

## Type 2 surge protection device - VAL-MS 750/30/3+0 - 2920269

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Surge arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element and protective connectors, for mounting on NS 35.

### Product Features

- ✓ Other solutions for power supplies UN = 400 V available on request
- ✓ For power supplies with higher supply voltages
- ✓ Use in powerful industrial networks and wind power plants



### Key commercial data

Packing unit	1 pc
Custom tariff number	85363030
Country of origin	Germany

### Technical data

#### Dimensions

Height	90 mm
Width	53.4 mm
Depth	58 mm

#### Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g

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### Technical data

#### Ambient conditions

Vibration (operation)	5g
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#### General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
	IT (please see note below)
Number of ports	One
SPD design	Voltage-limiting type
Mode of protection	L-PEN
	L-PE
Mounting type	DIN rail: 35 mm
Color	black
Housing material	PA 6.6
	PBT
Pollution degree	2
Distance between live and grounded parts	8 mm
Inflammability class according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical

#### Additional descriptions

Note	Usable in all low-voltage systems between L-N or L-PEN. Only usable in IT Systems between L-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation. (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a)
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#### Protective circuit

Nominal voltage $U_N$	554/960 V AC (TN-C)
	690 V AC (IT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$ (L-PE)	760 V AC
Maximum continuous operating voltage $U_C$ (L-PEN)	760 V AC
Rated load current $I_L$	80 A

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### Technical data

#### Protective circuit

Residual current $I_{PE}$	$\leq 1.5 \text{ mA}$
Standby power consumption $P_C$	$\leq 1200 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (L-PE)	15 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (L-PEN)	15 kA
Maximum discharge current $I_{max}$ (8/20) $\mu\text{s}$ (L-PE)	30 kA
Maximum discharge current $I_{max}$ (8/20) $\mu\text{s}$ (L-PEN)	30 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$ (L-PE)	$\leq 2.9 \text{ kV}$
Voltage protection level $U_p$ (L-PEN)	$\leq 2.9 \text{ kV}$
Residual voltage $U_{res}$ (L-PE)	$\leq 2.9 \text{ kV}$ (at $I_n$ )
	$\leq 2.7 \text{ kV}$ (at 10 kA)
	$\leq 2.5 \text{ kV}$ (at 5 kA)
	$\leq 2.3 \text{ kV}$ (at 3 kA)
Residual voltage $U_{res}$ (L-PEN)	$\leq 2.9 \text{ kV}$ (at $I_n$ )
	$\leq 2.7 \text{ kV}$ (at 10 kA)
	$\leq 2.5 \text{ kV}$ (at 5 kA)
	$\leq 2.3 \text{ kV}$ (at 3 kA)
TOV behavior at $U_T$ (L-PEN)	1000 V AC (5 s / withstand mode)
Response time $t_A$ (L-PE)	$\leq 25 \text{ ns}$
Response time $t_A$ (L-PEN)	$\leq 25 \text{ ns}$
Max. backup fuse with branch wiring	100 A AC (gG)
Max. backup fuse with V-type through wiring	80 A AC (gG)

#### Connection data

Connection method	Screw connection
Conductor cross section stranded min.	1.5 mm <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	1.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
AWG conductor cross section	15 ... 2
	10 ... 2 (UL)
Screw thread	M5
Tightening torque	4.5 Nm
	30 lb <sub>r</sub> -in. (UL)
Stripping length	16 mm

#### UL specifications

UL class	Type 4 SPD for Type 2 applications
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### Technical data

#### UL specifications

Maximum continuous operating voltage MCOV (L-G)	750 V AC
Nom. voltage	690 V AC
Mode of protection	L-L
	L-G
Power distribution system	3D
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	4 kV
Voltage protection rating VPR (L-G)	2.5 kV
Nominal discharge current $I_n$ (L-L)	10 kA
Nominal discharge current $I_n$ (L-G)	10 kA

### 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	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	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

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## Approvals

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### Approvals

UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / GOST / GL / CCA / IECCEB Scheme / KEMA-KEUR / ÖVE / cULus Recognized

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### Ex Approvals


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### Approvals submitted

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## Approval details

UL Recognized 

KEMA-KEUR 

ÖVE 

cUL Recognized 

GOST 

GL

CCA

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## Approvals

IECEE CB Scheme

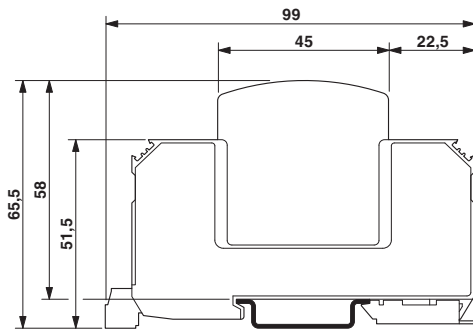
KEMA-KEUR

ÖVE

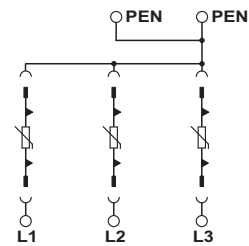
cULus Recognized

## Drawings

Dimensioned drawing



Circuit diagram



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