

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355

<https://www.phoenixcontact.com/us/products/2910355>

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, single channel with remote indicator contact for 120 V AC

Your advantages

- With floating remote indication contact
- UL open terminal listed SPD
- Thermal disconnect device for each individual plug
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters
- Pluggable
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to new latching

Commercial data

Item number	2910355
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL17
Product key	CL115U
Catalog page	Page 92 (C-4-2019)
GTIN	4055626444956
Weight per piece (including packing)	177.3 g
Weight per piece (excluding packing)	150 g
Customs tariff number	85363030
Country of origin	DE

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355

<https://www.phoenixcontact.com/us/products/2910355>

Technical data

Product properties

Product type	Surge protection for NEMA power supply units
Product family	VALVETRAB US
IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
IEC power supply system	TN-C
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	Optical, remote indicator contact

Data management status

Article revision	04
------------------	----

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 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
Conductor cross section AWG	15 ... 2

Remote fault indicator contact

Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm

VAL-US-120/65/1+0-FM - Type 1 surge protection device

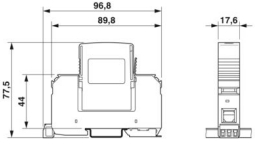


2910355

<https://www.phoenixcontact.com/us/products/2910355>

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	17.6 mm
Height	96.8 mm
Depth	77.5 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	120 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-PEN)	175 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 0.8 mA
Nominal discharge current I_n (8/20) μ s	20 kA
Maximum discharge current I_{max} (8/20) μ s	65 kA
Total discharge current I_{total} (10/350) μ s	12.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 0.8 kV
Residual voltage U_{res}	≤ 0.8 kV (at I_n) ≤ 0.75 kV (at 10 kA) ≤ 0.65 kV (at 5 kA) ≤ 0.5 kV (at 3 kA)
TOV behavior at U_T	208 V AC (5 s / withstand mode) 240 V AC (120 min / safe failure mode)

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355

<https://www.phoenixcontact.com/us/products/2910355>

Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	160 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)	30g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV	175 V AC
Short-circuit current rating (SCCR)	200 kA
Voltage protection rating VPR	700 V
UL type	type 1
Nominal discharge current I_n	20 kA
Maximum Surge Current per Phase	65 kA (acc. IEC61643-1) 80 kA (acc. NEMA LS1)
Mode of protection	L-N L-G
Nominal voltage	120 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

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355
<https://www.phoenixcontact.com/us/products/2910355>

Note	2012
------	------

Mounting

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

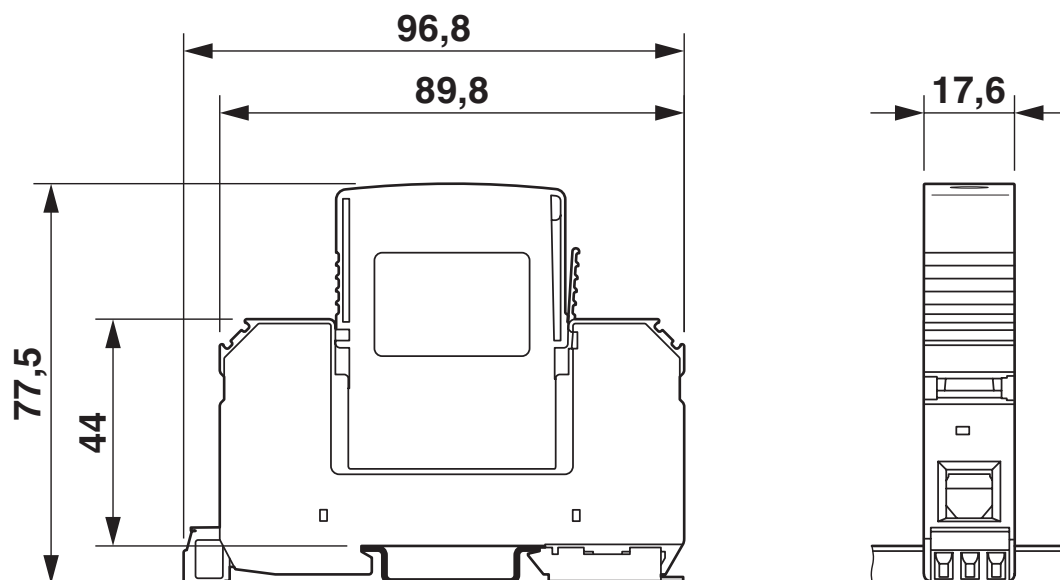
VAL-US-120/65/1+0-FM - Type 1 surge protection device

2910355

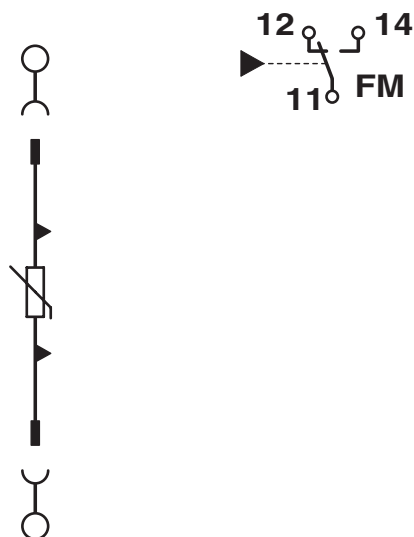
<https://www.phoenixcontact.com/us/products/2910355>

Drawings

Dimensional drawing



Circuit diagram



VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355
<https://www.phoenixcontact.com/us/products/2910355>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2910355>



UL Listed
Approval ID: FILE E 330181



cUL Listed
Approval ID: FILE E 330181

cULus Listed

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355
<https://www.phoenixcontact.com/us/products/2910355>

Classifications

ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

ETIM

ETIM 9.0	EC000941
----------	----------

UNSPSC

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

VAL-US-120/65/1+0-FM - Type 1 surge protection device



2910355
<https://www.phoenixcontact.com/us/products/2910355>

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 2024 © - 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