

## Type 1 surge protection device - VAL-US-347/30/3+0-FM - 2910383

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Surge protective device, three channel with remote indicator contact for 347/600V and 400/690 V AC, 4-wire.

### Your advantages

- ✓ With floating remote indication contact
- ✓ UL open terminal listed SPD
- ✓ Plugs can be checked with CHECKMASTER
- ✓ Mechanical coding of all slots
- ✓ 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         |  |
| GTIN         | 4055626445212                                                                        |

### Technical data

#### Dimensions

|                  |         |
|------------------|---------|
| Height           | 98.7 mm |
| Width            | 53.4 mm |
| Depth            | 65.5 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                              |

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## Technical data

### Ambient conditions

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                        |
| Altitude                                | ≤ 2000 m (amsl (above mean sea level))  |
| Permissible humidity (operation)        | 5 % ... 95 %                            |
| Shock (operation)                       | 25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation)                   | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z)    |

### General

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| IEC test classification                  | II                                      |
|                                          | T2                                      |
| EN type                                  | T2                                      |
| IEC power supply system                  | TN-C                                    |
| Mode of protection                       | L-PEN                                   |
| 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, remote indicator contact       |

### Protective circuit

|                                                    |                                     |
|----------------------------------------------------|-------------------------------------|
| Nominal voltage $U_N$                              | 400/690 V AC (TN-C)                 |
|                                                    | 347/600 V AC (TN-C)                 |
| Nominal frequency $f_N$                            | 50 Hz (60 Hz)                       |
| Maximum continuous voltage $U_C$                   | 580 V AC                            |
| Standby power consumption $P_C$                    | ≤ 150 mVA                           |
| Nominal discharge current $I_n$ (8/20) $\mu$ s     | 15 kA                               |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s | 30 kA                               |
| Short-circuit current rating $I_{SCCR}$            | 25 kA                               |
| Voltage protection level $U_p$                     | ≤ 2.5 kV                            |
| Residual voltage $U_{res}$                         | ≤ 2.5 kV (at $I_n$ )                |
|                                                    | ≤ 2.3 kV (at 10 kA)                 |
|                                                    | ≤ 2.1 kV (at 5 kA)                  |
|                                                    | ≤ 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) |
| Max. backup fuse with branch wiring                | 125 A (gG)                          |

### Indicator/remote signaling

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## Technical data

### 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 mm² ... 1.5 mm²                  |
| Conductor cross section solid    | 0.14 mm² ... 1.5 mm²                  |
| Conductor cross section AWG      | 28 ... 16                             |

### Connection data

|                                  |                            |
|----------------------------------|----------------------------|
| Connection method                | Screw connection           |
| Screw thread                     | M5                         |
| Tightening torque                | 3 Nm (1.5 mm² ... 16 mm²)  |
|                                  | 4.5 Nm (25 mm² ... 35 mm²) |
| Stripping length                 | 16 mm                      |
| Conductor cross section flexible | 1.5 mm² ... 25 mm²         |
| Conductor cross section solid    | 1.5 mm² ... 35 mm²         |
| Conductor cross section AWG      | 15 ... 2                   |
| Connection method                | Fork-type cable lug        |
| Conductor cross section flexible | 1.5 mm² ... 16 mm²         |

### UL specifications

|                                                 |                            |
|-------------------------------------------------|----------------------------|
| SPD Type                                        | 1                          |
| Maximum continuous operating voltage MCOV (L-L) | 750 V AC                   |
| Maximum continuous operating voltage MCOV (L-G) | 580 V AC                   |
| Nom. voltage                                    | 347/600 V AC (3-phase Wye) |
|                                                 | 400/690 V AC (3-phase Wye) |
| Mode of protection                              | L-L                        |
|                                                 | L-G                        |
| Power distribution system                       | Wye                        |
| Nominal frequency                               | 50/60 Hz                   |
| Voltage protection rating VPR (L-L)             | 4000 V                     |
| Voltage protection rating VPR (L-G)             | 2000 V                     |
| Nominal discharge current I <sub>n</sub>        | 20 kA                      |
| Maximum Surge Current per Phase                 | 30 kA                      |
| Short-circuit current rating (SCCR)             | 200 kA                     |

### UL indicator/remote signaling

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### Technical data

#### UL indicator/remote signaling

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Operating voltage           | 125 V AC                                          |
| Operating current           | 1 A AC                                            |
| Tightening torque           | 2 lb <sub>F</sub> -in. ... 4 lb <sub>F</sub> -in. |
| Conductor cross section AWG | 30 ... 14                                         |

#### UL connection data

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

#### Standards and Regulations

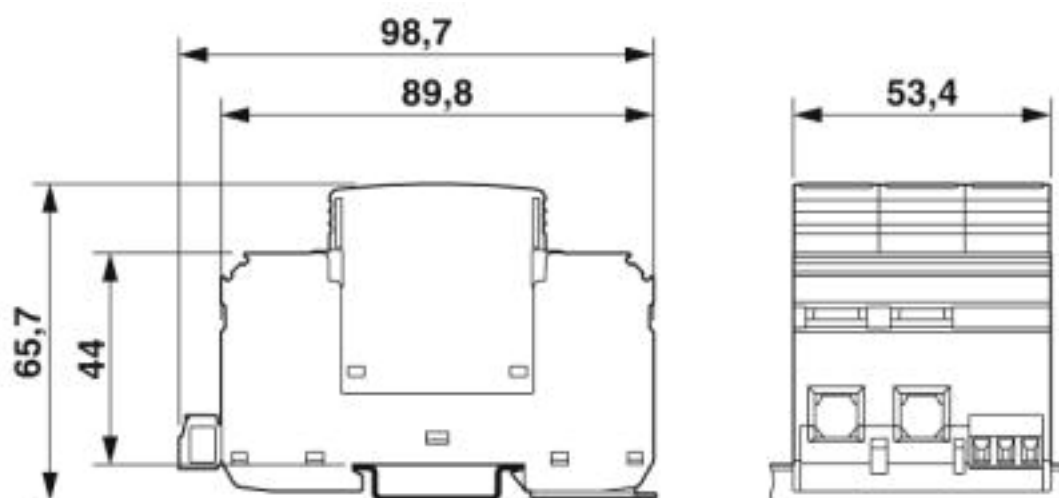
|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
|                       | EN 61643-11 2012  |

#### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

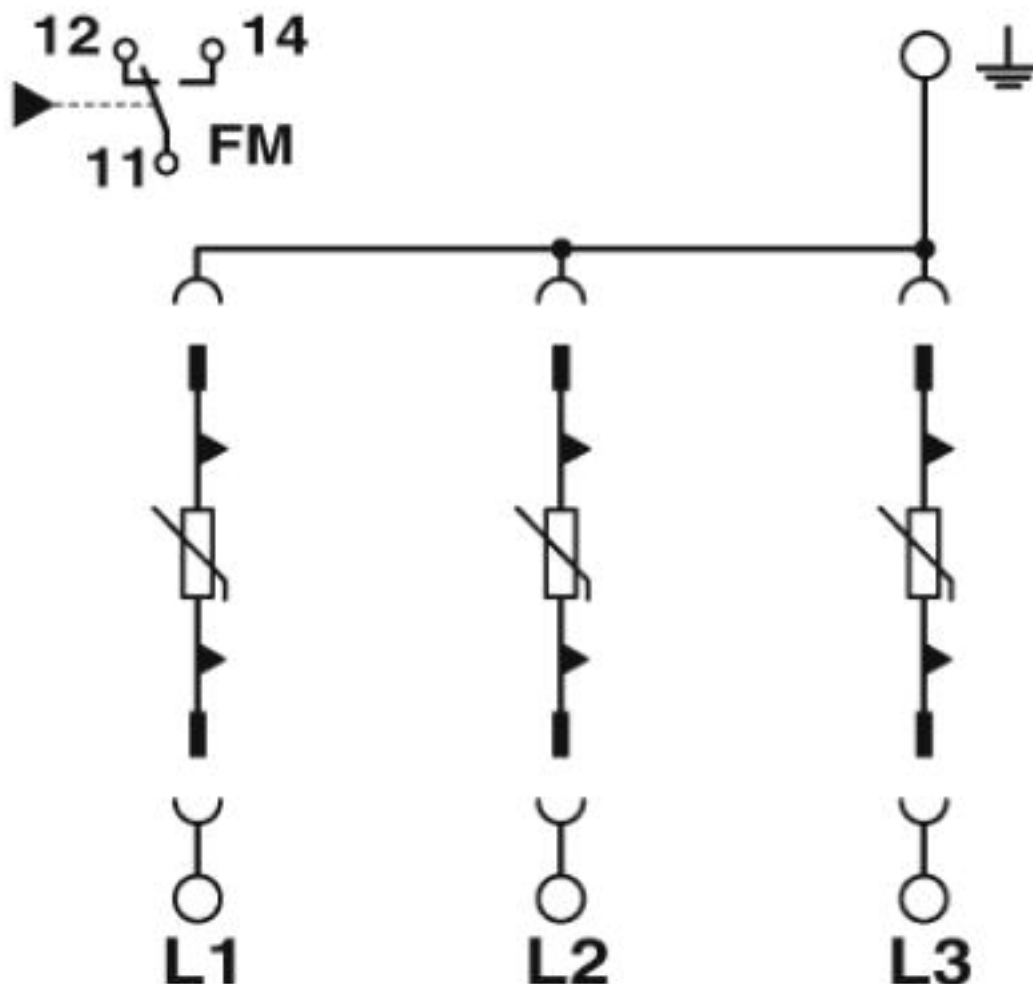
### Drawings

Dimensional drawing



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Circuit diagram



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27130805 |
| eCl@ss 6.0    | 27130800 |
| eCl@ss 7.0    | 27130805 |
| eCl@ss 8.0    | 27130805 |
| eCl@ss 9.0    | 27130805 |

ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC000941 |
| ETIM 6.0 | EC000941 |
| ETIM 7.0 | EC000941 |

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### Approvals

#### Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

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### 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



### Accessories

#### Accessories

#### Bridge

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 600 mm

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Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 600 mm

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### Accessories

Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 200 mm

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Wiring bridge - MPB 18/1-10/1.0.0 - 2830443



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

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Wiring bridge - MPB 18/4-12 - 2809296



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

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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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Wiring bridge - MPB 18/3- 6 - 2809241



Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.

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## Type 1 surge protection device - VAL-US-347/30/3+0-FM - 2910383

### Accessories

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.

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.

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### Accessories

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.

### Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

### Feed-through terminal block

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



Feed-through terminal block for VAL and FLT applications

### Labeled device marker

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### Accessories

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589



Marker for terminal blocks, Strip, white, labeled, Horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576



Marker for terminal blocks, Strip, white, labeled, Horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

### Marker pen

Marker pen - B-STIFT - 1051993



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

### Spare parts

Type 1 surge protection plug - VAL-US-347/30-P - 2910339



UL Recognized type 1 SPD and IEC type 2 surge protection plug with a varistor and thermal disconnect for use with VAL-US base elements, mechanical and visual fault warning