

# VAL-SEC-T2-120DC-P - Type 2 surge protection plug



2907878

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Replacement plug for surge protective devices from the VALVETRAB SEC product range for DC power sources.

## Your advantages

- Surge protection family for universal use with optimum energy coordination from the lightning current arrester to the device protection
- Easy to maintain due to consistently pluggable protection modules
- Excellent level of information provided by mechanical/visual status indicator and remote indication contact
- Extremely narrow design, just 12 mm per position
- Varistor arrester with a low leakage current

## Commercial data

Item number	2907878
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	CL01
Product key	CL1353
Catalog page	Page 58 (C-4-2019)
GTIN	4055626245034
Weight per piece (including packing)	53.2 g
Weight per piece (excluding packing)	53.2 g
Customs tariff number	85363090
Country of origin	DE

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## Technical data

### Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	DC
Type	Male
Product type	Replacement plug
Product family	SEC Family
Number of positions	1
Surge protection fault message	optical

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Electrical properties

Nominal voltage $U_N$	100 V DC ... 120 V DC
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### Connection data

Connection method	pluggable
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### Dimensions

Dimensional drawing	
Width	11.7 mm
Height	46.4 mm
Depth	59.4 mm
Horizontal pitch	0.6 Div.

### Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA6.6-FR 20% GF
	PBT-FR
Material group	I
Housing material	PA 6.6-FR 20 % GF
	PBT-FR

### Protective circuit

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Mode of protection	(DC+) - (DC-)
	(DC+/DC-) - PE
Direction of action	(DC+/DC-) - PE
Nominal voltage $U_N$	100 V DC ... 120 V DC
Maximum continuous voltage $U_C$	150 V DC
Residual current $I_{PE}$	$\leq 5 \mu A$ DC
Nominal discharge current $I_n$ (8/20) $\mu s$	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu s$	40 kA
Impulse discharge current (10/350) $\mu s$ , charge	0.5 As
Impulse discharge current (10/350) $\mu s$ , specific energy	0.25 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu s$ , peak value $I_{imp}$	1 kA
Short-circuit current rating $I_{SCCR}$	0.2 kA (without backup fuse)
	6 kA (for 20 A gG/B backup fuse)
Voltage protection level $U_p$	$\leq 0.85$ kV
Residual voltage $U_{res}$	$\leq 0.85$ kV (at $I_n$ )
	$\leq 0.75$ kV (at 10 kA)
	$\leq 0.65$ kV (at 5 kA)
	$\leq 0.63$ kV (at 4 kA)
	$\leq 0.57$ kV (at 2 kA)
TOV behavior at $U_T$	174 V DC (5 s / withstand mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with V-type through wiring	20 A (gG / B at $I_{SCCR} > 200$ A)
Max. backup fuse with branch wiring	20 A (gG / B at $I_{SCCR} > 200$ A)
Additional technical data	
Maximum continuous voltage $U_C$	135 V AC (for operation in safety lighting systems)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 6000$ m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

## Approvals

### UL specifications

Maximum continuous operating voltage MCOV	150 V DC
Short-circuit current rating (SCCR)	50 kA
Voltage protection rating VPR	700 V
Nominal discharge current $I_n$	20 kA
Mode of protection	(DC+) - G

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	(DC-) - G
Nominal voltage	120 V DC
Power distribution system	DC
SPD Type	1CA

## Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011

### EN 61643-11

Standards/specifications	EN 61643-11
Note	2012

## Mounting

Mounting type	on base element
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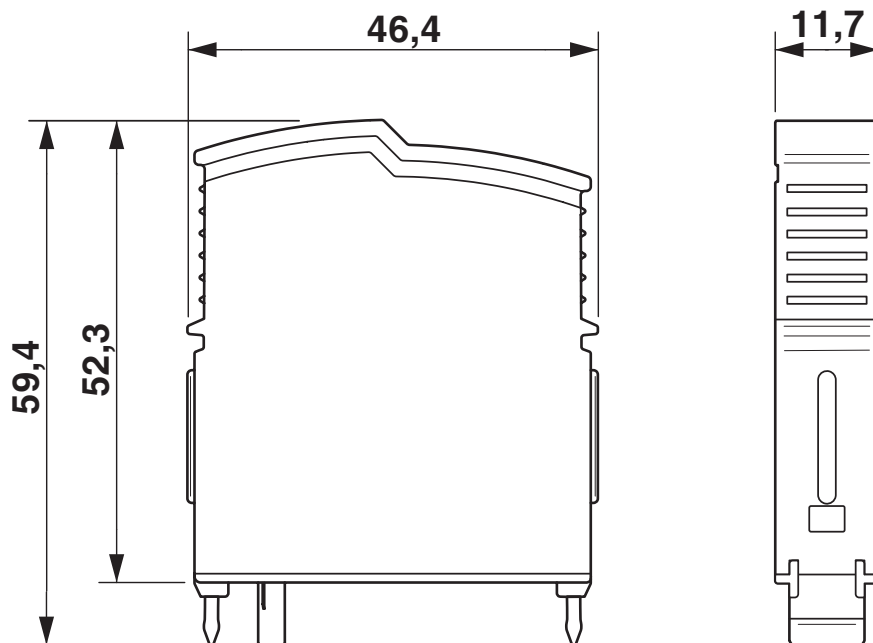


## Drawings

Circuit diagram



Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2907878>



**cUL Recognized**  
Approval ID: FILE E 330181



**UL Recognized**  
Approval ID: FILE E 330181



**EAC**  
Approval ID: RU C-DE.\*09.B.00169

**UAE-RoHS**

Approval ID: 22-09-50946

**cULus Recognized**

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## Classifications

### ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

### ETIM

ETIM 8.0	EC002496
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values



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## Accessories

### EML (20XE)R - Label

0803452

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Label, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 20 mm

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### EML (20XE)R YE - Label

0803453

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Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 20 mm

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## B-STIFT - Marker pen

1051993

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Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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