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
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

Technical data

Product properties

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

Insulation characteristics

Overvoltage category	III
Pollution degree	2

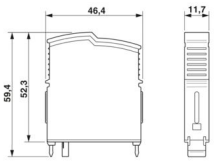
Electrical properties

Nominal voltage U_N	100 V DC ... 120 V DC

Connection data

Connection method	pluggable

Dimensions

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

Material specifications

Color	light gray (RAL 7035)
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

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 operating voltage U_C	150 V DC
Protective conductor current I_{PE}	≤ 5 µA DC
Nominal discharge current I_n (8/20) µs	20 kA
Maximum discharge current I_{max} (8/20) µs	40 kA
Impulse discharge current (10/350) µs, charge	0.5 As
Impulse discharge current (10/350) µs, specific energy	0.25 kJ/Ω
Impulse discharge current (10/350) µs, 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	≤ 0.85 kV
Residual voltage U_{res}	≤ 0.85 kV (at I_n)
	≤ 0.75 kV (at 10 kA)
	≤ 0.65 kV (at 5 kA)
	≤ 0.63 kV (at 4 kA)
	≤ 0.57 kV (at 2 kA)
TOV behavior at U_T	174 V DC (5 s / withstand mode)
Response time t_A	≤ 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 operating 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	≤ 6000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±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
	(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

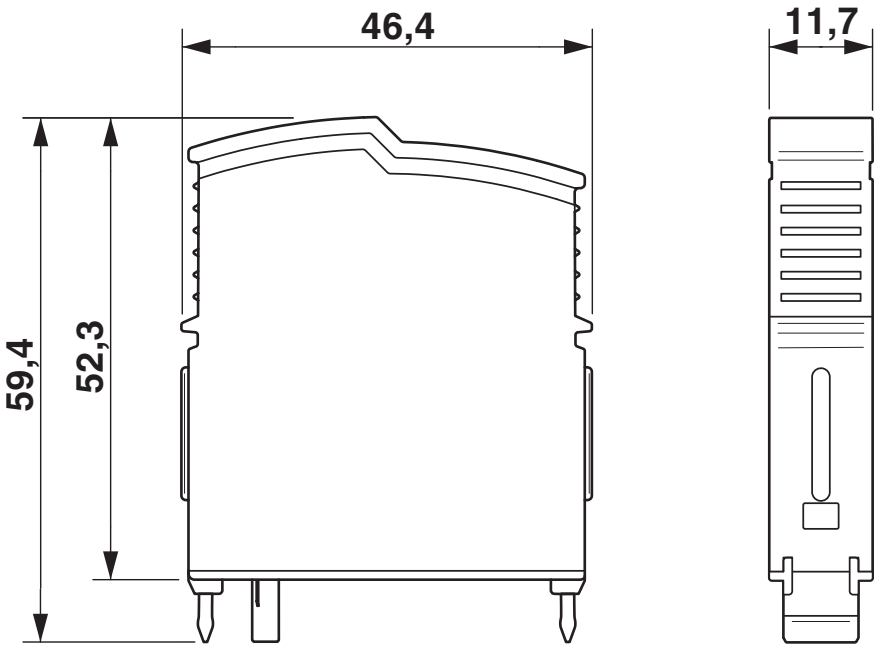
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	on base element

Drawings

Dimensional drawing



Circuit diagram



Approvals

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cUL Recognized
Approval ID: FILE E 330181

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UAE-RoHS
Approval ID: 23-10-88707

Classifications

ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

ETIM

ETIM 10.0	EC002496

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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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