

Type 2 surge protection device - VAL-MS 230/3+1-FM - 2838199

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Surge voltage arrester consisting of base element with remote indicator contact and ground connectors, for mounting on NS 35/7.5, nominal voltage: 230 V AC, 3 + 1 circuit

Why buy this product

- With or without floating remote indication contact
- Multi-channel type 2 arresters
- Optical, mechanical status indication for the individual arresters
- Type 2 consistent plug-in surge arresters
- Mechanical keying of all slots
- Disconnect device on each individual plug



Key commercial data

| | |
|------------------------|---|
| Packing unit | 1 |
| Minimum order quantity | 1 |
| Catalog page | Page 36 (TT-2011) |
| GTIN |  4 017918 172800 |
| Custom tariff number | 85363030 |
| Country of origin | GERMANY |

Technical data

Standards

| | |
|--|---|
| Housing material | PBT / PA |
| Inflammability class according to UL 94 | V0 |
| Color | black |
| Standards for air and creepage distances | DIN EN 60664-1 |
| Degree of protection | IP20 |
| Mounting type | DIN rail: 35 mm |
| Design | DIN rail module, two-section, divisible |
| Number of positions | 4 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Message: Surge protection fault | Optical, remote indicator contact |

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| | |
|---------------------|-------------|
| Direction of action | 3L-N & N-PE |
| Width | 70.8 mm |
| Height | 96.8 mm |
| Depth | 65.5 mm |
| Pitch unit | 4 Div. |

Protective circuit

| | |
|--|--------------------------------|
| IEC category | II |
| IEC category | T2 |
| EN type | T2 |
| Nominal voltage UN | 230 V AC (400 V AC) |
| Nominal voltage UN | 230 V AC ... 415 V AC |
| Arrester rated voltage UC | 275 V AC |
| Arrester rated voltage UC (L-N) | 275 V AC |
| Arrester rated voltage UC (N-PE) | 260 V AC |
| UT (TOV-proof) | 335 V AC (5 s / L-N) |
| UT (TOV-proof) | 1200 V AC (200 ms / N-PE) |
| Nominal frequency fN | 50 Hz (60 Hz) |
| Ground conductor current IPE | ≤ 1 μA |
| Standby power consumption PC | ≤ 360 mVA |
| Max. discharge surge current I _{max} (8/20) μs | 40 kA |
| Max. discharge surge current I _{max} (8/20) μs maximum (L-N) | 40 kA |
| Max. discharge surge current I _{max} (8/20) μs maximum (L-PE) | 40 kA |
| 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) | 20 kA |
| Nominal discharge surge current I _n (8/20) μs (L-PE) | 20 kA |
| Nominal discharge surge current I _n (8/20) μs (N-PE) | 20 kA |
| Lightning test current (10/350) μs, peak value I _{imp} | 12 kA (N-PE) |
| Impulse operate voltage at 6 kV (1.2/50)μs (N-PE) | ≤ 1.5 kV |
| Protection level UP (L-N) | ≤ 1.35 kV |
| Protection level UP (L-PE) | ≤ 1.6 kV |
| Protection level UP (N-PE) | ≤ 1.5 kV |
| Residual voltage (L-N) | ≤ 1.35 kV (at I _n) |
| Residual voltage (L-N) | ≤ 1.2 kV (at 10 kA) |
| Residual voltage (L-N) | ≤ 1.1 kV (at 5 kA) |
| Residual voltage (L-N) | ≤ 0.95 kV (at 3 kA) |
| Residual voltage (L-PE) | ≤ 1.6 kV (at I _n) |
| Residual voltage (L-PE) | ≤ 1.35 kV (at 10 kA) |
| Residual voltage (L-PE) | ≤ 1.2 kV (at 5 kA) |
| Residual voltage (L-PE) | ≤ 1 kV (at 3 kA) |
| Residual voltage (N-PE) | ≤ 0.4 kV (at I _n) |
| Residual voltage (N-PE) | ≤ 0.25 kV (at 10 kA) |
| Residual voltage (N-PE) | ≤ 0.15 kV (at 5 kA) |

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| | |
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| Residual voltage (N-PE) | ≤ 0.1 kV (at 3 kA) |
| 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) |
| Short-circuit resistance IP with max. backup fuse (effective) | 25 kA |
| Follow current quenching capacity I _f (N-PE) | 100 A (260 V) |

Connection, protective circuit

| | |
|--|--------------------------------|
| Connection method | Screw connection |
| Connection type IN | Biconnect screw terminal block |
| Connection type OUT | Biconnect screw terminal block |
| Screw thread | M5 |
| Tightening torque | 4.5 Nm |
| Stripping length | 14.5 mm |
| Conductor cross section stranded min. | 0.5 mm ² |
| Conductor cross section stranded max. | 25 mm ² |
| Conductor cross section solid min. | 0.5 mm ² |
| Conductor cross section solid max. | 35 mm ² |
| Conductor cross section AWG/kcmil min. | 20 |
| Conductor cross section AWG/kcmil max | 2 |

Remote indicator contact

| | |
|---|--------------------------------|
| Connection name | Remote fault indicator contact |
| Switching function | PDT contact |
| Connection method | 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 | 30 V DC |
| Max. operating current I _{max} | 0.75 A AC (250 V AC) |
| Max. operating current I _{max} | 3 A AC (125 V AC) |
| Max. operating current I _{max} | 2 A DC (30 V DC) |
| Min. permissible switching capacity | 0.12 VA (12 V, 10 mA) |

Standards

| | |
|-----------------------|------------------|
| Standards/regulations | IEC 61643-1 2005 |
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|-----------------------|----------------------|
| Standards/regulations | EN 61643-11/A11 2007 |
|-----------------------|----------------------|

Classifications

eclass

| | |
|------------|----------|
| eCl@ss 4.0 | 27140201 |
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130801 |
| eCl@ss 6.0 | 27130805 |
| eCl@ss 7.0 | 27130805 |

etim

| | |
|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000941 |

unspsc

| | |
|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |

Approvals

Approvals

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IECEE CB Scheme / UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / GOST / GL / CCA / cULus Recognized

Ex Approvals

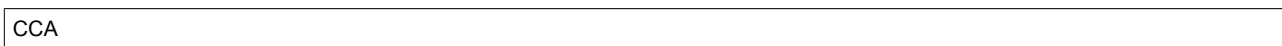
Approvals submitted

Approval details

| |
|-----------------|
| IECEE CB Scheme |
|-----------------|

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Approvals



Accessories

Accessories

Bridges

Wiring bridge - MPB 18/4- 8 - 2809283



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

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Accessories

Wiring bridge - MPB 18/4-12 - 2809296



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm

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Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm

Wiring bridge - MPB 18/4-12 - 2809296



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

Wiring bridge - MPB 18/4- 8 - 2809283



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

Wiring bridge - MPB 18/1-57 - 2809238



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

Wiring bridge - MPB 18/1-12 - 2748593



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

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Accessories

Wiring bridge - MPB 18/1- 9 - 2748580



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

Wiring bridge - MPB 18/1- 8 - 2748577



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

Wiring bridge - MPB 18/1- 6 - 2748564



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

Wiring bridge - MPB 18/1- 4 - 2809225



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

Wiring bridge - MPB 18/1- 3 - 2809212



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

Wiring bridge - MPB 18/1- 2 - 2809209



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.

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Accessories

Marking

Zack marker strip - ZBN 18,LGS:ERDE - 2749589



Zack marker strip, Strip, white, Labeled, Horizontal: Grounding symbol, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Zack marker strip - ZBN 18,LGS:L1-N,ERDE - 2749576



Zack marker strip, Strip, white, Labeled, Horizontal: L1, L2, L3, N, GND, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Feed-through terminal block - DK-BIC-35 - 2749880

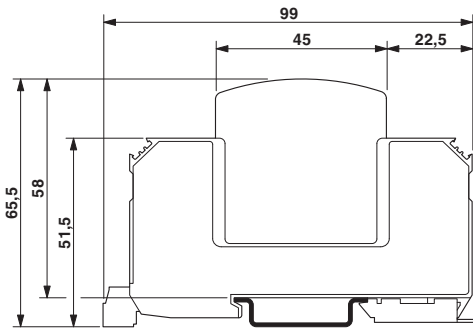


Feed-through terminal block for VAL and FLT applications

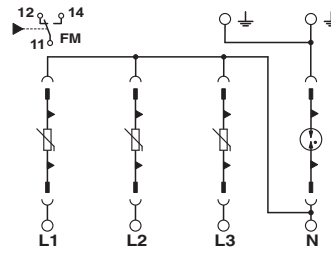
Drawings

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Dimensioned drawing



Circuit diagram



Application drawing

