

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Surge protective device, two channel with remote indicator contact for 240 V AC corner-grounded DELTA.

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 2910369 |
| Packing unit | 1 pc |
| Sales key | CL17 |
| Product key | CL132U |
| Catalog page | Page 98 (C-4-2019) |
| GTIN | 4055626445083 |
| Weight per piece (including packing) | 235.3 g |
| Weight per piece (excluding packing) | 213 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

Technical data

Notes

General

| Note | Additional information for IT systems |
|------|---------------------------------------|
|------|---------------------------------------|

Product properties

| | |
|--------------------------------|--|
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-C |
| | IT |
| Type | DIN rail module, two-section, divisible |
| Product type | Surge protection for NEMA power supply units |
| Product family | VALVETRAB US |
| Number of positions | 2 |
| 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 ... 750 mA AC |
| | 1 A DC |

RCD switch

| | |
|---|------------------|
| Rated residual operating current $I_{\Delta n}$ | $\leq 450 \mu A$ |
|---|------------------|

Connection data

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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

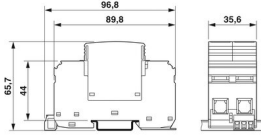
<https://www.phoenixcontact.com/us/products/2910369>

| | |
|----------------------------------|--|
| Conductor cross section AWG | 15 ... 2 |
| Connection method | Fork-type cable lug |
| Conductor cross section flexible | 1.5 mm ² ... 16 mm ² |

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 mm ² ... 1.5 mm ² |
| Conductor cross section rigid | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |

Dimensions

| | |
|---------------------|---|
| Dimensional drawing |  |
| Width | 35.6 mm |
| Height | 96.8 mm |
| Depth | 65.7 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 2 Div. |

Material specifications

| | |
|--|---------------|
| 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 | 2L-GND |
| Nominal voltage U_N | 240 V AC (IT) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 275 V AC |
| Standby power consumption P_C | ≤ 120 mVA |
| Nominal discharge current I_n (8/20) μs | 20 kA |
| Maximum discharge current I_{max} (8/20) μs | 40 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | ≤ 1.35 kV ≤ 1.35 kV (at I_n) |

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

| | |
|-------------------------------------|--|
| Residual voltage U_{res} | ≤ 1.1 kV (at 10 kA) |
| | ≤ 1 kV (at 5 kA) |
| | ≤ 0.9 kV (at 3 kA) |
| TOV behavior at U_T | 335 V AC (5 s / withstand mode) |
| | 440 V AC (120 min / safe failure mode) |
| Response time t_A | ≤ 25 ns |
| 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 $\pm X$, $\pm Y$, $\pm Z$) |
| Vibration (operation) | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z) |

Approvals

UL specifications

| | |
|---|--|
| Maximum continuous operating voltage MCOV (L-L) | 550 V |
| Maximum continuous operating voltage MCOV (L-G) | 275 V AC |
| Short-circuit current rating (SCCR) | 200 kA |
| Voltage protection rating VPR (L-L) | 1800 V |
| Voltage protection rating VPR (L-G) | 1000 V |
| UL type | type 1 |
| Nominal discharge current I_n | 20 kA |
| Maximum Surge Current per Phase | 40 kA |
| Mode of protection | L-L |
| | L-G |
| Nominal voltage | 240 V AC (3-phase corner-grounded Delta) |
| Power distribution system | Delta |
| 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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device

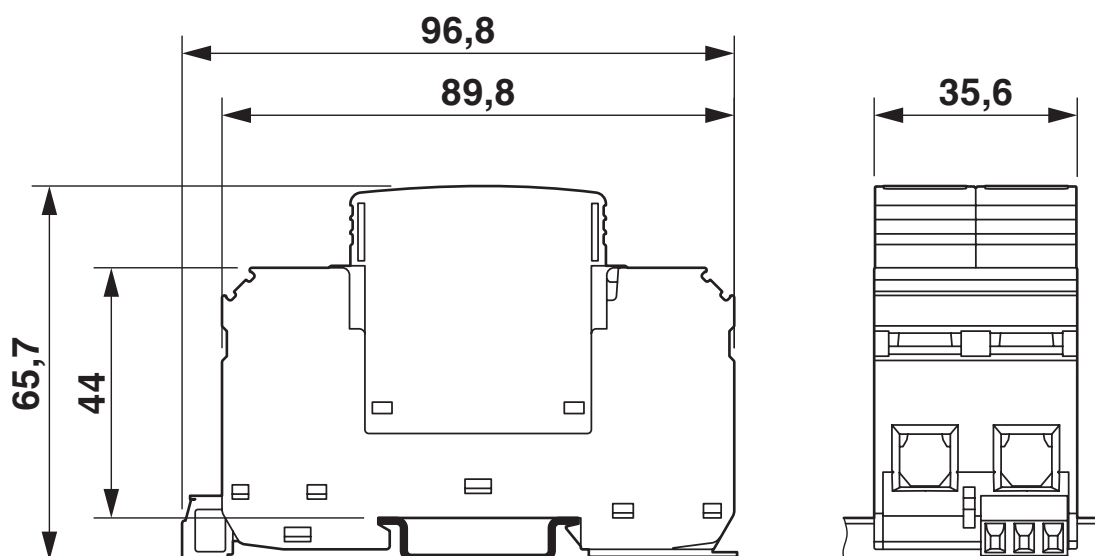


2910369

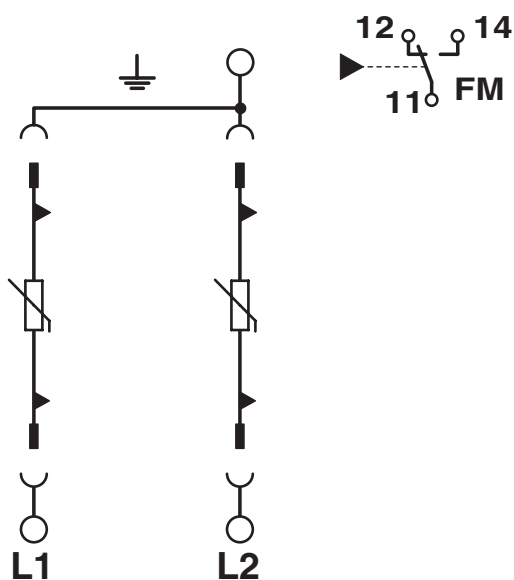
<https://www.phoenixcontact.com/us/products/2910369>

Drawings

Dimensional drawing



Circuit diagram




VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2910369>



UL Listed

Approval ID: FILE E 330181



cUL Listed

Approval ID: FILE E 330181

cULus Listed

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369
<https://www.phoenixcontact.com/us/products/2910369>

Classifications

ECLASS

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

ETIM

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

UNSPSC

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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

Accessories

MPB F600X16/ 1GS - Wiring bridge

2818355

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



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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

MPB 18/4- 8 - Wiring bridge

2809283

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

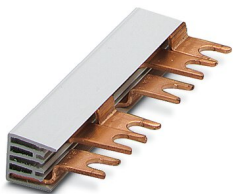


Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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.

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

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

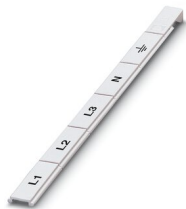


Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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

VAL-US-240D/40/2+0-FM - Type 1 surge protection device



2910369

<https://www.phoenixcontact.com/us/products/2910369>

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

VAL-US-240D/40-P - Type 1 surge protection plug

2910337

<https://www.phoenixcontact.com/us/products/2910337>



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

Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

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