

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

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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 |

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. |

Ambient conditions

| | |
|-----------------------------------------|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |

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Ambient conditions

| | |
|----------------------------------|-----------------------------------------|
| 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 ²) |
| | 63 A (TWIN ferrule 2 x 10 mm ²) |
| 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 |
| Voltage protection level U_p (DC+/DC-) - PE | ≤ 1.5 kV |
| TOV behavior at U_T | 551 V DC (5 s / withstand mode) |
| Response time t_A | ≤ 25 ns |

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Protective circuit

| | |
|---------------------------------------------|-------------------------------------|
| 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 ² ... 1.5 mm ² |
| Conductor cross section solid | 0.14 mm ² ... 1.5 mm ² |
| 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 ² ... 16 mm ² |
| Conductor cross section solid | 2.5 mm ² ... 25 mm ² |
| Conductor cross section AWG | 12 ... 4 |
| Connection method | Fork-type cable lug |
| Conductor cross section flexible | 1.5 mm ² ... 6 mm ² |

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 |

UL indicator/remote signaling

| | |
|-------------------|----------|
| Operating voltage | 125 V AC |
| Operating current | 1 A AC |

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Technical data

UL indicator/remote signaling

| | |
|-----------------------------|------------------------|
| Tightening torque | 4 lb _f -in. |
| Conductor cross section AWG | 30 ... 14 |

UL connection data

| | |
|-----------------------------|-------------------------|
| Conductor cross section AWG | 10 ... 2 |
| Tightening torque | 30 lb _f -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" |

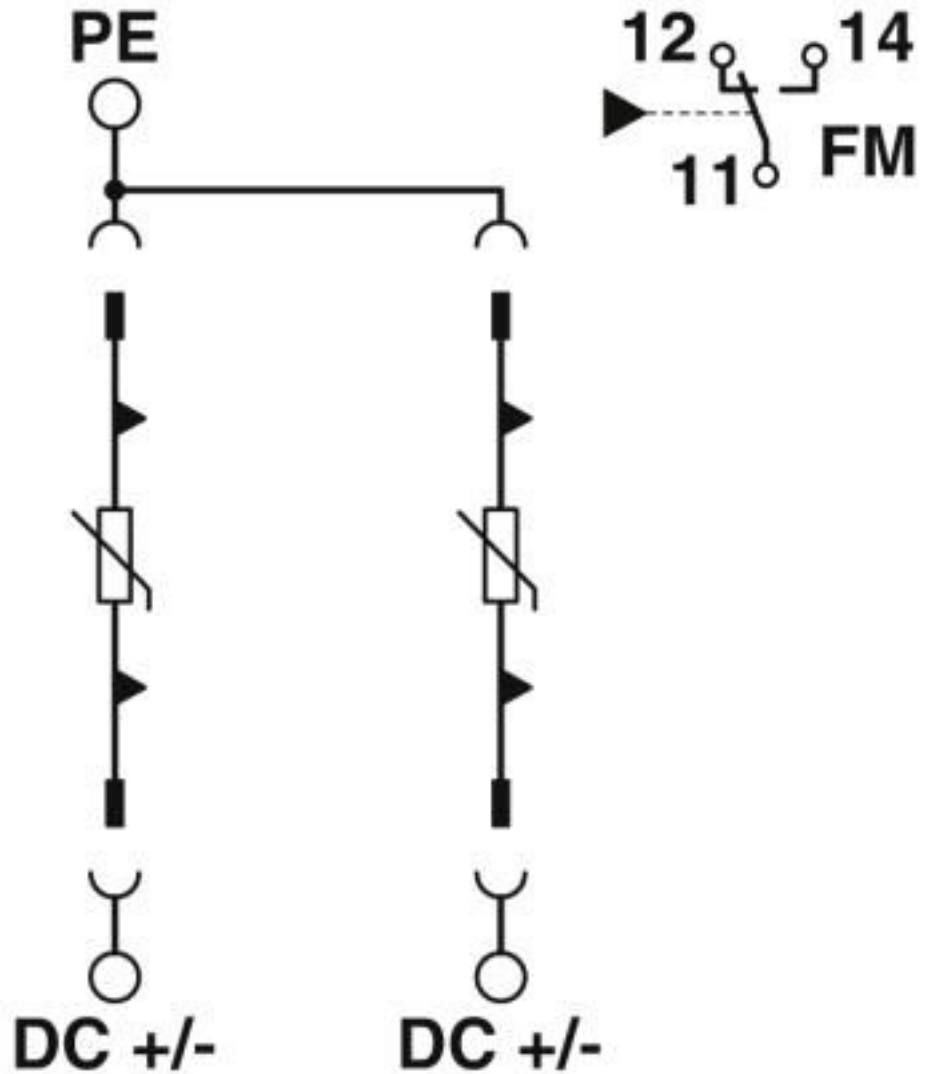
Drawings

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

Product drawing

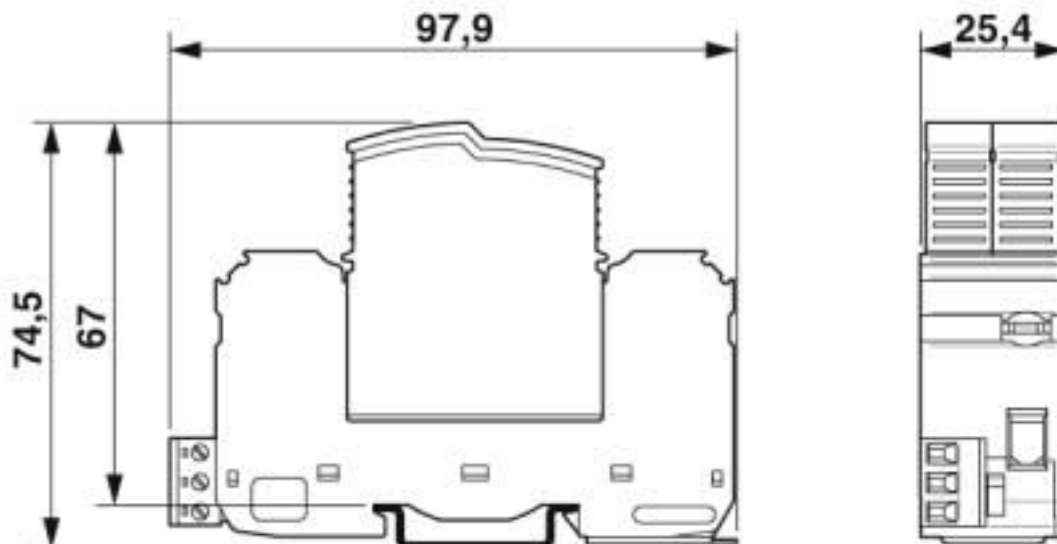


Circuit diagram



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Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27130805 |
| 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

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Approvals

Approvals

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

Ex Approvals

Approval details

| | | | |
|-----|--|--|---------------------|
| EAC | | | RU C-DE.*09.B.00169 |
|-----|--|--|---------------------|

| | | | |
|--------|--|-----------------------------------------------------------------------------------|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE000023D |
|--------|--|-----------------------------------------------------------------------------------|------------|

| | | | |
|---------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
|---------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

| | | | |
|----------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | 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

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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

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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.

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[DFF](#) [GUS22](#) [0804111](#) [5053609](#) [5053201](#) [SPD2-150-1P0](#) [SPD2-550-1P0](#) [6720005416](#) [6720005417](#) [1-2191595-2](#) [STC-CAT6-P0E-I](#) [SPD2-](#)
[350-1P0](#) [FLT-CP-350-ST](#) [TTC-6P-3-HF-F-M-12DC-UT-I](#) [SMTPA200](#) [2800989](#) [2906776](#) [2906810](#) [2906847](#) [2906848](#) [2906851](#)