


VAL-CP-2S-175

Order No.: 2859495

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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



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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) μs maximum (L-N) | 80 kA (all channels) |
| Max. discharge surge current I_{max} (8/20) μs maximum (N-PE) | 40 kA |
| Nominal discharge surge current I_n (8/20) μs (L-N) | 40 kA (all channels) |
| Nominal discharge surge current I_n (8/20) μs (N-PE) | 20 kA |
| Impulse operate voltage at 6 kV (1.2/50) μs (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

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|---|--------------------------------|
| 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

Accessories

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

Bridges

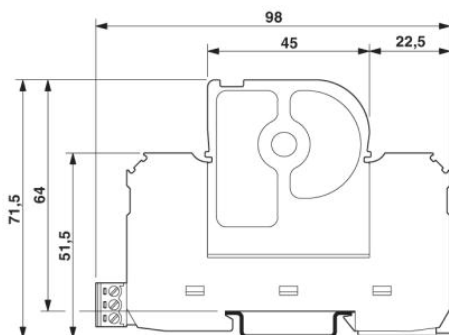
| | | |
|---------|-------------------|---|
| 2880684 | MPB SET VAL-CP-3S | Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue. |
|---------|-------------------|---|

Marking

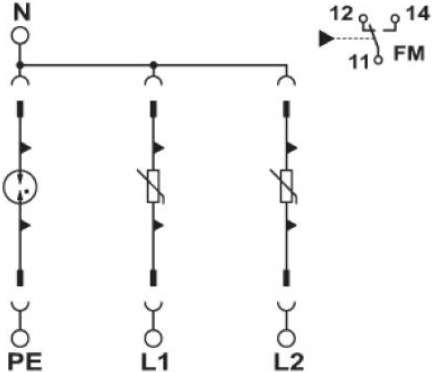
| | | |
|---------|----------------------|---|
| 0811228 | X-PEN 0,35 | Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm |
| 0809735 | ZBF 12:UNBEDRUCKT | Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer |
| 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



Circuit diagram



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