Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 175/12.5/3+0-FM - 2800672

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Universal varistor-based plug-in lightning/surge arrester for 3-phase power supply networks with common N and PE (4-conductor system: L1, L2, L3, PEN), with remote indication contact.

Why buy this product

- With or without floating remote indication contact
- Plugs can be checked with CHECKMASTER
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to new latching
- Optical, mechanical status indication for the individual arresters
- Mechanical coding of all slots
- Thermal disconnect device for each individual plug

Key commercial data

Packing unit	1 pc
GTIN	4 046356 624831
Weight per Piece (excluding packing)	460.1 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	99 mm
Width	53.4 mm
Depth	77.5 mm
Horizontal pitch	3 Div.

Ambient conditions

Degree of protection	IP20

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Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C

General

IEC power supply system	TN-C
Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	EN 60664-1
	EN 61643-11
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Direction of action	3L-PEN

Protective circuit

IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
Nominal voltage U_N	120 V AC
Maximum continuous operating voltage U_C	175 V AC
Maximum continuous operating voltage U_C (L-PEN)	175 V AC
U_T (TOV-proof)	208 V AC (5 s/L-PEN)
Nominal frequency f_N	50 Hz (60 Hz)
Rated load current I_L	80 A (with serial 16mm² through wiring)
Residual current I_{PE}	≤ 800 µA
Standby power consumption P_C	≤ 140 mVA
Max. discharge current I_{max} (8/20) µs maximum (L-PEN)	150 kA (3 x L)
	50 kA
Nominal discharge current I_n (8/20) µs (L-PEN)	37.5 kA (3 x L)
	12.5 kA
Impulse discharge current (10/350) µs, charge	18.75 As
Impulse discharge current (10/350) µs, specific energy	352.00 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	37.5 kA
Impulse discharge current (10/350) µs, charge	6.25 As
Impulse discharge current (10/350) µs, specific energy	39.00 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	12.5 kA (1-pos.)
Voltage protection level U_p	≤ 0.8 kV
Voltage protection level U_p (L-PEN)	≤ 0.7 kV
Residual voltage (L-PEN)	≤ 0.7 kV (at 10 kA)

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Protective circuit

	≤ 0.6 kV (at 5 kA)
	≤ 0.55 kV (at 3 kA)
	≤ 0.8 kV
Response time	≤ 25 ns
Response time (L-PEN)	≤ 25 ns
Max. required backup fuse with branch wiring	160 A (gL/gG)
Max. required backup fuse with V-type through wiring	80 A (gL/gG / with 16 mm²)
Short-circuit resistance I_P with max. backup fuse (effective)	25 kA_{rms}

Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm²
Conductor cross section stranded max.	25 mm²
Conductor cross section solid min.	1.5 mm²
Conductor cross section solid max.	35 mm²
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm²
Conductor cross section stranded max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage $U_{max.}$ AC	250 V AC
Max. operating current I_{max}	1.5 A AC (250 V AC)
	1.5 A DC (30 V DC)

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Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11/A11 2007

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130802
eCl@ss 7.0	27130802
eCl@ss 8.0	27130802

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000381
ETIM 5.0	EC000381

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

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KEMA-KEUR / GL / IECEE CB Scheme / CCA / IECEE CB Scheme / UL Recognized / cUL Recognized / ÖVE / cULus Recognized

Ex Approvals

Approvals submitted

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Approval details

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Accessories

Accessories

Device marking

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Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Feed-through terminal block

Feed-through terminal block - DK-BIC-35 - 2749880

Feed-through terminal block for VAL and FLT applications

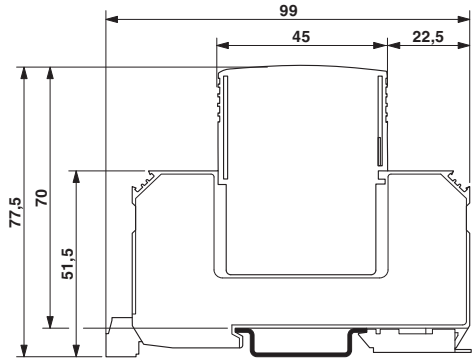
Marker pen

Marker pen - B-STIFT - 1051993

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

Drawings

Dimensioned drawing



Circuit diagram