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Extract from the online catalog

VAL-CP-2S-175

Order No.: 2859495



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2859495>

Pluggable type 2 arrester (surge arrester) for 2-phase current supply networks with separate N and PE (4-conductor system: L1, L2, N, PE), with remote indication contact. Overall width: 36 mm.



| Commercial data | |
|--------------------------|---------------------|
| GTIN (EAN) | 4 046356 045490 |
| sales group | J020 |
| Pack | 1 pcs. |
| Customs tariff | 85369010 |
| Catalog page information | Page 27 (TT-2009) |

Product notes

WEEE/RoHS-compliant since:
06/30/2006



<http://www.download.phoenixcontact.com>
 Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Standards

| | |
|------------------------------------|------|
| Housing material | PBT |
| Inflammability class acc. to UL 94 | V0 |
| Color | gray |

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| | |
|--|---|
| Standards for air and creepage distances | DIN VDE 0110-1 |
| | IEC 60664-1: 1992-10 |
| | IEC 61643-11 |
| | UL 1449 |
| | IEEE C62.1 |
| | IEEE C62.45 |
| | IEC 61643-1 |
| Surge voltage category | III |
| Pollution degree | 2 |
| Degree of protection | IP20 |
| Mounting type | DIN rail: 35 mm |
| Design | DIN rail module, two-section, divisible |
| Number of positions | 3 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Message: Surge protection fault | Optical, remote indicator contact |
| Direction of action | 2L-N & N-PE |
| Width | 37.25 mm |
| Height | 70.00 mm |
| Length | 98.50 mm |

Protective circuit

| | |
|-------------------------------------|---------------------------|
| IEC category | II |
| | T2 |
| EN type | T2 |
| Nominal voltage U_N | 120 V AC |
| Arrester rated voltage U_C (L-N) | 175 V AC |
| Arrester rated voltage U_C (N-PE) | 150 V AC |
| U_T (TOV-proof) | 208 V AC (5 s) |
| | 1200 V AC (200 ms / N-PE) |
| U_T (TOV-safe) | 240 V AC (5 s) |
| Nominal frequency f_N | 50 Hz |
| | 60 Hz |
| Nominal load current I_L | 40 A (40 A ... 63 A) |
| Ground conductor current I_{PE} | $\leq 1 \mu\text{A}$ |
| Standby power consumption P_C | $\leq 1.75 \text{ mW}$ |

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| | |
|--|------------------------|
| Max. discharge surge current I_{max} (8/20) μ s maximum (L-N) | 80 kA (all channels) |
| Max. discharge surge current I_{max} (8/20) μ s maximum (N-PE) | 40 kA |
| Nominal discharge surge current I_n (8/20) μ s (L-N) | 40 kA (all channels) |
| Nominal discharge surge current I_n (8/20) μ s (N-PE) | 20 kA |
| Impulse operate voltage at 6 kV (1.2/50) μ s (N-PE) | ≤ 950 V |
| Protection level U_p (L-N) | ≤ 850 V |
| Protection level U_p (N-PE) | ≤ 950 V |
| Residual voltage (L-N) | ≤ 600 V (at 5 kA) |
| Residual voltage (L-PE) | ≤ 700 V (at 5 kA) |
| Residual voltage (N-PE) | ≤ 200 V (at 5 kA) |
| Clamping voltage SVR (L-N) | ≤ 500 V |
| Clamping voltage SVR (L-PE) | ≤ 1 kV |
| Clamping voltage SVR (N-PE) | ≤ 800 V |
| Response time (L-N) | ≤ 25 ns |
| Response time (L-PE) | ≤ 100 ns |
| Response time (N-PE) | ≤ 100 ns |
| Max. required backup fuse with branch wiring | 125 A (gL/gG) |
| Max. required backup fuse with V-type through wiring | 40 A (gL/gG) |
| Short-circuit resistance I_p with max. backup fuse (effective) | 25 kA |
| Short-circuit current self-quenching | 100 A (N-PE) |

Connection, protective circuit

| | |
|---------------------------------------|--------------------------------|
| Type of connection | Screw connection |
| Connection type IN | Biconnect screw terminal block |
| Connection type OUT | Biconnect screw terminal block |
| Connection method | Biconnect terminal block |
| Screw thread | M5 |
| Tightening torque | 4.5 Nm |
| Stripping length | 16 mm |
| Conductor cross section stranded min. | 2.5 mm ² |
| Conductor cross section stranded max. | 16 mm ² |
| Conductor cross section solid min. | 2.5 mm ² |
| Conductor cross section solid max. | 25 mm ² |

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| | |
|--|----|
| Conductor cross section AWG/kcmil min. | 12 |
| Conductor cross section AWG/kcmil max | 4 |

Remote indicator contact

| | |
|---|--------------------------------|
| Connection name | Remote fault indicator contact |
| Switching function | PDT contact |
| Type of connection | Pluggable screw connection |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Stripping length | 7 mm |
| Conductor cross section stranded min. | 0.14 mm ² |
| Conductor cross section stranded max. | 1.5 mm ² |
| Conductor cross section solid min. | 0.14 mm ² |
| Conductor cross section solid max. | 1.5 mm ² |
| Conductor cross section AWG/kcmil min. | 28 |
| Conductor cross section AWG/kcmil max | 16 |
| Maximum operating voltage U _{max} AC | 250 V AC |
| Maximum operating voltage U _{max} DC | 125 V DC |
| Max. operating current I _{max} | 1 A AC (inductive) |
| | 1 A AC (ohmic) |
| | 30 mA DC (inductive) |
| | 200 mA DC (ohmic) |
| Min. permissible switching capacity | 0.12 VA (12 V, 10 mA) |

Standards

| | |
|-----------------------|------------------------------|
| Standards/regulations | IEC 61643-1 2005 |
| | DIN EN 61643-11 2002 |
| | DIN EN 61643-11/A11 2007 |
| | IEEE C62.1 / C62.34 / C62.45 |
| | UL 1449 |

Certificates / Approvals



Certification

CB, CUL, GOST, KEMA, UL

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Accessories

| Item | Designation | Description |
|------|-------------|-------------|
|------|-------------|-------------|

Bridges

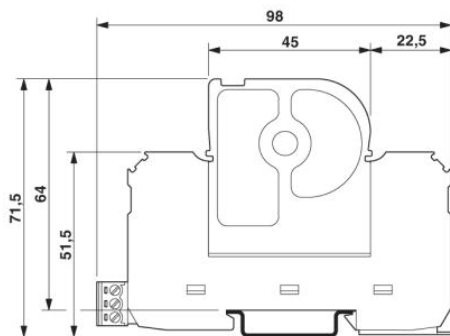
| | | |
|---------|-------------------|---|
| 2880684 | MPB SET VAL-CP-3S | Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue. |
|---------|-------------------|---|

Marking

| | | |
|---------|----------------------|---|
| 0811228 | X-PEN 0,35 | Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm |
| 0809735 | ZBF 12:UNBEDRUCKT | Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer |
| 0803595 | ZBFM 5/WH:UNBEDRUCKT | Zack marker sheet, flat, unprinted: 120-section, 10 strips à 12 markers, sufficient for 120 terminal blocks, for all terminal blocks, pitch 5.2 mm, labeling with M-PEN or CMS system, color: white |

Diagrams/Drawings

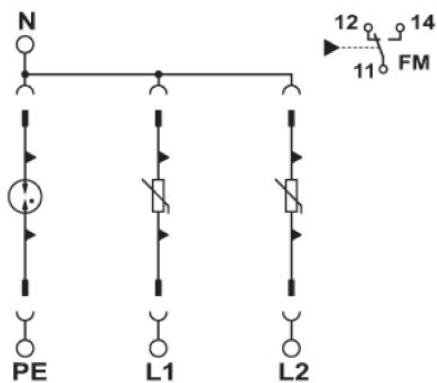
Dimensioned drawing



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Circuit diagram



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