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Type 2 surge arrester - VAL-MS 385/80/1+1 - 2921297

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Type 2 surge arrester for 3-wire power supply systems (L1, N, PE), with connector latching.

Why buy this product

- With or without floating remote indication contact
- Plugs can be checked with CHECKMASTER
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to new latching
- Multi-channel type 2 arresters
- Optical, mechanical status indication for the individual arresters
- Mechanical coding of all slots
- Type 2 consistent plug-in surge arresters
- Disconnect device on each individual plug

Key Commercial Data

Packing unit	1 STK
GTIN	4 046356 290869

Technical data

Dimensions

Height	90 mm
Width	35.6 mm
Depth	77.5 mm
Horizontal pitch	2 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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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	TT
	TN-C
	TN-S
Number of ports	One
SPD design	Combination type
Mode of protection	L-N
	L-PE
	N-PE
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 V AC (TN-S)
	240 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	385 V AC
Maximum continuous voltage U_C (N-PE)	264 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 5 µA
Standby power consumption P_C	≤ 231 mVA
Nominal discharge current I_n (8/20) µs	40 kA
Maximum discharge current I_{max} (8/20) µs	80 kA
Impulse discharge current (10/350) µs (L-N), charge	1.25 As
Impulse discharge current (10/350) µs (L-N), specific energy	1.56 kJ/Ω

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Protective circuit

Impulse discharge current (10/350) µs (L-N), peak current value I_{imp}	2.5 kA
Impulse discharge current (10/350) µs (L-PE), charge	1.25 As
Impulse discharge current (10/350) µs (L-PE), specific energy	1.56 kJ/Ω
Impulse discharge current (10/350) µs (L-PE), peak current value I_{imp}	2.5 kA
Impulse discharge current (10/350) µs (N-PE), charge	5 As
Impulse discharge current (10/350) µs (N-PE), specific energy	25 kJ/Ω
Impulse discharge current (10/350) µs (N-PE), peak current value I_{imp}	10 kA
Total discharge current I_{Total} (8/20) µs	80 kA
Total discharge current I_{Total} (10/350) µs	5 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A (264 V AC)
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-N)	≤ 2 kV
Voltage protection level U_p (L-PE)	≤ 2 kV
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage U_{res} (L-N)	≤ 2 kV (at I_n)
	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.15 kV (at 3 kA)
Residual voltage U_{res} (L-PE)	≤ 2 kV (at I_n)
	≤ 1.5 kV (at 10 kA)
	≤ 1.4 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
Residual voltage U_{res} (N-PE)	≤ 0.6 kV (at I_n)
	≤ 0.5 kV (at 10 kA)
	≤ 0.5 kV (at 5 kA)
	≤ 0.4 kV (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1.7 kV
TOV behavior at U_T (L-N)	480 V AC (5 s / withstand mode)
	457 V AC (120 min / withstand mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_A (L-N)	≤ 25 ns
Response time t_A (L-PE)	≤ 100 ns
Response time t_A (N-PE)	≤ 100 ns
Max. backup fuse with branch wiring	250 A (gG)
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm²)

Connection data

Connection method	Screw connection
Conductor cross section flexible	1.5 mm² ... 25 mm²
Conductor cross section solid	1.5 mm² ... 35 mm²

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Technical data

Connection data

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-N)	385 V AC
Maximum continuous operating voltage MCOV (L-G)	385 V AC
Maximum continuous operating voltage MCOV (N-G)	264 V AC
Nom. voltage	240 V AC
Mode of protection	L-N
	L-G
	N-G
Power distribution system	1
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	2710 V
Measured limiting voltage MLV (L-G)	3730 V
Measured limiting voltage MLV (N-G)	2590 V
Nominal discharge current I_n (L-N)	20 kA
Nominal discharge current I_n (L-G)	20 kA
Nominal discharge current I_n (N-G)	20 kA

UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb_f-in.

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	27130806
eCl@ss 9.0	27130806

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941

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Classifications

ETIM

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

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

Ex Approvals

Approvals submitted

Approval details

KEMA-KEUR

CCA

IECEE CB Scheme

GL

UL Recognized

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Approvals

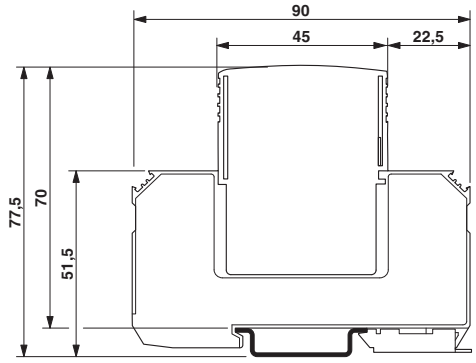
cUL Recognized

EAC

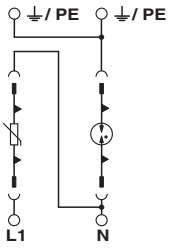
cULus Recognized

Drawings

Dimensional drawing



Circuit diagram



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- Purchasing management, order record and tracking of shipments.

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