

Type 2 surge protection device - VAL-US-277/80/4+0-FM - 2910380

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Surge protective device, four channel with remote indicator contact for 277/480 V AC, 4-wire plus ground.

Your advantages

- ✓ With floating remote indication contact
- ✓ UL open terminal listed SPD
- ✓ Plugs can be checked with CHECKMASTER
- ✓ Mechanical coding of all slots
- ✓ 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
- ✓ Disconnect device on each individual plug
- ✓ Multi-channel type 2 arresters



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 055626 445182 |
| GTIN | 4055626445182 |

Technical data

Dimensions

| | |
|------------------|---------|
| Height | 98.7 mm |
| Width | 71.2 mm |
| Depth | 65.5 mm |
| Horizontal pitch | 4 Div. |

Ambient conditions

| | |
|----------------------|---|
| Degree of protection | IP20 (only when all terminal points are used) |
|----------------------|---|

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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) | 30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation) | 7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z) |

General

| | |
|--|---|
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-S |
| 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 |
| Number of positions | 4 |
| Surge protection fault message | Optical, remote indicator contact |

Protective circuit

| | |
|---|---------------------|
| Nominal voltage U_N | 240/415 V AC (TN-S) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C (L-PE) | 385 V AC |
| Maximum continuous voltage U_C (N-PE) | 358 V AC |
| Residual current I_{PE} | ≤ 600 μA |
| Nominal discharge current I_n (8/20) μs | 40 kA |
| Maximum discharge current I_{max} (8/20) μs | 80 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p (L-N) | ≤ 4 kV |
| Voltage protection level U_p (L-PE) | ≤ 2 kV |
| Voltage protection level U_p (N-PE) | ≤ 2 kV |
| 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) |

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Protective circuit

| | |
|-------------------------------------|--|
| Residual voltage U_{res} (N-PE) | ≤ 2 kV (at I_n) |
| | ≤ 1.5 kV (at 10 kA) |
| | ≤ 1.4 kV (at 5 kA) |
| | ≤ 1.3 kV (at 3 kA) |
| TOV behavior at U_T (L-N) | 480 V AC (5 s / withstand mode) |
| | 530 V AC (120 min / safe failure mode) |
| Max. backup fuse with branch wiring | 125 A (gG) |

Indicator/remote signaling

| | |
|----------------------------------|--|
| Switching function | PDT contact |
| Operating voltage | 5 V AC ... 250 V AC |
| | 30 V DC |
| Operating current | 5 mA AC ... 1.5 A AC |
| | 1 A DC |
| Connection method | Plug-in/screw connection via COMBICON |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Stripping length | 7 mm |
| Conductor cross section flexible | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section solid | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M5 |
| Tightening torque | 3 Nm (1,5 mm ² ... 16 mm ²) |
| | 4.5 Nm (25 mm ² ... 35 mm ²) |
| Stripping length | 16 mm |
| Conductor cross section flexible | 1.5 mm ² ... 25 mm ² |
| Conductor cross section solid | 1.5 mm ² ... 35 mm ² |
| Conductor cross section AWG | 15 ... 2 |
| Connection method | Fork-type cable lug |
| Conductor cross section flexible | 1.5 mm ² ... 16 mm ² |

UL specifications

| | |
|---|--------------|
| SPD Type | 1 |
| Maximum continuous operating voltage MCOV (L-L) | 750 V AC |
| Maximum continuous operating voltage MCOV (L-N) | 750 V AC |
| Maximum continuous operating voltage MCOV (L-G) | 385 V AC |
| Maximum continuous operating voltage MCOV (N-G) | 385 V AC |
| Nom. voltage | 277/480 V AC |
| Mode of protection | L-N |

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UL specifications

| | |
|-------------------------------------|----------|
| | N-G |
| | L-G |
| | L-L |
| Power distribution system | 3Y |
| Nominal frequency | 50/60 Hz |
| Voltage protection rating VPR (L-L) | 2500 V |
| Voltage protection rating VPR (L-N) | 2500 V |
| Voltage protection rating VPR (L-G) | 1500 V |
| Voltage protection rating VPR (N-G) | 1200 V |
| Nominal discharge current I_n | 20 kA |
| Maximum Surge Current per Phase | 80 kA |
| Short-circuit current rating (SCCR) | 200 kA |

UL indicator/remote signaling

| | |
|-----------------------------|---|
| Operating voltage | 125 V AC |
| Operating current | 1 A AC |
| Tightening torque | 2 lb _F -in. ... 4 lb _F -in. |
| Conductor cross section AWG | 30 ... 14 |

UL connection data

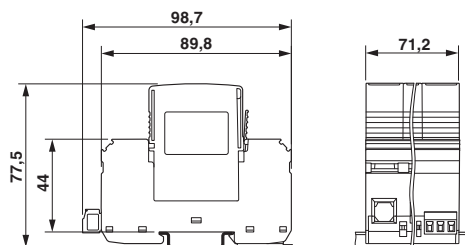
| | |
|-----------------------------|-------------------------|
| Conductor cross section AWG | 10 ... 2 |
| Tightening torque | 30 lb _F -in. |

Standards and Regulations

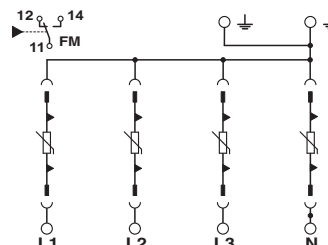
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|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
| | EN 61643-11 2012 |

Drawings

Dimensional drawing



Circuit diagram



Approvals

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

| | | | |
|--------------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| cULus Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | |

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