Type 1 surge protection device - VAL-MS-T1/T2 335/12.5/3+0 - 2800189

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Universal varistor-based plug-in lightning arrester for 3-phase power supply networks with common N and PE (4-conductor system: L1, L2, L3, PEN), for Lightning Protection Levels III and IV.

Product Features

- 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
- Thermal disconnect device for each individual plug
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters

Key commercial data

package_quantity	1
GTIN	4046356518604

Technical data

Dimensions

Height	90 mm
Width	53.4 mm
Depth	77.5 mm
Pitch unit	3 Div.

Ambient conditions

Degree of protection	IP20
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

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Technical data

General

Standards for air and creepage distances	EN 61643-11
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	3
Message: Surge protection fault	Optical
Direction of action	3L-PEN

Protective circuit

IEC test classification	I, II
IEC test classification	T1, T2
EN type	T1, T2
Nominal voltage U_N	240 V AC (230/400 V AC ... 240/415 V AC)
Maximum continuous operating voltage U_C	335 V AC
Maximum continuous operating voltage U_C (L-PEN)	335 V AC
U_T (TOV-proof)	415 V AC (5 s)
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	≤ 268 mVA
Max. discharge current I_{max} (8/20) µs maximum (L-PEN)	150 kA (3 x L)
Max. discharge current I_{max} (8/20) µs maximum (L-PEN)	50 kA
Nominal discharge current I_n (8/20) µs (L-PEN)	37.5 kA (3 x L)
Nominal discharge current I_n (8/20) µs (L-PEN)	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	≤ 1.2 kV
Voltage protection level U_P (L-PEN)	≤ 1.2 kV
Voltage protection level U_P (L-PEN)	≤ 1.6 kV (30 kA - 8/20µs)
Residual voltage (L-PEN)	≤ 1.1 kV
Residual voltage (L-PEN)	≤ 1 kV (at 5 kA)
Residual voltage (L-PEN)	≤ 0.9 kV (at 3 kA)
Residual voltage (L-PEN)	≤ 1.2 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)

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Protective circuit

Short-circuit resistance I_P with max. backup fuse (effective)	25 kA

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

Maximum operating voltage $U_{max.}$ AC	250 V AC
Max. operating current I_{max}	1.5 A AC (250 V AC)
Max. operating current I_{max}	1.5 A DC (30 V DC)

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
Standards/regulations	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

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UNSPSC

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

approvals

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

Approval details

KEMA-KEUR

ÖVE

CCA

IECEE CB Scheme

GL

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approvals

cULus Recognized

accessories

Labeled device marker

ZBN 18,LGS:ERDE - 2749589

ZBN 18,LGS:L1-N,ERDE - 2749576

Device marking

ZBN 18:UNBEDRUCKT - 2809128

Marker pen

B-STIFT - 1051993

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accessories

Feed-through terminal block

DK-BIC-35 - 2749880

accessories

ZBN 18:SO/CMS - 0800763

ZBN 18,LGS:L1-N,ERDE - 2830469

Drawings

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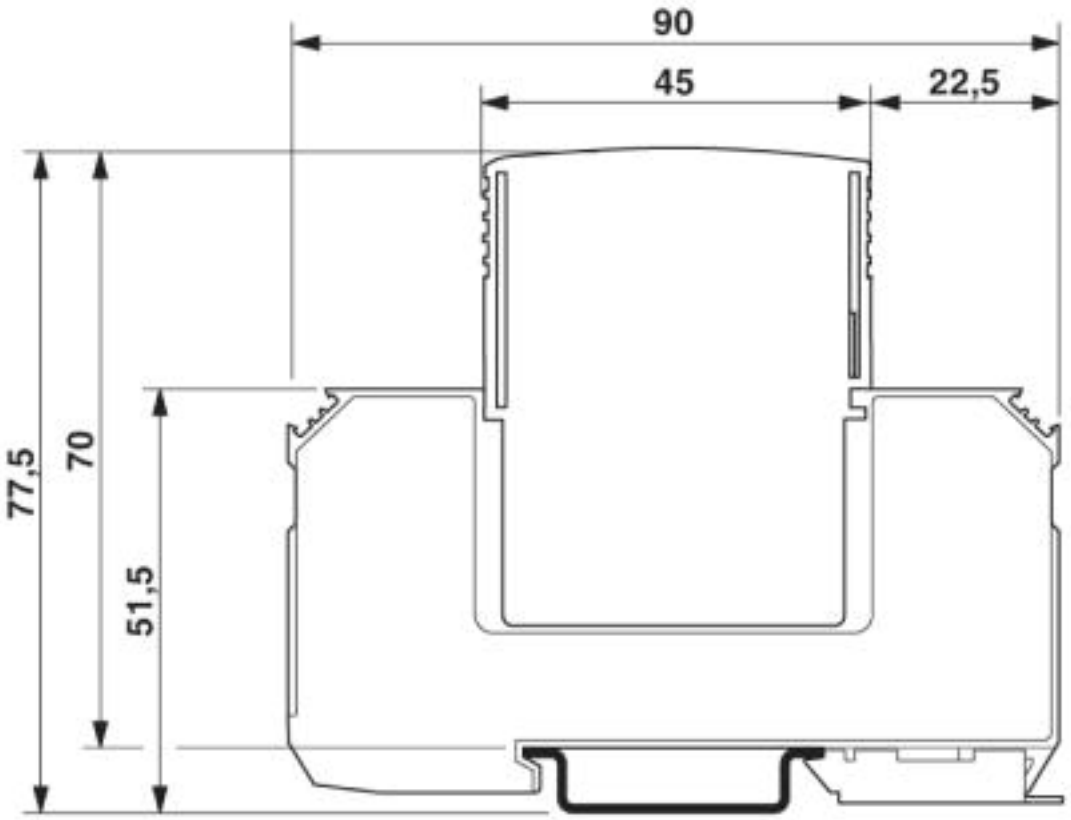
Dimensioned drawing



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Circuit diagram