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Especialistas en Automatización

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## Type 2 surge arrester - VAL-MS 385/80/3+0 - 2921093

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Type 2 surge arrester for 4-wire power supply systems (L1, L2, L3, PEN), with connector latching.

### 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
- Multi-channel type 2 arresters
- Disconnect device on each individual plug
- Type 2 consistent plug-in surge arresters
- Optical, mechanical status indication for the individual arresters



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 290852

### Technical data

#### Dimensions

Height	90 mm
Width	53.4 mm
Depth	77.5 mm
Horizontal pitch	3 Div.

#### 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

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## Technical data

### Ambient conditions

Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (half sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

### 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
Number of ports	One
SPD design	Voltage-limiting type
Mode of protection	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Surge protection fault message	optical

### Protective circuit

Nominal voltage $U_N$	240/415 V AC (TN-C)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	385 V AC
Rated load current $I_L$	80 A
Residual current $I_{PE}$	≤ 1800 $\mu$ A
Standby power consumption $P_C$	≤ 690 mVA
Nominal discharge current $I_n$ (8/20) $\mu$ s	40 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	80 kA
Impulse discharge current (10/350)# $\mu$ s, charge	1.25 As
Impulse discharge current (10/350)# $\mu$ s, specific energy	1.56 kJ/ $\Omega$
Impulse discharge current (10/350)# $\mu$ s, peak value $I_{imp}$	2.5 kA
Total discharge current $I_{Total}$ (8/20) $\mu$ s	200 kA
Total discharge current $I_{Total}$ (10/350) $\mu$ s	7.5 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	≤ 2 kV
Residual voltage $U_{res}$	≤ 2 kV (at $I_n$ )

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#### Protective circuit

	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.15 kV (at 3 kA)
TOV behavior at $U_T$	480 V AC (5 s / withstand mode)
	457 V AC (120 min / withstand mode)
Response time $t_A$	≤ 25 ns
Max. backup fuse with branch wiring	250 A (gG)
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm <sup>2</sup> )

#### Connection data

Connection method	Screw connection
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section solid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	15 ... 2
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm

#### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-L)	385 V AC
Maximum continuous operating voltage MCOV (L-G)	385 V AC
Nom. voltage	240 V AC
Mode of protection	L-L
	L-G
Power distribution system	3D
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	3860 V
Measured limiting voltage MLV (L-G)	2710 V
Nominal discharge current $I_n$ (L-L)	20 kA
Nominal discharge current $I_n$ (L-G)	20 kA

#### UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb <sub>F</sub> -in.

### Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801

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## Classifications

### eCl@ss

eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130806
eCl@ss 9.0	27130806

### 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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KEMA-KEUR / CCA / IEC60384-14 / IEC60384-13 / IEC60384-12 / IEC60384-11 / IEC60384-10 / IEC60384-9 / IEC60384-8 / IEC60384-7 / IEC60384-6 / IEC60384-5 / IEC60384-4 / IEC60384-3 / IEC60384-2 / IEC60384-1 / IEC60384-0 / IEC60384-001 / IEC60384-002 / IEC60384-003 / IEC60384-004 / IEC60384-005 / IEC60384-006 / IEC60384-007 / IEC60384-008 / IEC60384-009 / IEC60384-010 / IEC60384-011 / IEC60384-012 / IEC60384-013 / IEC60384-014 / IEC60384-015 / IEC60384-016 / IEC60384-017 / IEC60384-018 / IEC60384-019 / IEC60384-020 / IEC60384-021 / IEC60384-022 / IEC60384-023 / IEC60384-024 / IEC60384-025 / IEC60384-026 / IEC60384-027 / IEC60384-028 / IEC60384-029 / IEC60384-030 / IEC60384-031 / IEC60384-032 / IEC60384-033 / IEC60384-034 / IEC60384-035 / IEC60384-036 / IEC60384-037 / IEC60384-038 / IEC60384-039 / IEC60384-040 / IEC60384-041 / IEC60384-042 / IEC60384-043 / IEC60384-044 / IEC60384-045 / IEC60384-046 / IEC60384-047 / IEC60384-048 / IEC60384-049 / IEC60384-050 / IEC60384-051 / IEC60384-052 / IEC60384-053 / IEC60384-054 / IEC60384-055 / IEC60384-056 / IEC60384-057 / IEC60384-058 / IEC60384-059 / IEC60384-060 / IEC60384-061 / IEC60384-062 / IEC60384-063 / IEC60384-064 / IEC60384-065 / IEC60384-066 / IEC60384-067 / IEC60384-068 / IEC60384-069 / IEC60384-070 / IEC60384-071 / IEC60384-072 / IEC60384-073 / IEC60384-074 / IEC60384-075 / IEC60384-076 / IEC60384-077 / IEC60384-078 / IEC60384-079 / IEC60384-080 / IEC60384-081 / IEC60384-082 / IEC60384-083 / IEC60384-084 / IEC60384-085 / IEC60384-086 / IEC60384-087 / IEC60384-088 / IEC60384-089 / IEC60384-090 / IEC60384-091 / IEC60384-092 / IEC60384-093 / IEC60384-094 / IEC60384-095 / IEC60384-096 / IEC60384-097 / IEC60384-098 / IEC60384-099 / IEC60384-100

#### Ex Approvals

#### Approvals submitted

### Approval details

KEMA-KEUR
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CCA
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## Approvals

IECEE CB Scheme

GL

UL Recognized

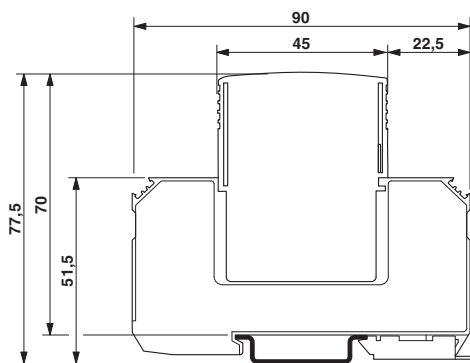
cUL Recognized

EAC

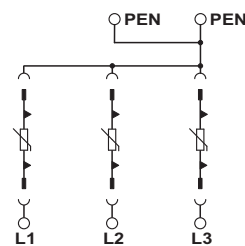
cULus Recognized

## Drawings

Dimensional drawing



Circuit diagram





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