VAL-US-120/40-P - Type 1 surge protection plug

2910335

https://www.phoenixcontact.com/us/products/2910335

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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

Product description

Surge protective device replacement plug

Commercial data

Item number	2910335
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1321
Catalog page	Page 92 (C-4-2019)
GTIN	4055626444475
Weight per piece (including packing)	39.8 g
Weight per piece (excluding packing)	33 g
Customs tariff number	85363030
Country of origin	DE

Technical data

Notes

General	Used in:

Product properties

Product type	Replacement plug
Product family	VALVETRAB MS
IEC test classification	II
	T2
EN type	T2
Type	Male
Number of positions	1
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

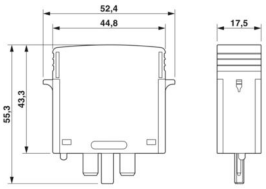
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)

Connection data

Connection method	VALVETRAB plug-in system

Dimensions

Dimensional drawing	
Width	17.5 mm
Height	52.4 mm
Depth	55.3 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-N
	L-PEN
	N-PE
Direction of action	1L-N/PE
Nominal voltage U_N	120/208 V AC
	120/240 V AC
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	175 V AC
Residual current I_{PE}	≤ 450 µA
Standby power consumption P_C	≤ 400.00 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	≤ 0.9 kV
Residual voltage U_{res}	≤ 0.8 kV (at I_n)
	≤ 0.7 kV (at 10 kA)
	≤ 0.6 kV (at 5 kA)
	≤ 0.5 kV (at 3 kA)
TOV behavior at U_T	208 V AC (5 s / withstand mode)
	229 V AC (120 min / withstand mode)
Max. backup fuse with branch wiring	100 A (gG)

Additional technical data

Maximum discharge current I_{max} (8/20) µs	40 kA

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
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	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	40 kA
Mode of protection	L-N
	L-G
	N-G
Nominal voltage	120/240 V AC
Power distribution system	Single phase
Nominal frequency	50/60 Hz
SPD Type	1CA

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

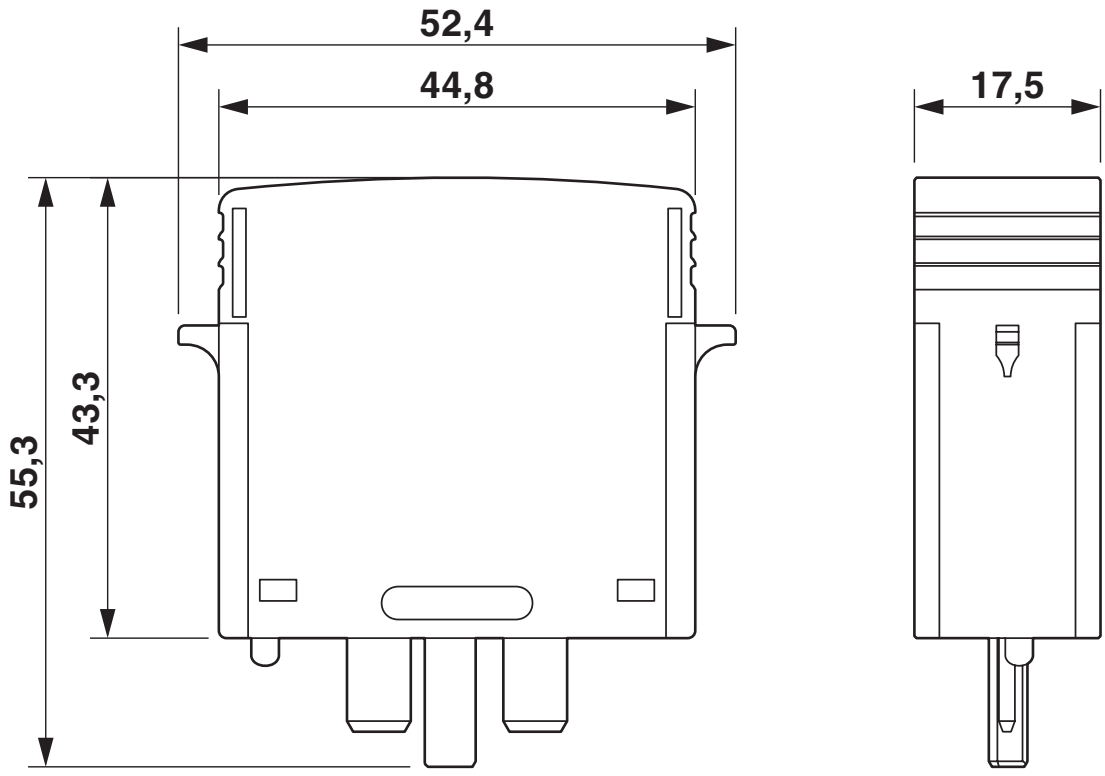
Mounting type	on base element

Drawings

Circuit diagram



Dimensional drawing



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2910335

cUL Recognized
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UL Recognized
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Classifications

ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

ETIM

ETIM 8.0	EC002496

UNSPSC

UNSPSC 21.0	39121600

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%

Accessories

VAL-US-120/40/1+0-FM - Type 1 surge protection device

2910348

https://www.phoenixcontact.com/us/products/2910348



Surge protective device, single channel with remote indicator contact for 120 V AC

VAL-US-120/40/1+1-FM - Type 1 surge protection device

2910349

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Surge protective device, two channel with remote indicator contact for 120 V AC, 2-wire plus ground.

VAL-US-120/40/2+0-FM - Type 1 surge protection device

2910351

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

VAL-US-120/40/2+1-FM - Type 1 surge protection device

2910352

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

VAL-US-120/40/3+0-FM - Type 1 surge protection device

2910353

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Surge protective device, three-channel with remote indicator contact for 120/240 V split-phase or 120/208 V Wye three-phase AC, 4-wire.

VAL-US-120/40/3+1-FM - Type 1 surge protection device

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Surge protective device, four channel with remote indicator contact for 120/208 V Wye three phase AC, 4-wire plus ground.

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VAL-US-240HLD/40/3+1-FM - Type 1 surge protection device

2910371

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Surge protective device, four channel with remote indicator contact for 240 V AC high-leg DELTA.

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