

# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

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, UL Listed type 1 and IEC type 2, three channel with remote indicator contact for 120/240 V split phase AC, 3-wire plus ground.

## Commercial data

Item number	2910352
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL17
Product key	CL132U
GTIN	4055626444925
Weight per piece (including packing)	309 g
Weight per piece (excluding packing)	283 g
Customs tariff number	85363030
Country of origin	DE

# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

## 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-S TT
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

### 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	4.5 Nm (1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> ) 4.5 Nm (25 mm <sup>2</sup> ... 35 mm <sup>2</sup> )
Stripping length	16 mm
Conductor cross-section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross-section rigid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross-section AWG	15 ... 2

### Remote fault indicator contact

Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm

# VAL-US-120/40/2+1-FM - Surge protection device

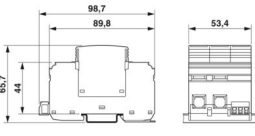


2910352

<https://www.phoenixcontact.com/us/products/2910352>

Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	53.4 mm
Height	98.7 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 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

## Mechanical properties

### Mechanical data

Open side panel	No
-----------------	----

## Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	2L-N & N-GND
Nominal voltage $U_N$	120/240 V AC (TN-S)
	120/240 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$ (L-N)	175 V AC
Maximum continuous operating voltage $U_C$ (N-PE)	264 V AC
Rated load current $I_L$	80 A
Protective conductor current $I_{PE}$	5 $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Follow current interrupt rating $I_{fi}$ (N-PE)	100 A
Short-circuit current rating $I_{SCCR}$	25 kA

Voltage protection level $U_p$ (L-N)	$\leq 0.9$ kV
Voltage protection level $U_p$ (L-PE)	$\leq 1.6$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.5$ kV
Residual voltage $U_{res}$ (L-N)	$\leq 0.9$ kV (at $I_n$ )
	$\leq 0.75$ kV (at 10 kA)
	$\leq 0.6$ kV (at 5 kA)
	$\leq 0.55$ kV (at 3 kA)
Residual voltage $U_{res}$ (L-PE)	$\leq 1.6$ kV (at $I_n$ )
	$\leq 1.2$ kV (at 10 kA)
	$\leq 1$ kV (at 5 kA)
	$\leq 0.9$ kV (at 3 kA)
Residual voltage $U_{res}$ (N-PE)	$\leq 0.4$ kV (at $I_n$ )
	$\leq 0.25$ kV (at 10 kA)
	$\leq 0.15$ kV (at 5 kA)
	$\leq 0.1$ kV (at 3 kA)
TOV behavior at $U_T$ (L-N)	208 V AC (5 s / withstand mode)
	240 V AC (120 min / safe failure mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$ (L-N)	$\leq 25$ ns
Response time $t_A$ (L-PE)	$\leq 100$ ns
Response time $t_A$ (N-PE)	$\leq 100$ ns
Max. backup fuse with V-type through wiring	80 A (gG)
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	$\leq 2000$ 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	175 V AC
Maximum continuous operating voltage MCOV (L-L)	350 V AC
Maximum continuous operating voltage MCOV (L-N)	175 V AC
Maximum continuous operating voltage MCOV (L-G)	175 V AC
Maximum continuous operating voltage MCOV (N-G)	305 V AC
Short-circuit current rating (SCCR)	200 kA
Voltage protection rating VPR (L-L)	1200 V

# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

Voltage protection rating VPR (L-N)	700 V
Voltage protection rating VPR (L-G)	1800 V
Voltage protection rating VPR (N-G)	1200 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-N L-G N-G
Nominal voltage	120/240 V AC (Split phase)
Power distribution system	Split 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 <sub>f</sub> -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
---------------	-----------------

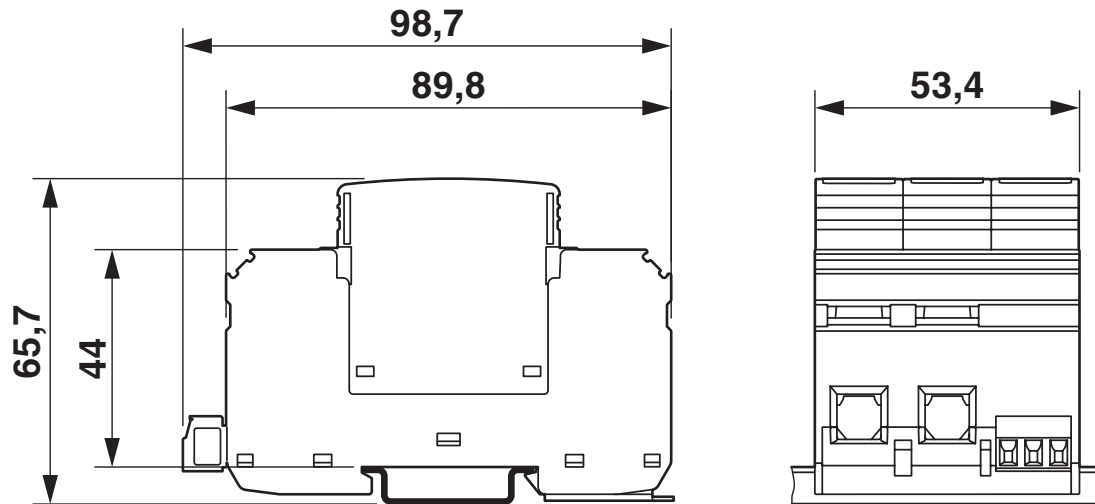
# VAL-US-120/40/2+1-FM - Surge protection device

2910352

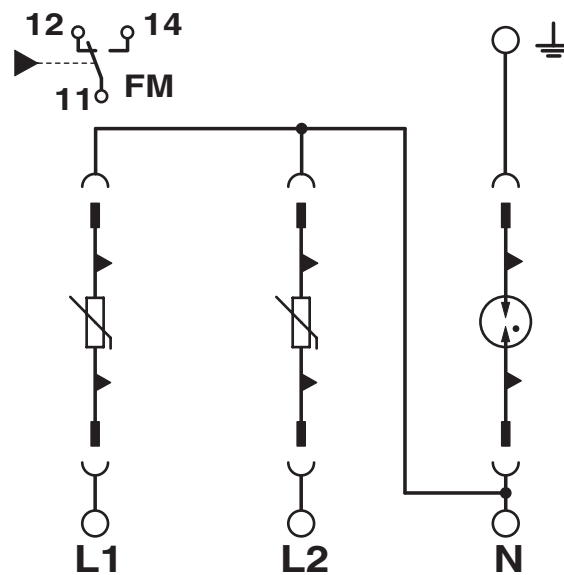
<https://www.phoenixcontact.com/us/products/2910352>

## Drawings

Dimensional drawing



Circuit diagram



# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2910352>



**UL Listed**

Approval ID: FILE E 330181



**cUL Listed**

Approval ID: FILE E 330181

# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

## Classifications

### ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

### ETIM

ETIM 10.0	EC000941
-----------	----------

### UNSPSC

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

# VAL-US-120/40/2+1-FM - Surge protection device



2910352

<https://www.phoenixcontact.com/us/products/2910352>

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - 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](mailto:info@phoenixcon.com)