Type 2 surge protection device - VAL-US-120/40/2+0-FM - 2910351

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's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)

Surge protective device, two channel with remote indicator contact for 120/240 V split phase AC, 3-wire.

RoHS

Key Commercial Data

Packing unit	1 STK
GTIN	4 055626 444918
GTIN	4055626444918

Technical data

Dimensions

Height	96.8 mm
Width	35.6 mm
Depth	65.5 mm
Horizontal pitch	2 Div.

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 (above mean sea level))
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)

General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C

Type 2 surge protection device - VAL-US-120/40/2+0-FM - 2910351

Technical data

General

Mode of protection	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	2
Surge protection fault message	Optical, remote indicator contact

Protective circuit

Nominal voltage U_N	120/240 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Rated load current I_L	80 A
Residual current I_{PE}	0.45 mA
Nominal discharge current I_n (8/20) µs	20 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 0.9 kV
Residual voltage U_{res}	≤ 0.9 kV (at I_n)
	≤ 0.75 kV (at 10 kA)
	≤ 0.6 kV (at 5 kA)
	≤ 0.55 kV (at 3 kA)
TOV behavior at U_T	208 V AC (5 s / withstand mode)
	240 V AC (120 min / safe failure mode)
Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	125 A (gG)

Indicator/remote signaling

Switching function	PDT 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 method	Screw connection
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 solid	0.14 mm² ... 1.5 mm²

Type 2 surge protection device - VAL-US-120/40/2+0-FM - 2910351

Technical data

Indicator/remote signaling

Conductor cross section AWG	28 ... 16

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 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 solid	1.5 mm² ... 35 mm²
Conductor cross section AWG	15 ... 2

UL specifications

SPD Type	1
Maximum continuous operating voltage MCOV (L-L)	350 V AC
Maximum continuous operating voltage MCOV (L-G)	175 V AC
Nom. voltage	120/240 V AC (Split phase)
Mode of protection	L-L
	L-G
Power distribution system	1
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	1200 V
Voltage protection rating VPR (L-G)	700 V
Nominal discharge current I_n	20 kA
Maximum Surge Current per Phase	40 kA
Short-circuit current rating (SCCR)	200 kA

UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A AC
Tightening torque	2 lb_f-in. ... 4 lb_f-in.
Conductor cross section AWG	30 ... 14

UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb_f-in.

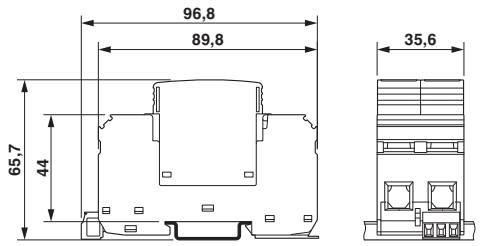
Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

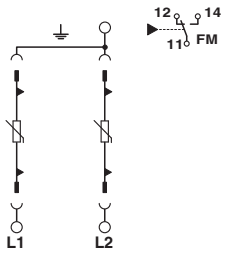
Drawings

Type 2 surge protection device - VAL-US-120/40/2+0-FM - 2910351

Dimensional drawing



Circuit diagram



Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
cULus Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
http://www.phoenixcontact.com