

Type 2 surge arrester - VAL-SEC-T2-2+F-220DC-FM - 1033789

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Pluggable surge protective device free of leakage current for 2-pos. isolated and grounded DC voltage systems with linear operating characteristic up to 220 V DC, for DIN rail mounting, 3-pos. base element with remote indication contact, three pluggable temperature-monitored protective elements, status message on each plug.

Your advantages

- ✓ Space-saving installation, thanks to the compact design
- ✓ Free of leakage current to ground, thanks to 2+F circuitry
- ✓ Easy replacement during servicing, thanks to completely pluggable system
- ✓ No mismatching of plugs, thanks to mechanical coding



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 539720
GTIN	4055626539720
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	97.9 mm
Width	37.3 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	2 Div.

Ambient conditions

Degree of protection	IP20
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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 5000 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
Surge protection fault message	Optical, remote indicator contact

Protective circuit

Nominal voltage U_N	200 V DC ... 220 V DC
Maximum continuous voltage U_C	250 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}	≤ 5 μA
Nominal discharge current I_n (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Total discharge current I_{total} (8/20) μs	40 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 (DC+) - (DC-)	≤ 3 kV
Voltage protection level U_p (DC+/DC-) - PE	≤ 1.9 kV
Front of wave sparkover voltage at 6 kV (1.2/50) μs (DC+/DC-) - PE	≤ 1.9 kV

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Protective circuit

TOV behavior at U_T	320 V DC (5 s / withstand mode)
	100 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	264 V AC (for operation in safety lighting systems)
Maximum continuous operating voltage U_{CPV}	250 V DC
Short-circuit current rating I_{SCPV}	2000 A
Continuous operating current I_{CPV}	10 μ A

Indicator/remote signaling

Switching function	Changeover 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

Standards and Regulations

Standards/regulations	IEC 61643-11 2011
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Standards and Regulations

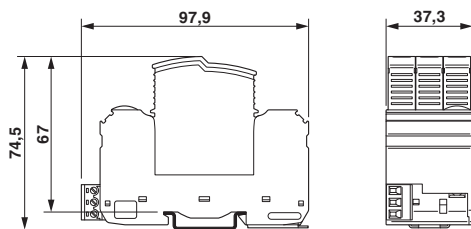
	EN 61643-11 2012
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Environmental Product Compliance

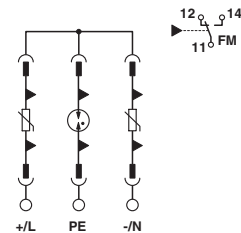
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Dimensional drawing



Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130805
eCl@ss 11.0	27130805
eCl@ss 6.0	27130800
eCl@ss 7.0	27130805
eCl@ss 9.0	27130805

ETIM

ETIM 6.0	EC000941
ETIM 7.0	EC000941

Accessories

Accessories

Device marking

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Accessories

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

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



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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

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Accessories

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

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

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Accessories

Type 2 surge protection plug - VAL-SEC-T2-220DC-P - 2907879



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

Type 2 surge protection plug - VAL-SEC-T2-GDT-800DC-P - 1052649



Replacement plug for surge protective devices from the VALVETRAB SEC product range for DC power sources.
Protection of the path to the ground for 220 und 380 V DC.
