

VAL-US-1U-48/40/1+1V-FM - Type 2 surge arrester



1215675

<https://www.phoenixcontact.com/us/products/1215675>

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UL Recognized SPD, varistor-based plug-in surge arrester for 48 - 60 V DC applications with two conductors plus ground, with remote indication contact



Your advantages

- Dual-channel, panel mountable surge protective device
- Orthogonal mounting orientation to plug
- Base element with floating remote indication contact
- Rack-mount 1U panel applications

Commercial data

Item number	1215675
Packing unit	1 pc
Minimum order quantity	6 pc
Sales key	NULL
Product key	CL132U
GTIN	4063151293451
Weight per piece (excluding packing)	246.66 g
Country of origin	US

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Technical data

Product properties

Product type	Surge protection for NEMA power supply units
Product family	VALVETRAB US
IEC test classification	II
	T2
EN type	T2
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

Insulation characteristics

Pollution degree	2
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Electrical properties

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

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC
	125 V AC (UL)
	125 V DC (200 mA DC)
Operating current	5 mA AC ... 1.5 A
	1 A (UL)
	1 A (30 V DC)

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	2.5 Nm ... 3 Nm (1.5 mm ² ... 16 mm ²)
	4.5 Nm (25 mm ² ... 35 mm ²)
	22 lb _F -in. ... 26.5 lb _F -in. (UL)
Stripping length	16 mm
Conductor cross-section flexible min.	1.5 mm ²
Conductor cross-section flexible max.	25 mm ²
Conductor cross-section, rigid min.	1.5 mm ²
Conductor cross-section, rigid max.	35 mm ²
Conductor cross-section flexible	1.5 mm ² ... 25 mm ²
Conductor cross-section rigid	1.5 mm ² ... 35 mm ²
Conductor cross-section AWG	15 ... 2
	14 ... 2 (UL)

Remote fault indicator contact

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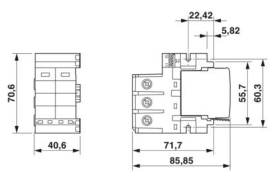


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Connection method	Push-in spring connection
Stripping length	6 mm
Conductor cross-section flexible min.	0.2 mm ²
Conductor cross-section flexible max.	0.5 mm ²
Conductor cross-section, rigid min.	0.14 mm ²
Conductor cross-section, rigid max.	0.5 mm ²
Conductor cross-section AWG	24 ... 20 (UL)

Dimensions

Dimensional drawing	
Width	70.6 mm
Height	40.6 mm
Depth	85.6 mm

Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6/PBT
Material group	I
Housing material	PA 6.6 PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Mode of protection	L-N
	N-PE
Direction of action	L-N & L(N)-PE
Nominal voltage U_N	60 V AC $\pm 10\%$ (TN-S)
	-48 V DC $\pm 10\%$ (RRH)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	75 V AC
	100 V DC
Rated load current I_L	80 A
Protective conductor current I_{PE}	≤ 0.45 mA
Standby power consumption P_C	≤ 35 mVA
Nominal discharge current I_n (8/20) μ s	15 kA

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Maximum discharge current I_{max} (8/20) μ s	40 kA
Voltage protection level U_p	≤ 0.55 kV
Residual voltage U_{res}	≤ 0.55 kV (at I_n)
	≤ 0.425 kV (at 10 kA)
	≤ 0.325 kV (at 5 kA)
	≤ 0.275 kV (at 3 kA)
TOV behavior at U_T	100 V AC (5 s / withstand mode)
Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A AC (gG - 16 mm ²)
Max. backup fuse with branch wiring	160 A AC (gG)

Additional technical data

Maximum discharge current I_{max} (8/20) μ s	40 kA
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Environmental and real-life conditions

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)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x \pm X, \pm Y, \pm Z)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV	100 V DC
Maximum continuous operating voltage MCOV (L-N)	75 V AC
	100 V DC
UL type	type 4
Nominal discharge current I_n	20 kA
Maximum Surge Current per Phase	40 kA
Mode of protection	N-G
	L-N
	(L+) - (L-)
	(L+) - G
	(L-) - G
Nominal voltage	60 V DC
Power distribution system	DC
SPD Type	4CA

UL indicator/remote signaling

Operating voltage	125 V AC
AC operating current	1 A AC

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UL connection data

Tightening torque	30 lb _F -in.
Conductor cross-section AWG	14 ... 2

Mounting

Mounting type	Panel mount
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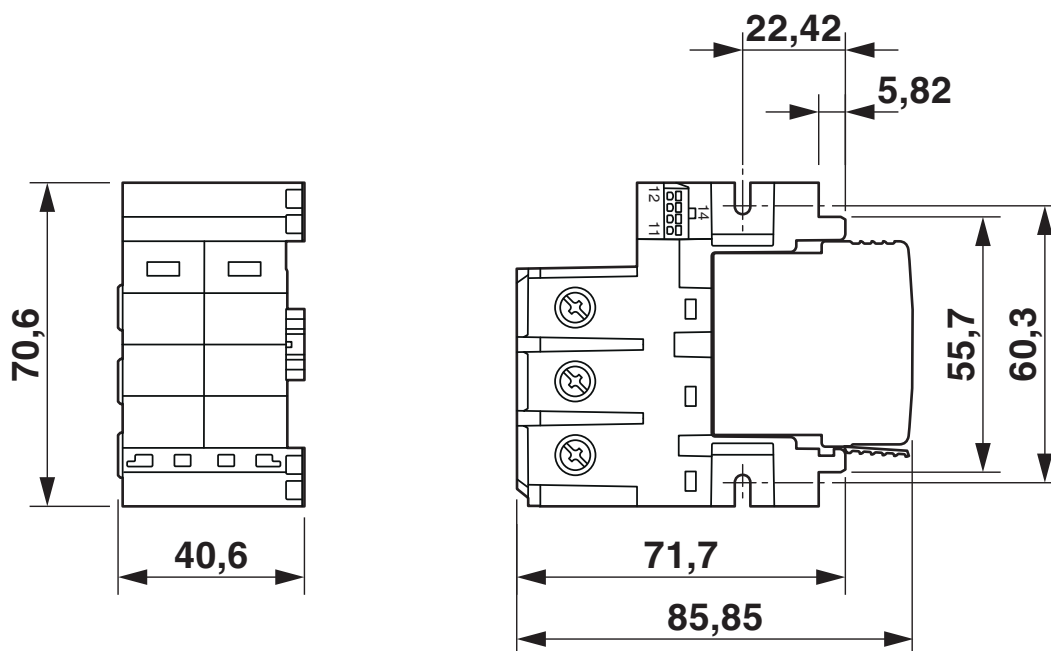


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Drawings

Dimensional drawing



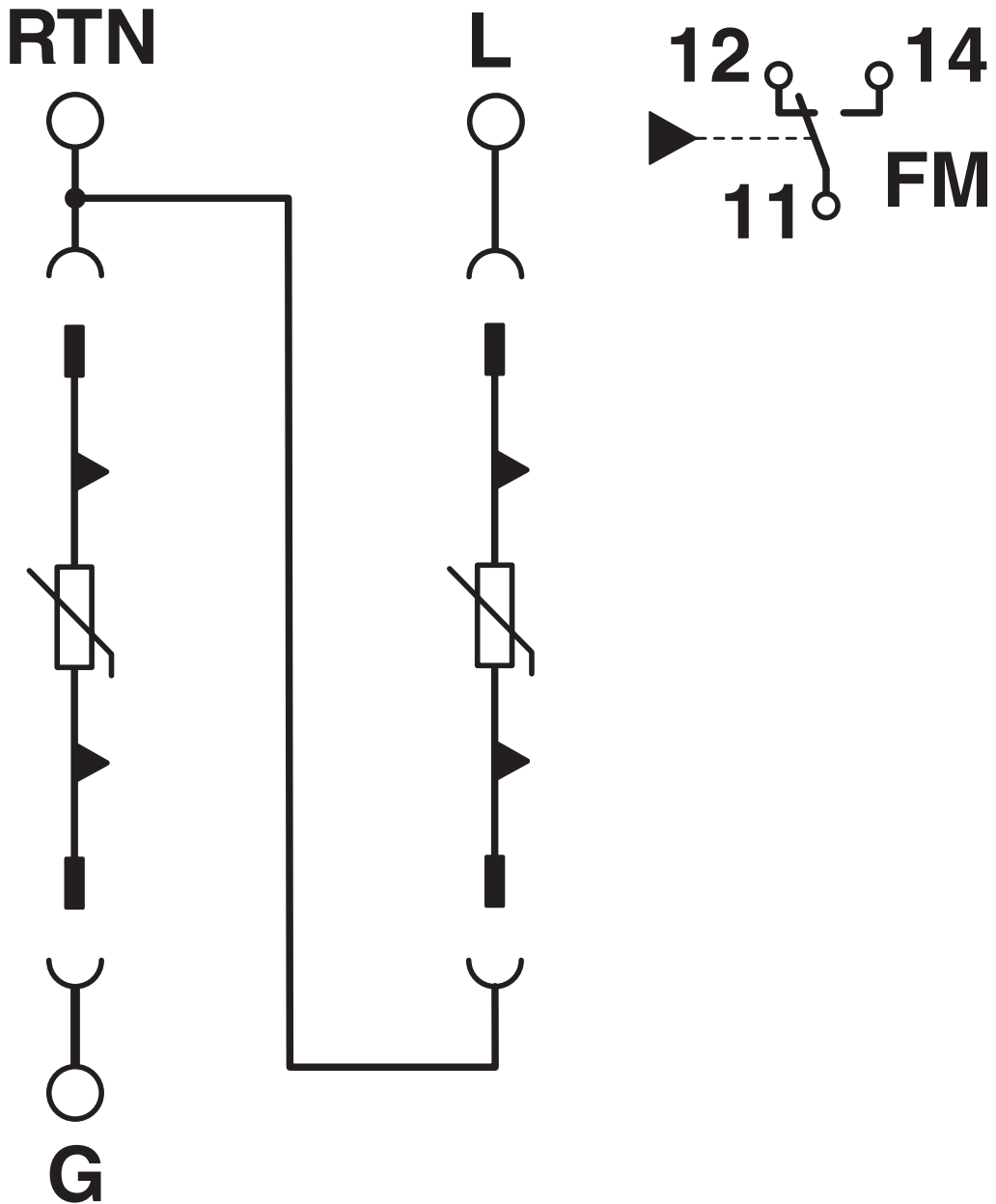
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Circuit diagram



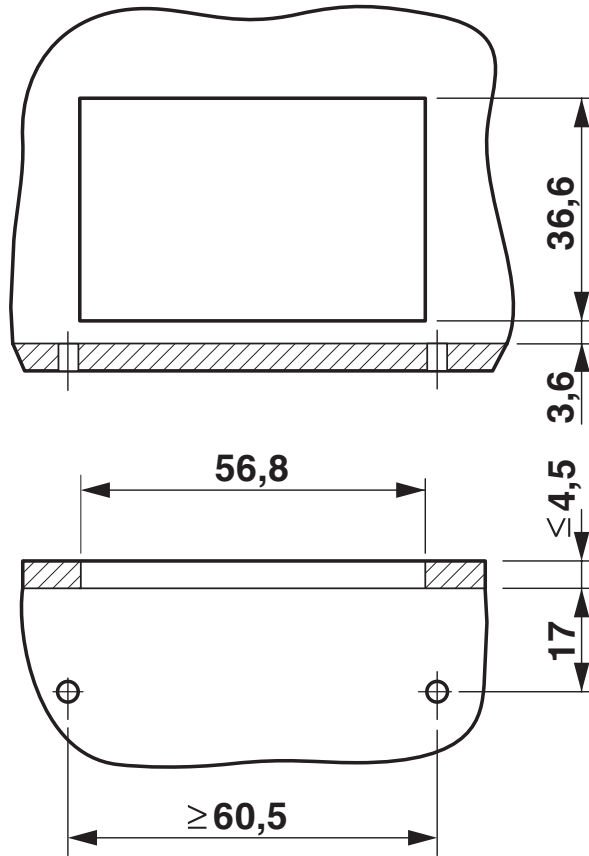
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Drilling plan/solder pad geometry



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Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

ETIM

ETIM 9.0	EC000941
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Environmental product compliance

China RoHS

Environment friendly use period (EFUP)	EFUP-50 An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
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EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com