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Especialistas en Automatización

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## Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

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Surge arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element and protective connectors, for mounting on NS 35.

### Why buy this product

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



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 STK   |
| GTIN         | <br>4 046356 163675 |

### Technical data

#### Dimensions

|                  |         |
|------------------|---------|
| Height           | 90 mm   |
| Width            | 53.4 mm |
| Depth            | 44 mm   |
| Horizontal pitch | 3 Div.  |

#### 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 (above mean sea level))        |
| Permissible humidity (operation)        | 5 % ... 95 %                                  |

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## Technical data

### Ambient conditions

|                       |  |
|-----------------------|--|
| Shock (operation)     | 25g (half sinus / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation) | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z)     |

### General

|  |   |
|--|---|
| Standards/specifications                 | IEC 61643-11 2011                       |
|  | EN 61643-11 2012                        |
| IEC test classification                  | II                                      |
|  | T2                                      |
| EN type                                  | T2                                      |
| IEC power supply system                  | TN-C                                    |
|  | IT                                      |
| Number of ports                          | One                                     |
| SPD design                               | Voltage-limiting type                   |
| Mode of protection                       | L-PEN                                   |
|  | L-PE                                    |
| Mounting type                            | DIN rail: 35 mm                         |
| Color                                    | jet black RAL 9005                      |
| Housing material                         | PA 6.6                                  |
|  | PBT                                     |
| Degree of pollution                      | 2                                       |
| Distance between live and grounded parts | 5 mm                                    |
| Flammability rating according to UL 94   | V-0                                     |
| Type                                     | DIN rail module, two-section, divisible |
| Number of positions                      | 3                                       |
| Surge protection fault message           | optical                                 |

### Additional descriptions

|      |   |
|------|---|
| Note | Usable in all low-voltage systems between L-N or L-PEN.<br>Only usable in IT Systems between L-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation. (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a) |
|------|---|

### Protective circuit

|  |                     |
|--|---------------------|
| Nominal voltage $U_N$                          | 400/690 V AC (TN-C) |
|  | 500 V AC (IT)       |
| Nominal frequency $f_N$                        | 50 Hz (60 Hz)       |
| Maximum continuous voltage $U_C$               | 580 V AC            |
| Rated load current $I_L$                       | 80 A                |
| Residual current $I_{PE}$                      | $\leq 0.75$ mA      |
| Standby power consumption $P_C$                | $\leq 450$ mVA      |
| Nominal discharge current $I_n$ (8/20) $\mu$ s | 15 kA               |

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## Technical data

### Protective circuit

|   |                                     |
|---|-------------------------------------|
| Maximum discharge current $I_{\max}$ (8/20) $\mu\text{s}$ | 30 kA                               |
| Short-circuit current rating $I_{\text{SCCR}}$            | 25 kA                               |
| Voltage protection level $U_p$                            | $\leq 2.5$ kV                       |
| Residual voltage $U_{\text{res}}$                         | $\leq 2.5$ kV (at $I_n$ )           |
|   | $\leq 2.3$ kV (at 10 kA)            |
|   | $\leq 2.1$ kV (at 5 kA)             |
|   | $\leq 1.9$ kV (at 3 kA)             |
| TOV behavior at $U_T$                                     | 690 V AC (5 s / withstand mode)     |
|   | 762 V AC (120 min / withstand mode) |
| Response time $t_A$                                       | $\leq 25$ ns                        |
| Max. backup fuse with branch wiring                       | 125 A (gG)                          |
| Max. backup fuse with V-type through wiring               | 80 A (gG)                           |

### Connection data

|                                  |  |
|----------------------------------|--|
| Connection method                | Screw connection                           |
| Conductor cross section flexible | 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> |
| Conductor cross section solid    | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Conductor cross section AWG      | 15 ... 2                                   |
| Screw thread                     | M5   |
| Tightening torque                | 4.5 Nm                                     |
| Stripping length                 | 16 mm                                      |

### UL specifications

|   |              |
|---|--------------|
| SPD Type  | 4CA          |
| Maximum continuous operating voltage MCOV (L-L) | 1160 V AC    |
| Maximum continuous operating voltage MCOV (L-G) | 580 V AC     |
| Nom. voltage                                    | 400/690 V AC |
| Mode of protection                              | L-L          |
|   | L-G          |
| Power distribution system                       | 3D           |
| Nominal frequency                               | 50/60 Hz     |
| Measured limiting voltage MLV (L-L)             | 4270 V       |
| Measured limiting voltage MLV (L-G)             | 2310 V       |
| Nominal discharge current $I_n$ (L-L)           | 10 kA        |
| Nominal discharge current $I_n$ (L-G)           | 10 kA        |

### UL connection data

|                             |                         |
|-----------------------------|-------------------------|
| Conductor cross section AWG | 10 ... 2                |
| Tightening torque           | 30 lb <sub>F</sub> -in. |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| 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 |
| eCl@ss 8.0 | 27130805 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000941 |
| ETIM 5.0 | 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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#### Approvals

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

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

|               |
|---------------|
| UL Recognized |
|---------------|

# Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

## Approvals

KEMA-KEUR

ÖVE

cUL Recognized

CCA

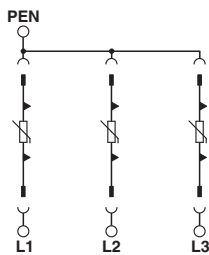
IECEE CB Scheme

EAC

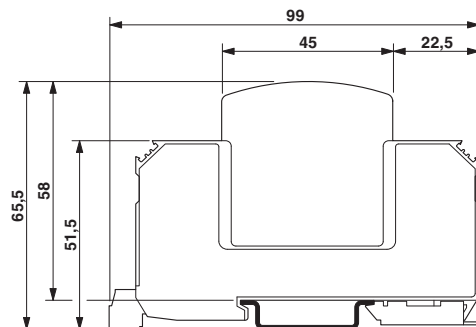
cULus Recognized

## Drawings

Circuit diagram



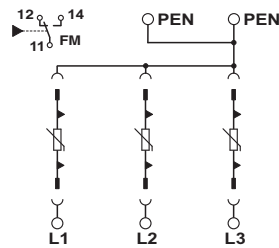
Dimensional drawing



The illustration shows the dimensional drawing for a version with remote indicator contact

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Circuit diagram



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|---|-------------|-------------------|----------------------------|
| Surge arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element and protective connectors, for mounting on NS 35. | 2920450     | VAL-MS<br>580/3+0 | <a href="#">Buy on EAN</a> |