VAL-US-277/80-P - Type 1 surge protection plug

2910331

https://www.phoenixcontact.com/us/products/2910331

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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	2910331
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1151
Catalog page	Page 93 (C-4-2019)
GTIN	4055626445311
Weight per piece (including packing)	89.5 g
Weight per piece (excluding packing)	83 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

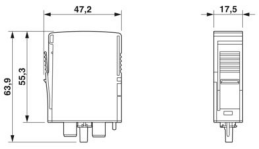
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)

Connection data

Connection method	VALVETRAB plug-in system

Dimensions

Dimensional drawing	
Width	17.5 mm
Height	47 mm
Depth	67.3 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	L-N / L-PEN
Nominal voltage U_N	240/415 V AC
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	385 V AC
Residual current I_{PE}	≤ 600 µA
Standby power consumption P_C	≤ 230.00 mVA
Nominal discharge current I_n (8/20) µs	40 kA
Maximum discharge current I_{max} (8/20) µs	80 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)
	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.15 kV (at 3 kA)
TOV behavior at U_T	480 V AC (5 s / withstand mode)
	457 V AC (120 min / withstand mode)
Max. backup fuse with branch wiring	125 A (gG)

Additional technical data

Maximum discharge current I_{max} (8/20) µs	80 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)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (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	80 kA (acc. IEC61643-1)

	100 kA (acc. NEMA LS1)
Mode of protection	L-N
	L-G
	N-G
Nominal voltage	277/480 V AC
Power distribution system	Single phase
Nominal frequency	50/60 Hz
SPD Type	1CA

Standards and regulations

Air clearances and creepage distances

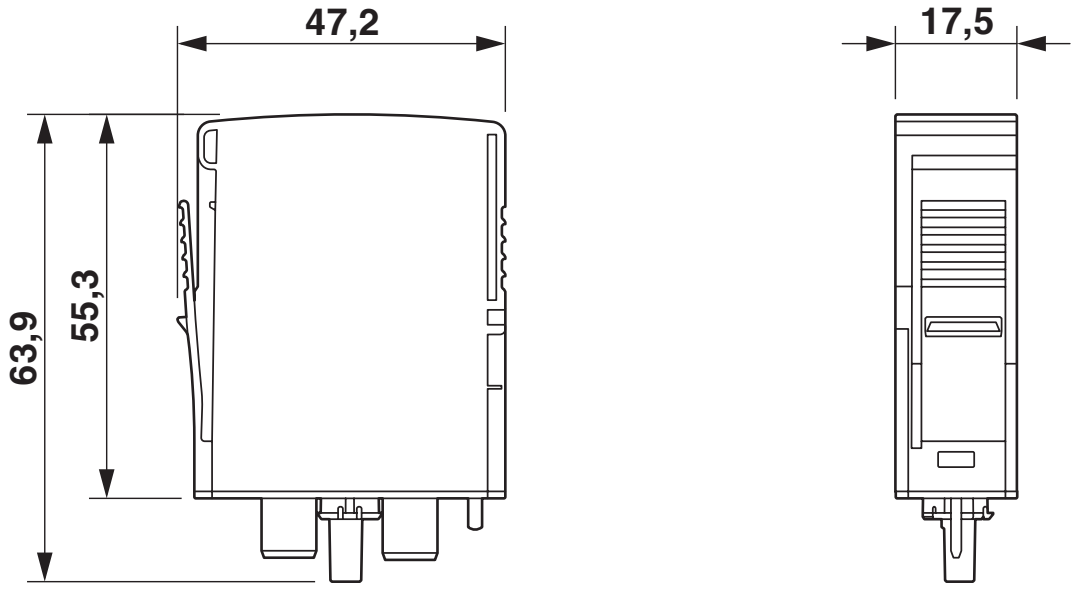
Standards/regulations	EN 60664-1 / EN 61643-11
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	on base element

Drawings

Dimensional drawing



Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2910331

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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-277/80/3+0-FM - Type 1 surge protection device

1075896

https://www.phoenixcontact.com/us/products/1075896



Surge protective device, three channel with remote indicator contact for 277/480 V AC, 4-wire.

VAL-US-277/80/1+0-FM - Type 1 surge protection device

2910377

https://www.phoenixcontact.com/us/products/2910377



Surge protective device, single channel with remote indicator contact for 277 V AC.

VAL-US-277/80/1+1V-FM - Type 1 surge protection device

2910378

https://www.phoenixcontact.com/us/products/2910378



Surge protective device, two channel with remote indicator contact for 277 V AC, 2-wire plus ground.

VAL-US-277/80/3+1V-FM - Type 1 surge protection device

2910379

https://www.phoenixcontact.com/us/products/2910379



Surge protective device, four channel with remote indicator contact for 277/480 V AC, 4-wire plus ground.

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VAL-US-277/80/4+0-FM - Type 1 surge protection device

2910380

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Surge protective device, four channel with remote indicator contact for 277/480 V AC, 4-wire plus ground.

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