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

2910381

https://www.phoenixcontact.com/us/products/2910381

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Surge protective device, single channel with remote indicator contact for 347 V AC.

## Your advantages

- With floating remote indication contact
- Optical, mechanical status indication for the individual arresters
- Mechanical coding of all slots

## Commercial data

| | |
|---|---|
| Item number | 2910381 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL17 |
| Product key | CL132U |
| Catalog page | Page 92 (C-4-2019) |
| GTIN | 4055626445199 |
| Weight per piece (including packing) | 158 g |
| Weight per piece (excluding packing) | 133 g |
| Customs tariff number | 85363030 |
| Country of origin | US |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Surge protection for NEMA power supply units |
| Product family | VALVETRAB US |
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-C |
| Type | DIN rail module, two-section, divisible |
| Distance between live and grounded parts | 5 mm |
| Number of positions | 1 |
| Surge protection fault message | Optical, remote indicator contact |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Pollution degree | 2 |

### Electrical properties

| | |
|---|---|
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |

Indicator/remote signaling

| | |
|---|---|
| Connection name | Remote fault indicator contact |
| Switching function | Changeover 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 data

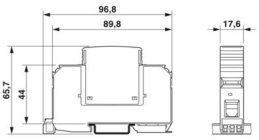
| | |
|---|---|
| Connection method | Screw connection |
| Screw thread | M5 |
| Tightening torque | 3 Nm (1.5 mm² ... 16 mm²) |
| | 4.5 Nm (25 mm² ... 35 mm²) |
| Stripping length | 16 mm |
| Conductor cross section flexible | 1.5 mm² ... 25 mm² |
| Conductor cross section rigid | 1.5 mm² ... 35 mm²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

Remote fault indicator contact

| | |
|---|---|
| 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 rigid | 0.14 mm² ... 1.5 mm² |
| Conductor cross section AWG | 28 ... 16 |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 17.6 mm |
| Height | 96.8 mm |
| Depth | 65.7 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 1 Div. |

## Material specifications

| | |
|---|---|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA 6.6/PBT |
| Material group | I |
| Housing material | PA 6.6 |
| | PBT |

## Protective circuit

| | |
|---|---|
| Mode of protection | L-PEN |
| Direction of action | 1L-GND |
| Nominal voltage $U_N$ | 400 V AC (TN-C) |
| | 347 V AC (TN-C) |
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
| Maximum continuous voltage $U_C$ | 580 V AC |
| Standby power consumption $P_C$ | ≤ 150.00 mVA |
| Nominal discharge current $I_n$ (8/20) µs | 15 kA |
| Maximum discharge current $I_{max}$ (8/20) µs | 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) |

## Environmental and real-life conditions

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) |
| 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) |

## Approvals

UL specifications

| | |
|---|---|
| Maximum continuous operating voltage MCOV | 580 V AC |
| Short-circuit current rating (SCCR) | 200 kA |
| Voltage protection rating VPR | 2000 V |
| UL type | type 1 |
| Nominal discharge current $I_n$ | 20 kA |
| Maximum Surge Current per Phase | 30 kA |
| Mode of protection | L-N |
| | L-G |
| Nominal voltage | 347/600 V AC (Single-phase) |
| | 400/690 V AC |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |
| SPD Type | 1 |

UL indicator/remote signaling

| | |
|---|---|
| Operating voltage | 125 V AC |
| AC operating current | 1 A AC |

UL connection data

| | |
|---|---|
| Tightening torque | 30 $lb_f$-in. |
| Conductor cross section AWG | 14 ... 2 |

## Standards and regulations

Air clearances and creepage distances

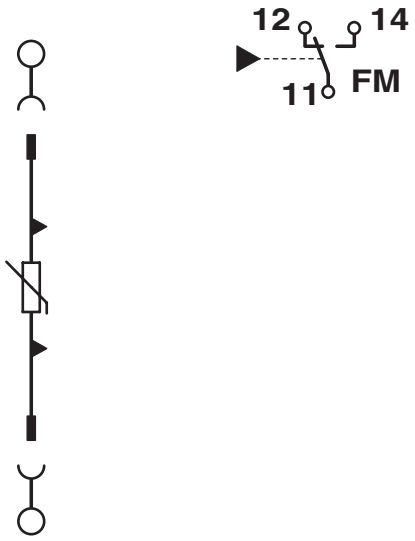
| | |
|---|---|
| Standards/regulations | EN 60664-1 / EN 61643-11 |
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 |

## Mounting

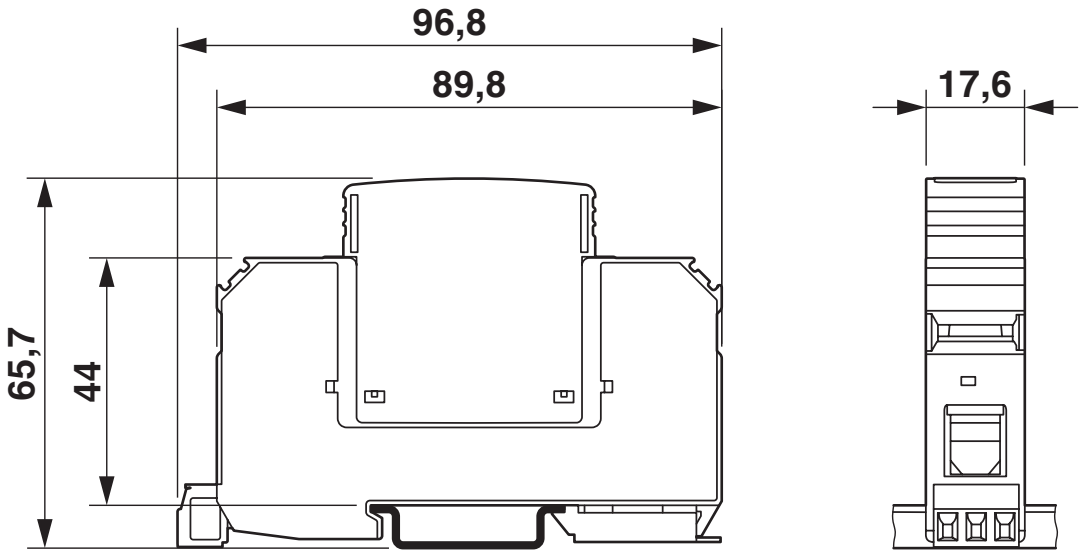
| | |
|---|---|
| Mounting type | DIN rail: 35 mm |

## Drawings

Circuit diagram




Dimensional drawing



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2910381

**UL Listed**
Approval ID: FILE E 330181

**cUL Listed**
Approval ID: FILE E 330181

**cULus Listed**

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27130805 |
| ECLASS-13.0 | 27171202 |

### ETIM

| | |
|---|---|
| ETIM 8.0 | EC000941 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121600 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

## Accessories

### MPB F600X16/ 1GS - Wiring bridge

2818355

https://www.phoenixcontact.com/us/products/2818355



Wiring bridge flexible, diameter: 16 $mm^2$, with a fork-type cable lug on one side, length: 600 mm

### MPB F200X16/ 1GS - Wiring bridge

2818339

https://www.phoenixcontact.com/us/products/2818339



Wiring bridge flexible, diameter 16 $mm^2$, with a fork-type cable lug on one side, length: 200 mm

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

2830443

https://www.phoenixcontact.com/us/products/2830443

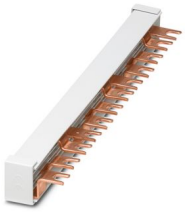


Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

## MPB 18/4-12 - Wiring bridge

2809296

https://www.phoenixcontact.com/us/products/2809296

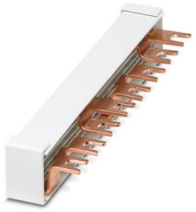


Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

## MPB 18/4- 8 - Wiring bridge

2809283

https://www.phoenixcontact.com/us/products/2809283

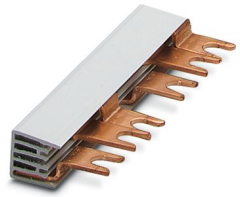


Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

## MPB 18/3- 6 - Wiring bridge

2809241

https://www.phoenixcontact.com/us/products/2809241



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

## MPB 18/1-57 - Wiring bridge

2809238

https://www.phoenixcontact.com/us/products/2809238



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

## MPB 18/1-12 - Wiring bridge

2748593

https://www.phoenixcontact.com/us/products/2748593



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

## MPB 18/1- 9 - Wiring bridge

2748580

https://www.phoenixcontact.com/us/products/2748580



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

## MPB 18/1- 8 - Wiring bridge

2748577

https://www.phoenixcontact.com/us/products/2748577



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

## MPB 18/1- 6 - Wiring bridge

2748564

https://www.phoenixcontact.com/us/products/2748564



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

## MPB 18/1- 4 - Wiring bridge

2809225

https://www.phoenixcontact.com/us/products/2809225



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

## MPB 18/1- 3 - Wiring bridge

2809212

https://www.phoenixcontact.com/us/products/2809212



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

## MPB 18/1- 2 - Wiring bridge

2809209

https://www.phoenixcontact.com/us/products/2809209



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

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

2749589

https://www.phoenixcontact.com/us/products/2749589



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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

2749576

https://www.phoenixcontact.com/us/products/2749576




Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

https://www.phoenixcontact.com/us/products/2809128



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

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

2749880

https://www.phoenixcontact.com/us/products/2749880



Feed-through terminal block for VAL and FLT applications

## B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/us/products/1051993



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

## SZK PZ2 VDE - Screwdriver

1206463

https://www.phoenixcontact.com/us/products/1206463



Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

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

2910381

https://www.phoenixcontact.com/us/products/2910381

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

2910339

https://www.phoenixcontact.com/us/products/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

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com