

Type 2 surge protection device - VAL-MS 350/20/3+1 - 2803548

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Surge arrester for 5-conductor power supply systems (L1, L2, L3, N, PE), consisting of a base element and protective connectors, for mounting on NS 35.

Product Features

- With or without floating remote indication contact
- Solutions for the low performance class
- Multi-channel type 2 arresters
- Disconnect device on each individual plug
- Type 2 consistent plug-in surge arresters
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	365.4 GRM
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	90 mm
Width	71.2 mm
Depth	65.5 mm
Horizontal pitch	4 Div.

Ambient conditions

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

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Technical data

General

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	4
Surge protection fault message	Optical
Direction of action	3L-N & N-PE

Protective circuit

IEC test classification	II
	T2
EN type	T2
Nominal voltage U_N	230 V AC (400 V AC)
	400 V AC
	230 V AC
Maximum continuous operating voltage U_C	350 V AC
Maximum continuous operating voltage U_C (L-N)	350 V AC
Maximum continuous operating voltage U_C (N-PE)	260 V AC
U_T (TOV-proof)	415 V AC (5 s / L-N)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Residual current I_{PE}	$\leq 3 \mu A$
Standby power consumption P_C	$\leq 360 \text{ mVA}$
Max. discharge current I_{max} (8/20) μs	20 kA (per channel L-N)
Max. discharge current I_{max} (8/20) μs maximum (L-N)	60 kA (all channels)
	20 kA (per channel)
Max. discharge current I_{max} (8/20) μs maximum (N-PE)	30 kA
Nominal discharge current I_n (8/20) μs (L-N)	30 kA (all channels)
	10 kA (per channel)
Nominal discharge current I_n (8/20) μs (N-PE)	20 kA
Front of wave sparkover voltage at 6 kV (1.2/50) μs (N-PE)	$\leq 1.5 \text{ kV}$
Voltage protection level U_p (L-N)	$\leq 1.4 \text{ kV}$
Voltage protection level U_p (N-PE)	$\leq 1.5 \text{ kV}$
Residual voltage (L-N)	$\leq 1.4 \text{ kV}$

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Protective circuit

	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
Residual voltage (L-PE)	≤ 1.5 kV
	≤ 1.3 kV (at 5 kA)
	≤ 1.2 kV (at 3 kA)
Residual voltage (N-PE)	≤ 250 V
	≤ 150 V (at 5 kA)
	≤ 100 V (at 3 kA)
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Max. backup fuse with branch wiring	125 A (gL/gG)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA
Follow current quenching capacity I_f (N-PE)	100 A

Connection, protective circuit

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

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Classifications

eCl@ss

eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805

ETIM

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

UNSPSC

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

Approvals

Approvals


Approvals

KEMA-KEUR / ÖVE / GOST / CCA / IECCEB Scheme

Ex Approvals

Approvals submitted

Approval details

KEMA-KEUR 

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Approvals

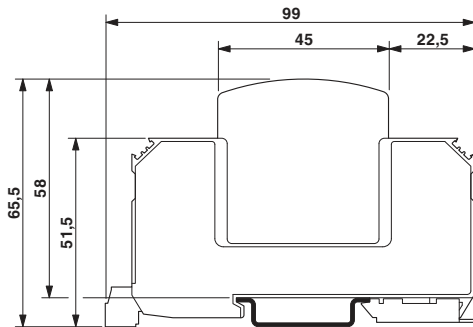


CCA

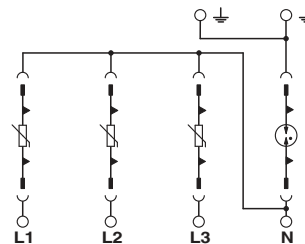
IECEE CB Scheme

Drawings

Dimensioned drawing



Circuit diagram



The illustration shows the dimensional drawing for a version with remote indicator contact