

VAL-US 60/2+0/1U/FM - Type 2 surge protection device



2907043

<https://www.phoenixcontact.com/us/products/2907043>

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Universal 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 | 2907043 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL18 |
| Product key | CL1321 |
| GTIN | 4055626248981 |
| Weight per piece (including packing) | 222.222 g |
| Weight per piece (excluding packing) | 222.222 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

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Technical data

Notes

General

| | |
|------|---|
| Note | For installation into a touch protected cabinet. For applications with $U_C > 500$ V distances at the side and distances at the connection area must be minimum of 5 mm between different active parts including earthed parts. |
|------|---|

Product properties

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

Insulation characteristics

| | |
|------------------|---|
| Pollution degree | 2 |
|------------------|---|

Electrical properties

| | |
|-------------------------|---------------|
| Nominal frequency f_N | 50 Hz (60 Hz) |
|-------------------------|---------------|

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 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 |

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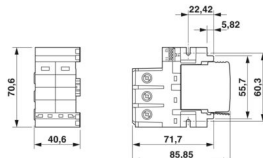
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| | |
|-------------------------------------|--------------------|
| Conductor cross-section, rigid max. | 35 mm ² |
| Conductor cross-section AWG | 15 ... 2 |
| | 10 ... 2 (UL) |

Remote fault indicator contact

| | |
|---------------------------------------|---------------------------|
| 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 |
| Rack unit | 1 U |
| Depth | 85.6 mm |

Material specifications

| | |
|--|-----------------|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 | V-0 |
| Housing material | PA 6.6 |
| | PBT |

Mechanical properties

Mechanical data

| | |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

Protective circuit

| | |
|--|---------------------------|
| Mode of protection | L-PE |
| | N-PE |
| Direction of action | N-PE |
| | L-PE |
| Nominal voltage U_N | 60 V AC ± 10 % (TN-S) |
| | 60 V DC ± 10 % |
| | -48 V DC ± 10 % (RRH) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C | 75 V AC |

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| | |
|--|------------------------------------|
| | 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 |
| Maximum discharge current I_{max} (8/20) μ s | 40 kA |
| Short-circuit current rating I_{SCCR} | 25 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 |
|--|-------|

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 (L-N) | 75 V AC |
| | 100 V DC |
| Mode of protection | N-G |
| | L-G |
| | (L+) - (L-) |
| | (L+) - G |
| | (L-) - G |
| Nominal voltage | 60 V DC |
| Power distribution system | DC |
| SPD Type | 4CA |

UL indicator/remote signaling

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| | |
|----------------------|----------|
| Operating voltage | 125 V AC |
| AC operating current | 1 A AC |

UL connection data

| | |
|-----------------------------|-------------------------|
| Tightening torque | 30 lb _f -in. |
| Conductor cross-section AWG | 10 ... 2 |

Mounting

| | |
|---------------|-------------|
| Mounting type | Panel mount |
|---------------|-------------|

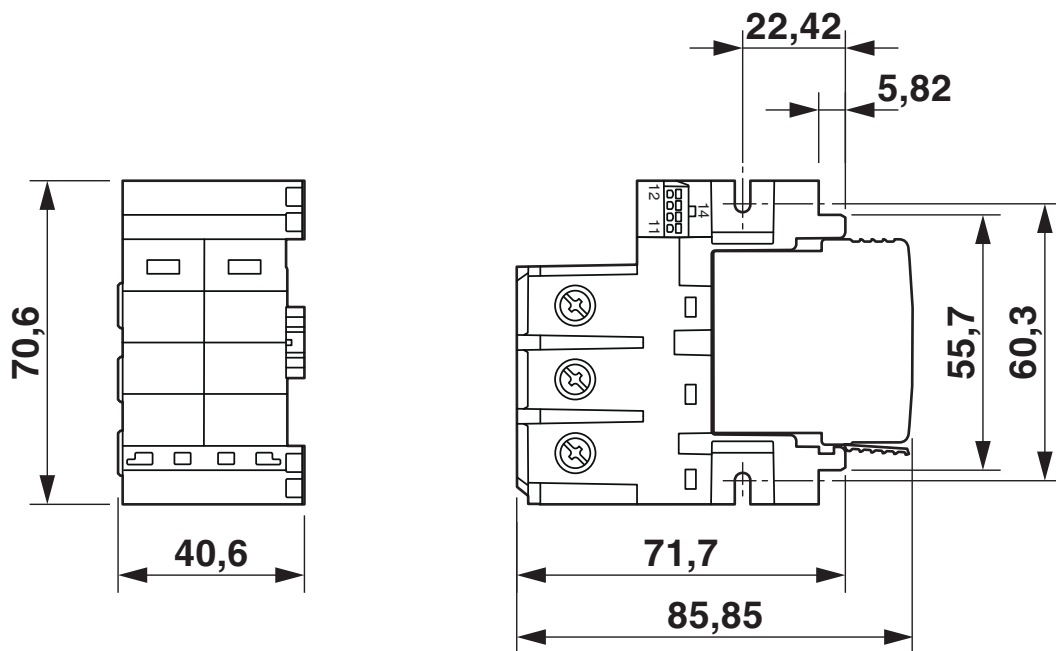
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Drawings

Dimensional drawing



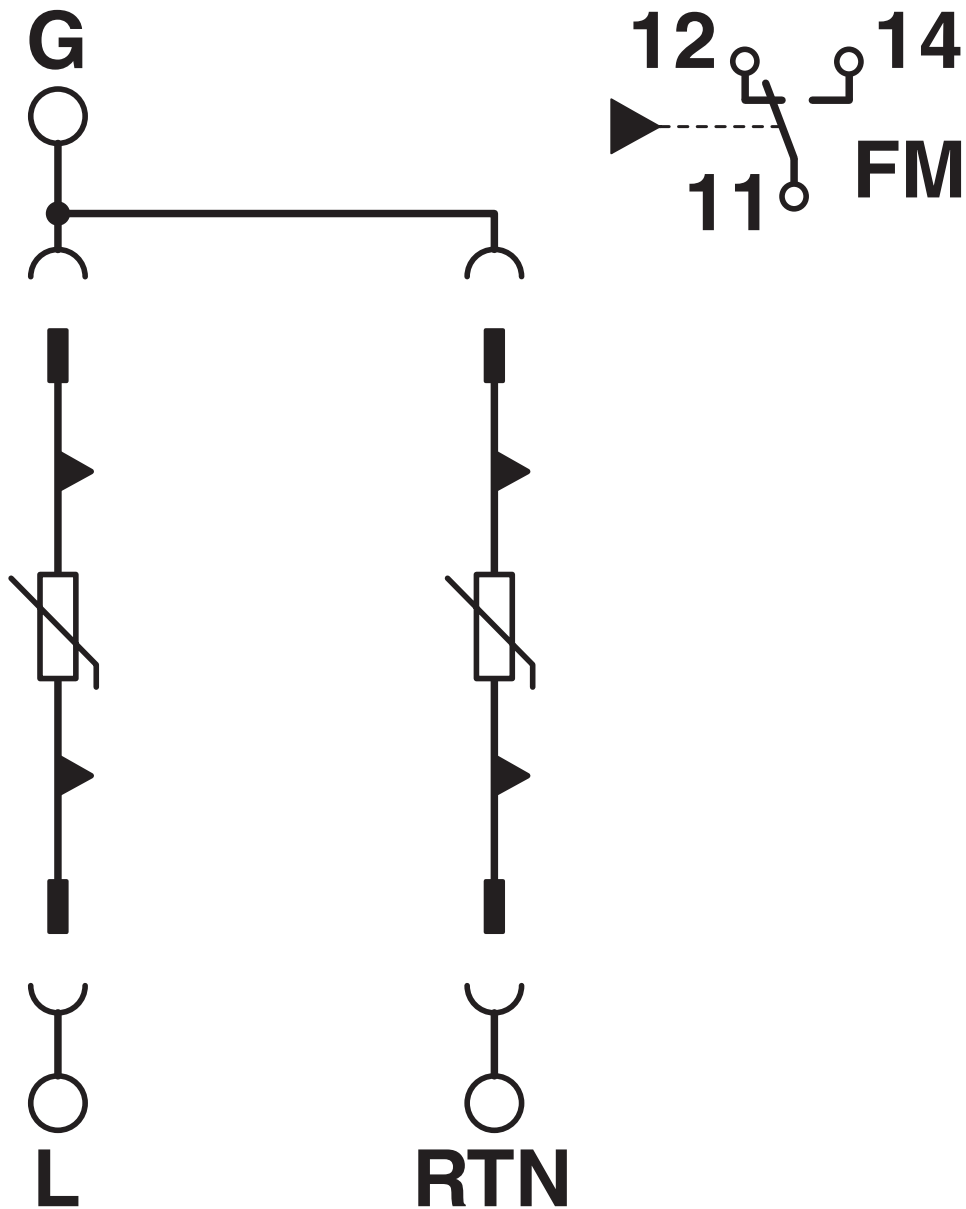
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Circuit diagram

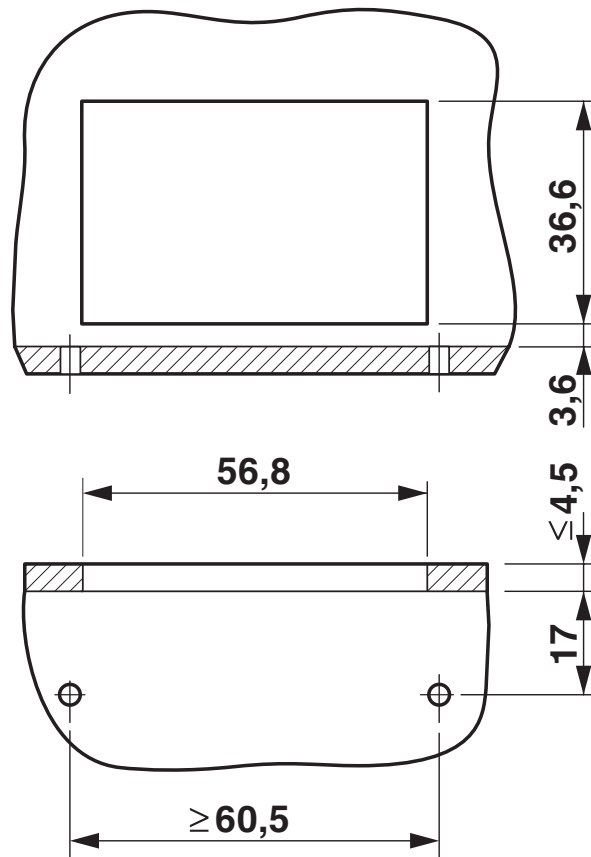


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Drilling plan/solder pad geometry



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171202 |
| ECLASS-15.0 | 27171202 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000941 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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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. |

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