

VAL-ME-3+1-100-275-A - Type 2 surge arrester



1106017

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Integrated lightning protector, voltage limiting large through-flow surge protector designed according to the requirements of class II tests, can be used for Category C & B (AS/NZS 1768:2007) in low voltage distribution systems. Suitable for 3-phase power supply protection of TN -S and TT power supply and power distribution systems.

Product description

SPD in accordance with AS/NZS 1768 Cat. C, B

Commercial data

Item number	1106017
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1332
Product key	CL1332
GTIN	4055626990767
Weight per piece (including packing)	950 g
Weight per piece (excluding packing)	910 g

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Technical data

Product properties

Product type	Surge arrester
IEC test classification	T2
EN type	T2
Type	DIN rail module, one-piece
Surge protection fault message	Optical, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Indicator/remote signaling

Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC
	30 V DC
Operating current	5 mA AC ... 1 A AC
	1 A DC

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (2.5 mm ² ... 16 mm ²)
	4.5 Nm (25 mm ² ... 35 mm ²)
Stripping length	16 mm
Conductor cross section flexible	2.5 mm ² ... 25 mm ²
Conductor cross section rigid	2.5 mm ² ... 35 mm ²
Conductor cross section AWG	2 ... 13
Screw thread	M2
Tightening torque	0.25 Nm (4 lbf.in (UL))
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

Material specifications

Flammability rating according to UL 94	V0
CTI value of material	600
Insulating material	PA 6.6 / PBT
Material group	I

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Housing material	PA 6.6/PBT
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Protective circuit

Mode of protection	L-N
	N-PE
Direction of action	3L-N & N-PE
Nominal voltage U_N	230/400 V AC (TN/TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	275 V AC (AS/NZS)
Maximum continuous operating voltage U_C (N-PE)	264 V AC (AS/NZS)
Rated load current I_L	125 A
Protective conductor current I_{PE}	$\leq 5 \mu A$
Nominal discharge current I_n (8/20) μs (L-N)	50 kA
Nominal discharge current I_n (8/20) μs (N-PE)	60 kA
Maximum discharge current I_{max} (8/20) μs (L-N)	100 kA
Maximum discharge current I_{max} (8/20) μs (N-PE)	120 kA
Lightning surge current I_{imp} (10/350) μs	12.5 kA (L-N)
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)	≤ 2.3 kV (at 50 kA)
	≤ 1.45 kV (at 20 kA)
	≤ 1.3 kV (at 10 kA)
	≤ 1.1 kV (at 3 kA)
Voltage protection level U_p (N-PE)	≤ 1.5 kV
TOV behavior at U_T (L-N)	415 V AC (5 s / withstand mode)
	440 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 (N-PE)	≤ 100 ns
Max. backup fuse with V-type through wiring	125 A AC (gG)
Max. backup fuse with branch wiring	250 A AC (gG)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 4000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (5-500 Hz/2.5 h/XYZ)

Standards and regulations

Standards/specifications	AS/NZS 1768:2007 C3, C2, C1, B
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Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	IEC 61643-11
Note	2012

Mounting

Mounting type	DIN rail: 35 mm
Mounting position	Internal

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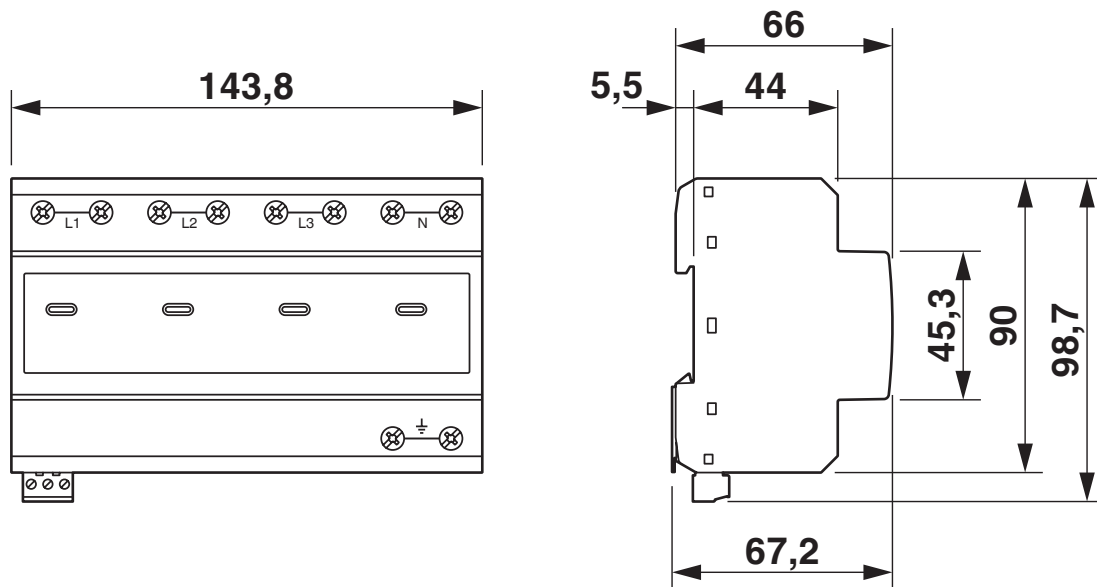


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Drawings

Dimensional drawing

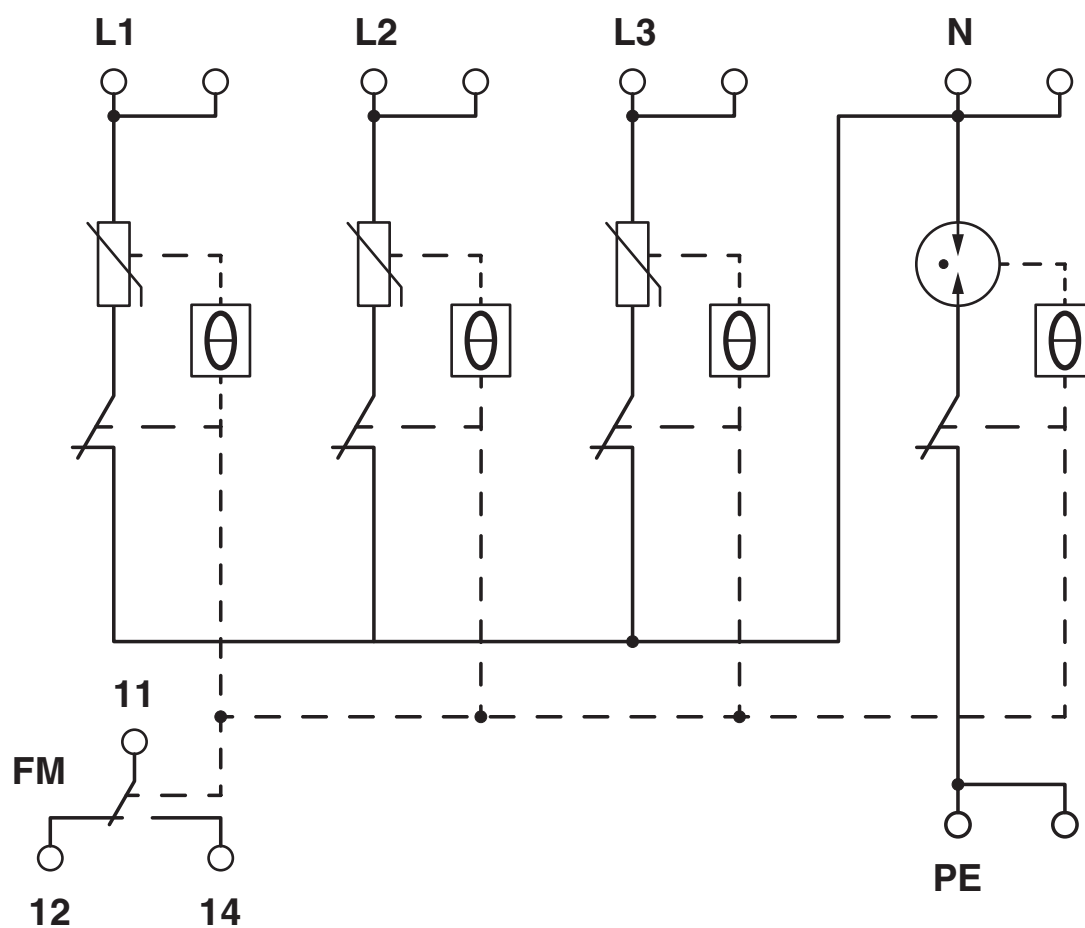


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Circuit diagram



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Classifications

ECLASS

ECLASS-13.0	27171202
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ETIM

ETIM 9.0	EC000941
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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