

## Type 2 surge arrester - VAL-MS 230 - 2839127

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Surge voltage arrester consisting of base element and ground connector with high-capacity varistor, for mounting on NS 35/7.5, nominal voltage: 230 V AC, 1-channel.

### Why buy this product

- Single-channel, DIN-rail mountable protective devices
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters
- Disconnect device on each individual plug
- Base element with/without floating remote indication contact
- Consists of base element and plug



### Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4017918182601

### Technical data

#### Dimensions

Height	89.8 mm
Width	17.6 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 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
Altitude	≤ 2000 m (amsl (above mean sea level))

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## Technical data

### Ambient conditions

Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

### General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN
	TT
Mode of protection	L-N
	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
Number of positions	1
Surge protection fault message	optical

### Protective circuit

Nominal voltage $U_N$	240/415 V AC (TN)
	240/415 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	275 V AC
Rated load current $I_L$	80 A
Residual current $I_{PE}$	≤ 0.45 mA
Standby power consumption $P_C$	≤ 120 mVA
Nominal discharge current $I_n$ (8/20) μs	20 kA
Maximum discharge current $I_{max}$ (8/20) μs	40 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	≤ 1.35 kV
Residual voltage $U_{res}$	≤ 1.35 kV (at $I_n$ )
	≤ 1.1 kV (at 10 kA)
	≤ 1 kV (at 5 kA)
	≤ 0.9 kV (at 3 kA)
TOV behavior at $U_T$	335 V AC (5 s / withstand mode)
	440 V AC (120 min / safe failure mode)
Response time $t_A$	≤ 25 ns

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## Technical data

### Protective circuit

Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	125 A (gG)

### Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1,5 mm <sup>2</sup> ... 16 mm <sup>2</sup> )
	4.5 Nm (25 mm <sup>2</sup> ... 35 mm <sup>2</sup> )
Stripping length	16 mm
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
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>

### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-N)	275 V AC
Nom. voltage	230 V AC
Mode of protection	L-N
Power distribution system	1
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	1900 V
Nominal discharge current I <sub>n</sub> (L-N)	20 kA

### UL connection data

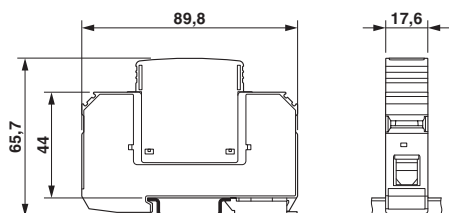
Conductor cross section AWG	10 ... 2
Tightening torque	30 lb <sub>F</sub> -in.

### Standards and Regulations

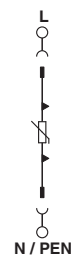
Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals

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### Approval details


IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	AT 2905/M1
UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
KEMA-KEUR		<a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>	2170208.01
ÖVE		<a href="https://www.ove.at/en/certification-pz/certification-register/">https://www.ove.at/en/certification-pz/certification-register/</a>	18583-001-13
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	94385-10 HH
CCA			NTR-AT 1947-A
CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631

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### Approvals

EAC		RU C- DE.A*30.B01561
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EAC		EAC-Zulassung
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>
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