Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 175/12.5/1+1 - 2800675

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The figure shows the 335 V version

Universal varistor-based plug-in lightning/surge arrester for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE).

Why buy this product

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

Key commercial data

Packing unit	1 pc
GTIN	4 046356 624343
Weight per Piece (excluding packing)	320.4 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	90 mm
Width	35.6 mm
Depth	77.5 mm
Horizontal pitch	2 Div.

Ambient conditions

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Technical data

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C

General

IEC power supply system	TT
	TN-C
	TN-S
Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1
	EN 61643-11
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	2
Surge protection fault message	Optical
Direction of action	1L-N & N-PE

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-N)	175 V AC
Maximum continuous operating voltage U_C (N-PE)	264 V AC
U_T (TOV-proof)	208 V AC (5 s / L-N)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Rated load current I_L	80 A (with serial 16mm² through wiring)
Residual current I_{PE}	≤ 5 µA (per phase)
Standby power consumption P_C	≤ 140 mVA
Max. discharge current I_{max} (8/20) µs maximum (L-N)	50 kA
Max. discharge current I_{max} (8/20) µs maximum (N-PE)	50 kA
Nominal discharge current I_n (8/20) µs (L-N)	12.5 kA
Nominal discharge current I_n (8/20) µs (N-PE)	50 kA
Impulse discharge current (10/350) µs, charge	25 As
Impulse discharge current (10/350) µs, specific energy	625.00 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	50 kA (N-PE)
Impulse discharge current (10/350) µs, charge	6.25 As

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Protective circuit

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 (L-N)
Impulse discharge current (10/350) µs, charge	12.5 As
Impulse discharge current (10/350) µs, specific energy	160.00 kJ/Ω
Impulse discharge current (10/350) µs, peak value I_{imp}	25 kA
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1.7 kV
Voltage protection level U_P (L-N)	≤ 0.8 kV
Voltage protection level U_p (L-PE)	≤ 2 kV
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage (L-N)	≤ 0.65 kV (at 10 kA)
	≤ 0.6 kV (at 5 kA)
	≤ 0.5 kV (at 3 kA)
	≤ 0.8 kV
Residual voltage (L-PE)	≤ 1.5 kV (at 10 kA)
	≤ 1.4 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
	≤ 2 kV
Residual voltage (N-PE)	≤ 0.5 kV (at 10 kA)
	≤ 0.5 kV (at 5 kA)
	≤ 0.4 kV (at 3 kA)
	≤ 0.6 kV
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 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
Follow current quenching capacity If (N-PE)	100 A (264 V AC)

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

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Connection, protective circuit

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

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

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Approvals

Ex Approvals

Approvals submitted

Approval details

KEMA-KEUR

GL

IECEE CB Scheme

CCA

IECEE CB Scheme

UL Recognized

cUL Recognized

ÖVE

cULus Recognized

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Accessories

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Device marking

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

Labeled device marker

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: 18 x 5 mm

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: 18 x 5 mm

Marker pen

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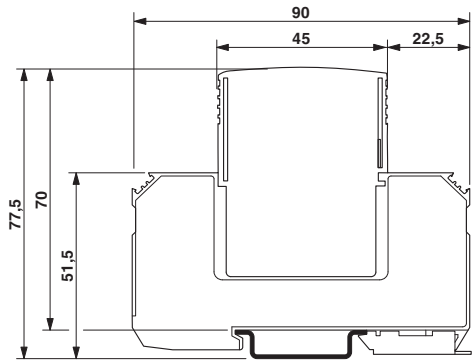
Accessories

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