq 2.4 \text{ kV}$ (at 40 kA)
Protective conductor current $I_{PE}$	$\leq 100 \mu\text{A}$
Voltage protection level $U_p$	$\leq 1.9 \text{ kV}$ (single item)
	$\leq 3.75 \text{ kV}$ (2 serial connections)
Standby power consumption $P_C$	$\leq 125 \text{ mVA}$

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP00
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	$\leq 5000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (10 Hz ... 500 Hz/2.5 h/XYZ)

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## Approvals

### UL specifications

Maximum continuous operating voltage MCOV	585 V DC (Ld-Ld)
Nominal discharge current $I_n$	20 kA
Mode of protection	Ld-Ld
Nominal voltage	485 V DC
Measured limiting voltage MLV	1900 V
SPD Type	4CA

## Standards and regulations

Standards/specifications	EN 50539-11
Note	2013
Standards/specifications	NB/T 32004/GF 026: 2013

## Mounting

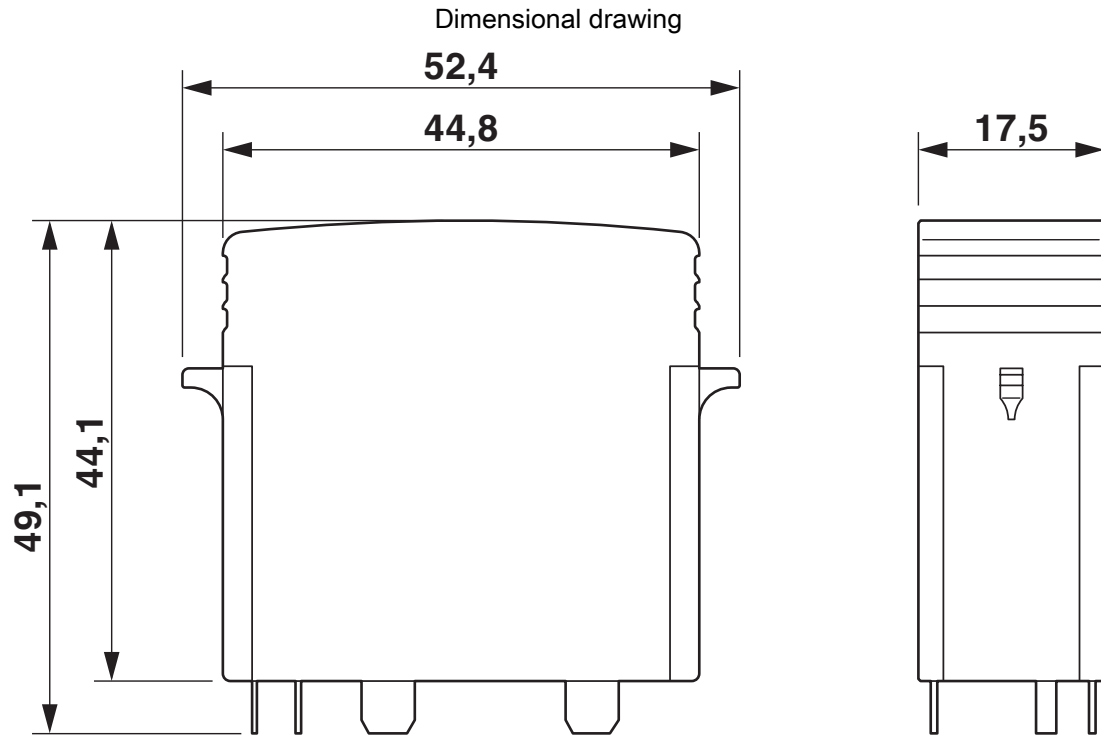
Mounting type	PCB mounting
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# PRT-PV-1000 - Type 2 surge arrester

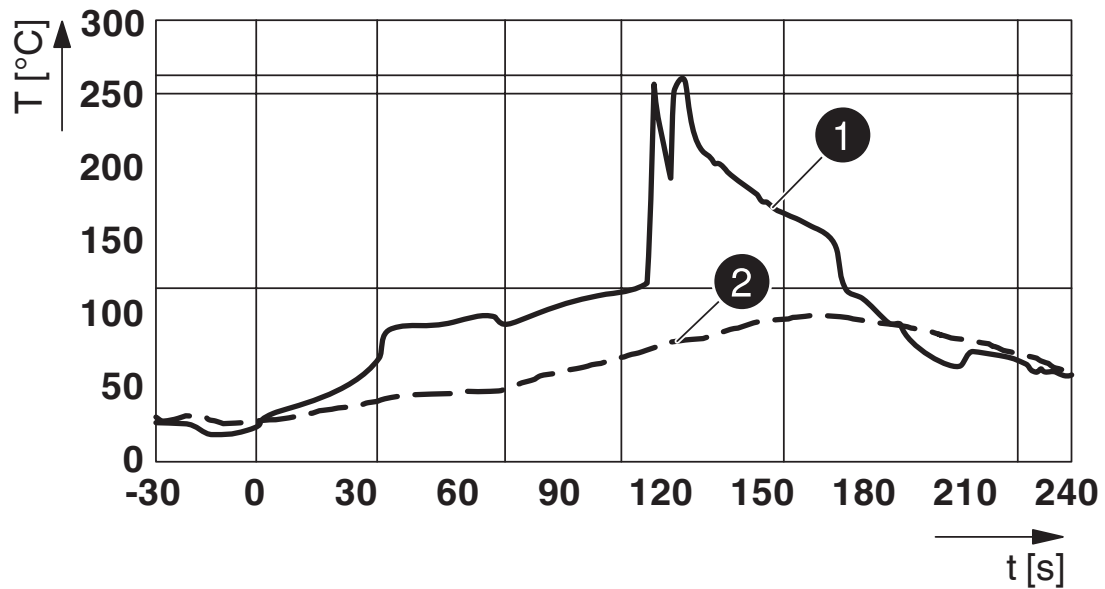
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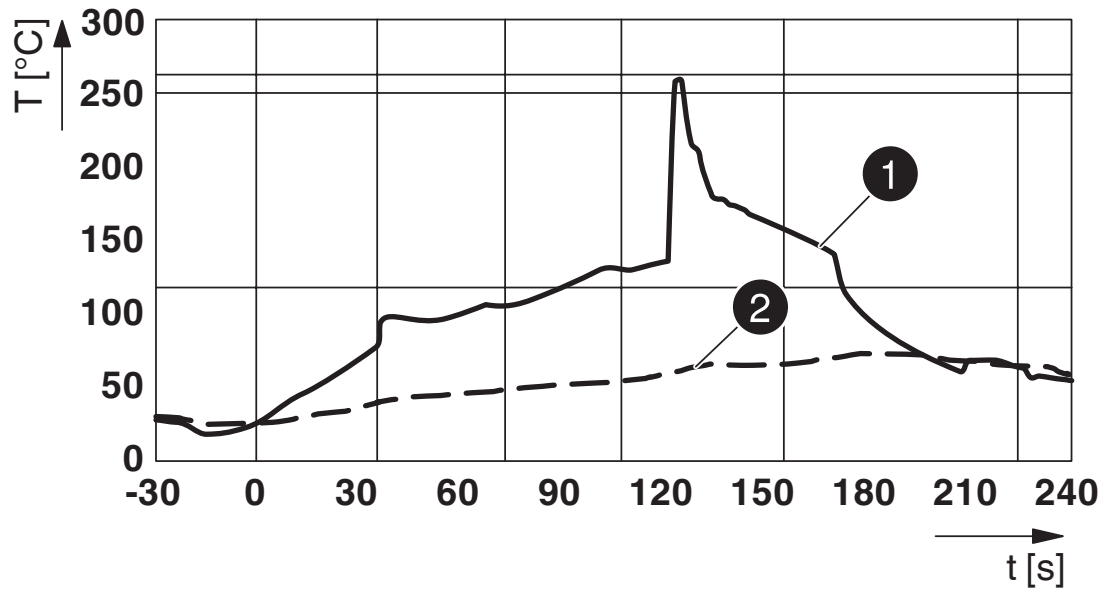
## Drawings



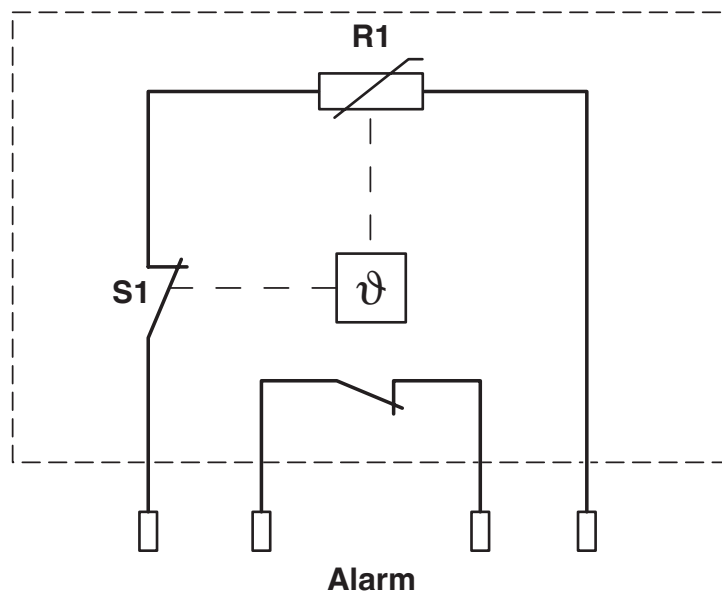
Diagram



Diagram



Circuit diagram



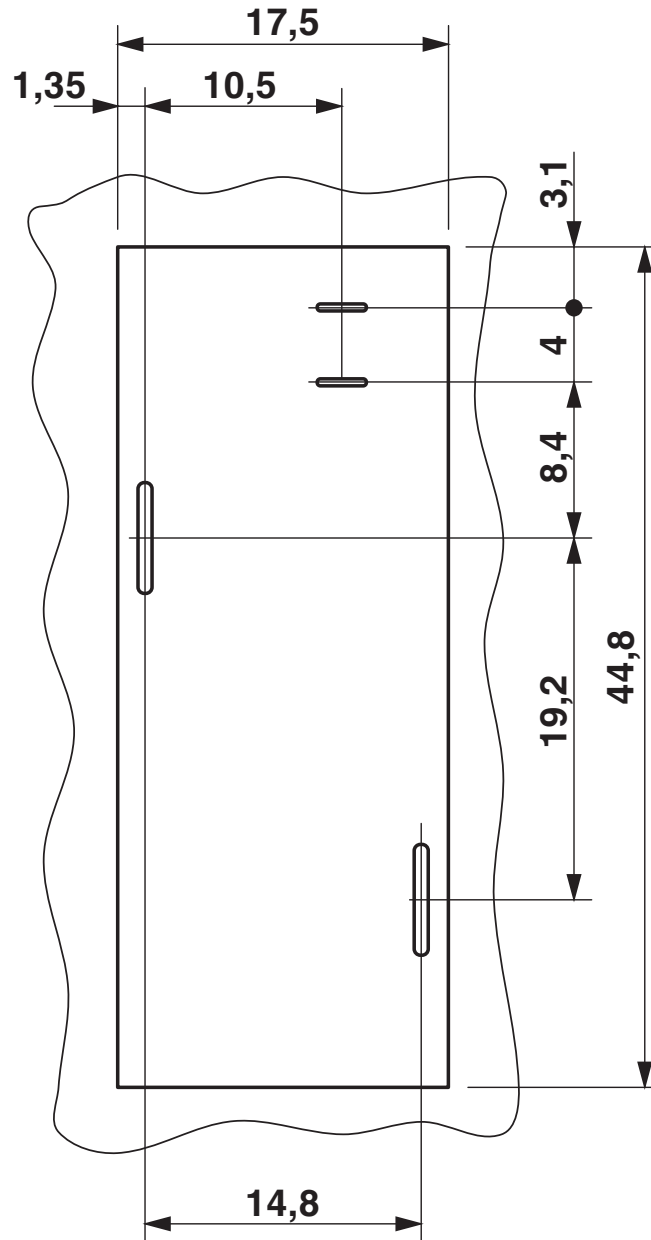
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Drilling plan/solder pad geometry



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## Classifications

### ECLASS

ECLASS-13.0

27171402

### ETIM

ETIM 9.0

EC000941

### UNSPSC

UNSPSC 21.0

39121600

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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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