

Type 2 surge protection device - VAL-MS 230/2+0-FM - 2800102

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Two-position rail-mountable surge arrester for 2+0 circuit, thermal-dynamic monitoring, visual fault indicator and remote indicator contact.

Product Features

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



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	260.0 GRM
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	97 mm
Width	35.6 mm
Depth	58 mm
Horizontal pitch	2 Div.

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
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Technical data

Ambient conditions

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
Vibration (operation)	5g

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	black
Housing material	PA 6.6
	PBT
Pollution degree	2
Inflammability class according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact

Protective circuit

Nominal voltage U_N	240/415 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-PEN)	275 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 0.9 mA
Standby power consumption P_C	≤ 240 mVA
Nominal discharge current I_n (8/20) μ s (L-PEN)	20 kA
Maximum discharge current I_{max} (8/20) μ s	40 kA
Maximum discharge current I_{max} (8/20) μ s (L-PEN)	40 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-PEN)	≤ 1.35 kV

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Protective circuit

Residual voltage U_{res} (L-PEN)	≤ 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 (L-PEN)	335 V AC (5 s / withstand mode)
Response time t_A (L-PEN)	≤ 25 ns
Max. backup fuse with branch wiring	125 A AC (gG)
Max. backup fuse with V-type through wiring	80 A AC (gG)

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC
	125 V AC (UL)
	30 V DC
Operating current	5 mA AC ... 1.5 A AC
	1 A AC (UL)
	1 A DC
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
	4 lb _f -in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
AWG conductor cross section	28 ... 16
	30 ... 14 (UL)

Connection data

Connection method	Screw connection
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
AWG conductor cross section	15 ... 2
	10 ... 2 (UL)

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Technical data

Connection data

Screw thread	M5
Tightening torque	4.5 Nm
	30 lb _f -in. (UL)
Stripping length	16 mm

NEMA/UL protective circuit

UL class	Type 4 SPD for Type 2 applications
Maximum continuous operating voltage MCOV (L-N)	275 V AC
Nominal voltage U _N	230 V AC
Mode of protection	L-L
	L-G
Power distribution system	1S
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	1.8 kV
Voltage protection rating VPR (L-G)	1 kV
Nominal discharge current I _n (L-L)	20 kA
Nominal discharge current I _n (L-G)	20 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

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Classifications

UNSPSC

UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / CSA / ÖVE / CCA / IECCEB Scheme / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

UL Recognized

cUL Recognized

CSA

ÖVE

CCA

IECEE CB Scheme

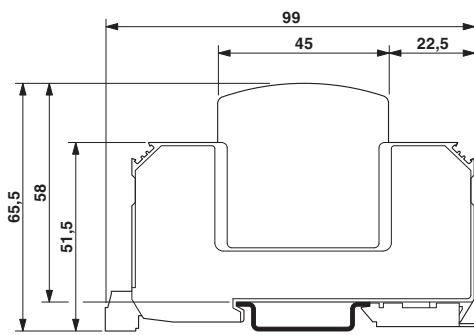
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Approvals



Drawings

Dimensioned drawing



Circuit diagram

