

## Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Pluggable surge protective device, in accordance with Type 2/Class II, for DC power sources with linear operating characteristics, with remote indication contact.

### Your advantages

- ✔ Varistor arrester with a low leakage current
- ✔ Extremely narrow design, just 12 mm per position
- ✔ High continuous voltage of 450 V DC for linear DC current sources with voltage fluctuations
- ✔ Pluggable
- ✔ Low voltage protection level
- ✔ Optical, mechanical status indicator
- ✔ With floating remote indication contact
- ✔ Plugs can be checked with CHECKMASTER 2



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 245010
GTIN	4055626245010
Weight per Piece (excluding packing)	226.600 g
Custom tariff number	85363030
Country of origin	Germany
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Height	97.9 mm
Width	25.4 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1.4 Div.

# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

## Technical data

### 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 (above mean sea level))
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)

### General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	DC
Mode of protection	(DC+) - (DC-)
	(DC+/DC-) - PE
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
	traffic grey A RAL 7042
Housing material	PA 6.6-FR 20 % GF
	PBT-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	2
Surge protection fault message	Optical, remote indicator contact

### Protective circuit

Nominal voltage $U_N$	350 V DC ... 400 V DC
Maximum continuous voltage $U_C$	450 V DC
Rated load current $I_L$	40 A (Biconnect M4 fork-type cable lug 6 mm <sup>2</sup> )
	63 A (TWIN ferrule 2 x 10 mm <sup>2</sup> )
Residual current $I_{PE}$	≤ 350 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
Total discharge current $I_{total}$ (8/20) µs	40 kA
Short-circuit current rating $I_{SCCR}$	0.1 kA (without backup fuse)
	6 kA (for 20 A gG/B backup fuse)
Voltage protection level $U_p$ (DC+) - (DC-)	≤ 3 kV

# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

## Technical data

### Protective circuit

Voltage protection level $U_p$ (DC+/DC-) - PE	$\leq 1.5$ kV
TOV behavior at $U_T$	551 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)
	10 A (gG / B at $I_{SCCR} > 100$ A)
Max. backup fuse with branch wiring	20 A (gG / B at $I_{SCCR} > 200$ A)
	10 A (gG / B at $I_{SCCR} > 100$ A)

### Indicator/remote signaling

Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC (Altitude $\leq 2000$ m amsl)
	5 V AC ... 150 V AC (Altitude $> 2000$ m amsl)
	125 V DC (200 mA DC)
Operating current	5 mA AC ... 1 A AC
	1 A DC (30 V DC)
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section solid	2.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section AWG	12 ... 4
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>

### UL specifications

SPD Type	4CA
Nominal voltage	400 V DC
Mode of protection	(DC+) - (DC-)
	(DC+) - G
	(DC-) - G
Power distribution system	DC
Nominal discharge current $I_n$	20 kA

# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

## Technical data

### UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A AC
Tightening torque	4 lb <sub>F</sub> -in.
Conductor cross section AWG	30 ... 14

### UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb <sub>F</sub> -in.

### Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

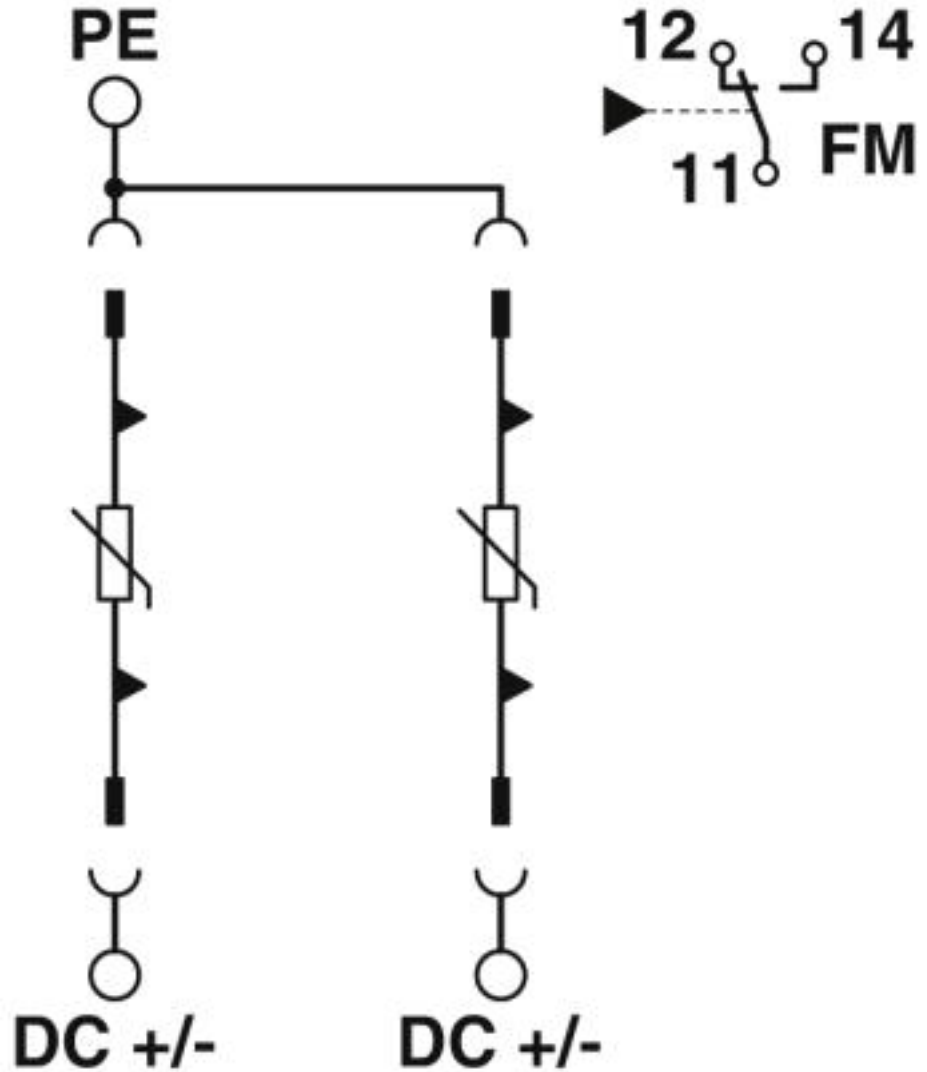
## Drawings

# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

Product drawing

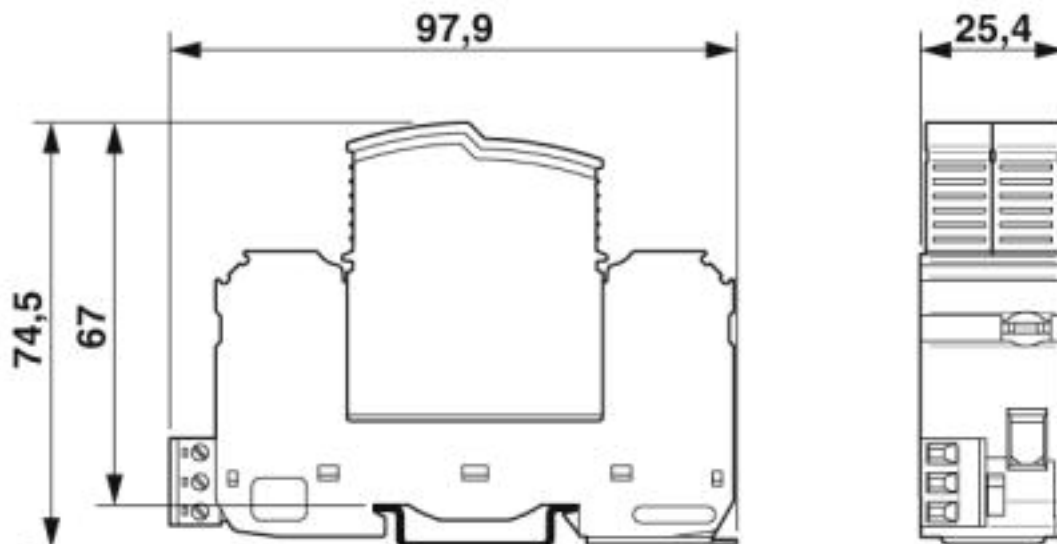


Circuit diagram



# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

Dimensional drawing



## Classifications

eCl@ss

eCl@ss 5.1	27130801
eCl@ss 6.0	27130800
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805
eCl@ss 9.0	27130805

ETIM

ETIM 5.0	EC000941
ETIM 6.0	EC000941
ETIM 7.0	EC000941

UNSPSC

UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

## Approvals

Approvals

---

Approvals

EAC / DNV GL / UL Recognized / cUL Recognized / cULus Recognized

# Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

## Approvals

Ex Approvals

### Approval details

EAC			RU C- DE.A*30.B01561
DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE000023D
UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
cULus Recognized			

## Accessories

Accessories

Device marking

Label - EML (20XE)R - 0803452



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

## Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

### Accessories

Label - EML (20XE)R YE - 0803453



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

---

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

End block

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

---

Labeled device marker

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576



Marker for terminal blocks, Strip, white, labeled, Horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5



## Type 2 surge arrester - VAL-SEC-T2-2+0-380DC-FM - 2907876

### Accessories

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589



Marker for terminal blocks, Strip, white, labeled, Horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

### Marker pen

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

---

### Terminal marking

Flat zack marker sheet - ZBFM 5/WH:UNBEDRUCKT - 0803595



Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 5 x 4.5 mm, Number of individual labels: 120

---

### Spare parts

Type 2 surge protection plug - VAL-SEC-T2-380DC-P - 2907880



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