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

2910361

https://www.phoenixcontact.com/us/products/2910361

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Surge protective device, single channel with remote indicator contact for 240 V AC.

Your advantages

- With floating remote indication contact
- Optical, mechanical status indication for the individual arresters

Commercial data

Item number	2910361
Packing unit	1 pc
Sales key	CL17
Product key	CL132U
Catalog page	Page 92 (C-4-2019)
GTIN	4055626445014
Weight per piece (including packing)	148.6 g
Weight per piece (excluding packing)	148.6 g
Customs tariff number	85363030
Country of origin	US

Technical data

Product properties

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

RCD switch

Rated residual operating current $I_{\Delta n}$	≤ 450 µA

Connection data

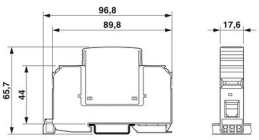
Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1.5 mm² ... 16 mm²)
	4.5 Nm (25 mm² ... 35 mm²)
Stripping length	16 mm
Conductor cross section flexible	1.5 mm² ... 25 mm²
Conductor cross section rigid	1.5 mm² ... 35 mm²
Conductor cross section AWG	15 ... 2
Connection method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

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	240 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	385 V AC
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	≤ 2 kV
Residual voltage U_{res}	≤ 2 kV (at I_n)
	≤ 1.7 kV (at 10 kA)
	≤ 1.5 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
TOV behavior at U_T	415 V AC (5 s / withstand mode)
	440 V AC (120 min / withstand 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 ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV	385 V AC
Short-circuit current rating (SCCR)	200 kA
Voltage protection rating VPR	1500 V
UL type	type 1
Nominal discharge current I_n	20 kA
Maximum Surge Current per Phase	40 kA
Mode of protection	L-N
	L-G
Nominal voltage	240 V AC (Single-phase)
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

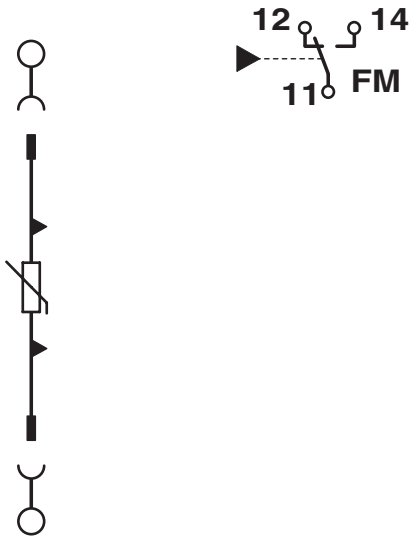
Standards/regulations	EN 60664-1 / EN 61643-11
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

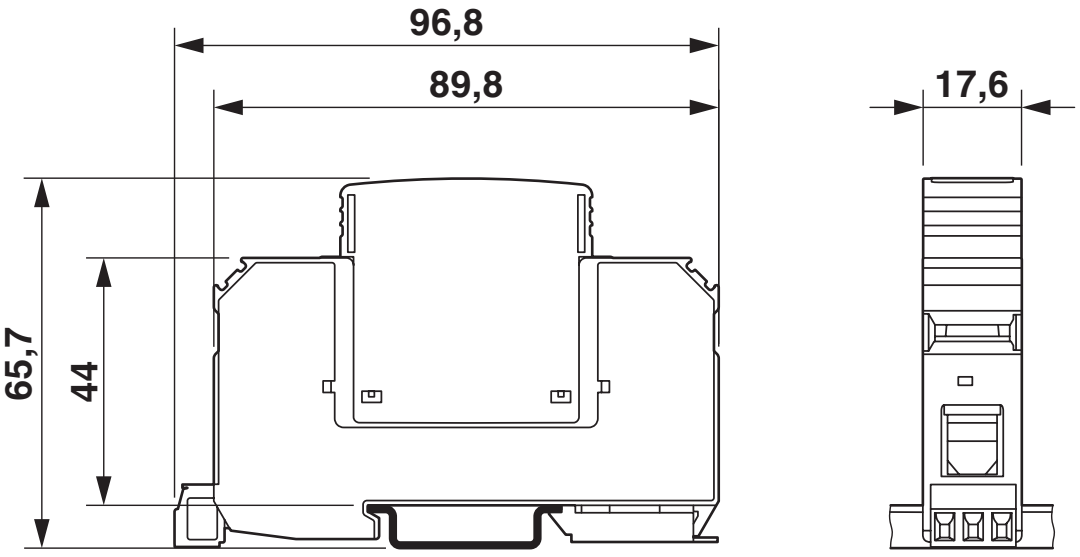
Mounting type	DIN rail: 35 mm

Drawings

Circuit diagram



Dimensional drawing



Approvals

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UL Listed
Approval ID: FILE E 330181

cUL Listed
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Classifications

ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

ETIM

ETIM 8.0	EC000941

UNSPSC

UNSPSC 21.0	39121600

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

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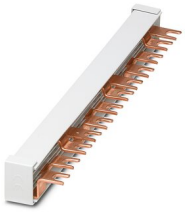


Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

MPB 18/4- 8 - Wiring bridge

2809283

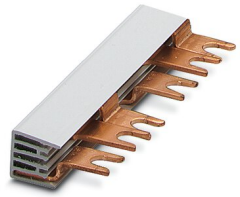
https://www.phoenixcontact.com/us/products/2809283

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

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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

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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-240/40-P - Type 1 surge protection plug

2910336

https://www.phoenixcontact.com/us/products/2910336

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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