

# VAL-SPP-T2-600DC-PV-P - Type 2 surge protection plug



1466778

<https://www.phoenixcontact.com/in/products/1466778>

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Replacement plug for PV special combined lightning current and surge arrester from the VAL-SPP-T2-600DC-PV-2+V-UT... product family.

## Your advantages

- Easy and safe installation with forward-thinking handling and safety features
- Reliable system protection with maximum performance and endurance
- Can be used in a wide range of applications due to the optimized design and broad portfolio
- Simple planning due to comprehensive digital data and selectors

## Commercial data

Item number	1466778
Packing unit	10 pc
Minimum order quantity	1 pc
Product key	CL138Z
GTIN	4063151862244
Weight per piece (including packing)	55.2 g
Weight per piece (excluding packing)	52 g
Country of origin	DE



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## Technical data

### Product properties

Product type	Replacement plug
Product family	VAL-SPP
IEC test classification	PV II
	PV T2
EN type	T2
IEC power supply system	DC
Type	Male
Number of positions	1
Installation location	Indoor
Installation location of the disconnect device	Internal
Accessibility	Accessible
Connection configuration	Y configuration
SPD failure behavior	OCFM (Open-Circuit Failure Mode)
Surge protection fault message	optical

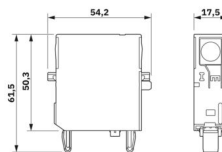
### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Connection data

Connection method	pluggable
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### Dimensions

Dimensional drawing	
Width	17.5 mm
Height	54.2 mm
Depth	61.5 mm
Horizontal pitch	1 Div.

### Material specifications

Color	light gray (RAL 7035)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6-FR 20 % GF
Material group	I
Housing material	PA 6.6-FR 20 % GF



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## Protective circuit

Residual current $I_{PE}$	$\leq 350 \mu\text{A AC}$
	$\leq 100 \mu\text{A DC}$
Standby power consumption $P_C$	$\leq 40 \text{ mVA}$
Nominal discharge current $I_n (8/20) \mu\text{s}$	20 kA
Maximum discharge current $I_{\text{max}} (8/20) \mu\text{s}$	40 kA
Total discharge current $I_{\text{total}} (8/20) \mu\text{s}$	40 kA
Voltage protection level $U_p$	$\leq 3 \text{ kV}$ (2 plugs in series)
Residual voltage $U_{\text{res}}$	$\leq 3 \text{ kV}$ (at $I_n$ , 2 plugs in series)
	$\leq 2.5 \text{ kV}$ (at 10 kA, 2 plugs in series)
	$\leq 2.3 \text{ kV}$ (at 5 kA, 2 plugs in series)
	$\leq 2.1 \text{ kV}$ (at 3 kA, 2 plugs in series)
Response time $t_A$	$\leq 25 \text{ ns}$

## PV protective circuit

Connection configuration	Y configuration
SPD failure behavior	OCFM (Open-Circuit Failure Mode)

## Protective circuit DC voltage side (DC)

Open circuit voltage $U_{\text{OCSTC}}$	667 V DC (2 plugs in series)
Maximum discharge current $I_{\text{max}} (8/20) \mu\text{s}$	40 kA
Response time $t_A$	$\leq 25 \text{ ns}$
Total discharge current $I_{\text{total}} (8/20) \mu\text{s}$	40 kA
Insulation resistance $R_{\text{iso}}$	$> 5 \text{ M}\Omega$ (at 500 V DC)
Nominal discharge current $I_n (8/20) \mu\text{s}$	20 kA
Continuous operating current $I_{\text{CPV}}$	$\leq 100 \mu\text{A DC}$
Maximum continuous operating voltage $U_{\text{CPV}}$	800 V DC (2 plugs in series)
Short-circuit current rating $I_{\text{SCPV}}$	15000 A
Residual voltage $U_{\text{res}}$	$\leq 3 \text{ kV}$ (at $I_n$ , 2 plugs in series)
	$\leq 2.5 \text{ kV}$ (at 10 kA, 2 plugs in series)
	$\leq 2.3 \text{ kV}$ (at 5 kA, 2 plugs in series)
	$\leq 2.1 \text{ kV}$ (at 3 kA, 2 plugs in series)
Residual current $I_{PE}$	$\leq 350 \mu\text{A AC}$
	$\leq 100 \mu\text{A DC}$
Voltage protection level $U_p$	$\leq 3 \text{ kV}$ (2 plugs in series)
Standby power consumption $P_C$	$\leq 40 \text{ mVA}$

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20C
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (assembly)	-5 °C ... 50 °C
Altitude	$\leq 5000 \text{ m}$ (amsl)



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Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (5-500 Hz/2.5 h/XYZ)

## Standards and regulations

Standards/specifications	EN 61643-31
Note	2019
Standards/specifications	IEC 61643-31
Note	2018

## Mounting

Mounting type	on base element
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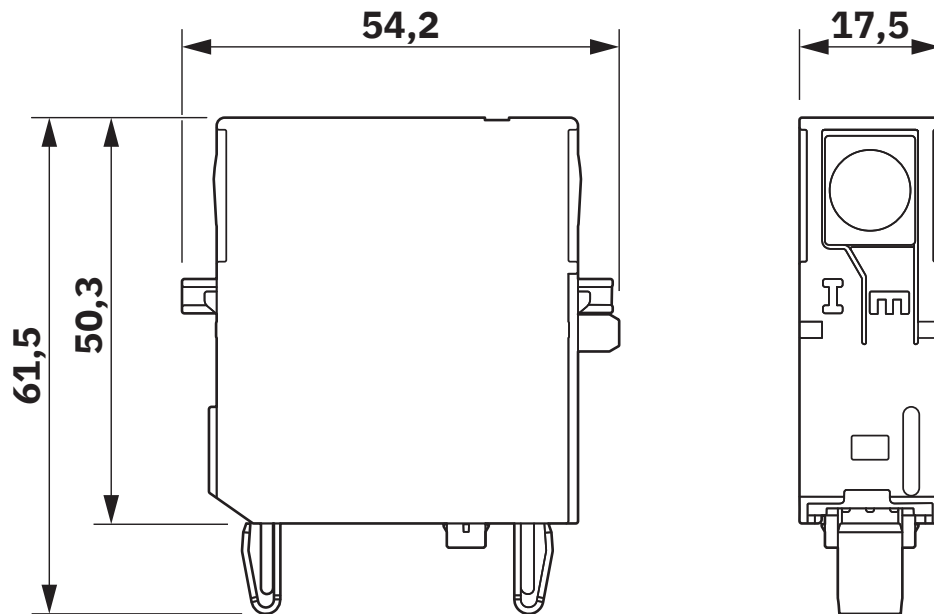


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## Drawings

Dimensional drawing



Circuit diagram





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## Approvals

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**IECEE CB Scheme**

Approval ID: NL-109183

**CCA**

Approval ID: NTR NL-8030



**KEMA-KEUR**

Approval ID: 71-133324



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## Classifications

### ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171492

### ETIM

ETIM 9.0	EC002496
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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