

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



2910331

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

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.



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

Your advantages

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

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

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



2910331

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

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

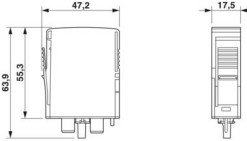
Electrical properties

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

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



2910331

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

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}	$\leq 600 \mu A$
Standby power consumption P_C	$\leq 230.00 \text{ mVA}$
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	$\leq 2 \text{ kV}$
Residual voltage U_{res}	$\leq 2 \text{ kV}$ (at I_n)
	$\leq 1.3 \text{ kV}$ (at 10 kA)
	$\leq 1.2 \text{ kV}$ (at 5 kA)
	$\leq 1.15 \text{ kV}$ (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	$\leq 2000 \text{ m}$ (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	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)

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



2910331

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

	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
---------------	-----------------

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

2910331

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

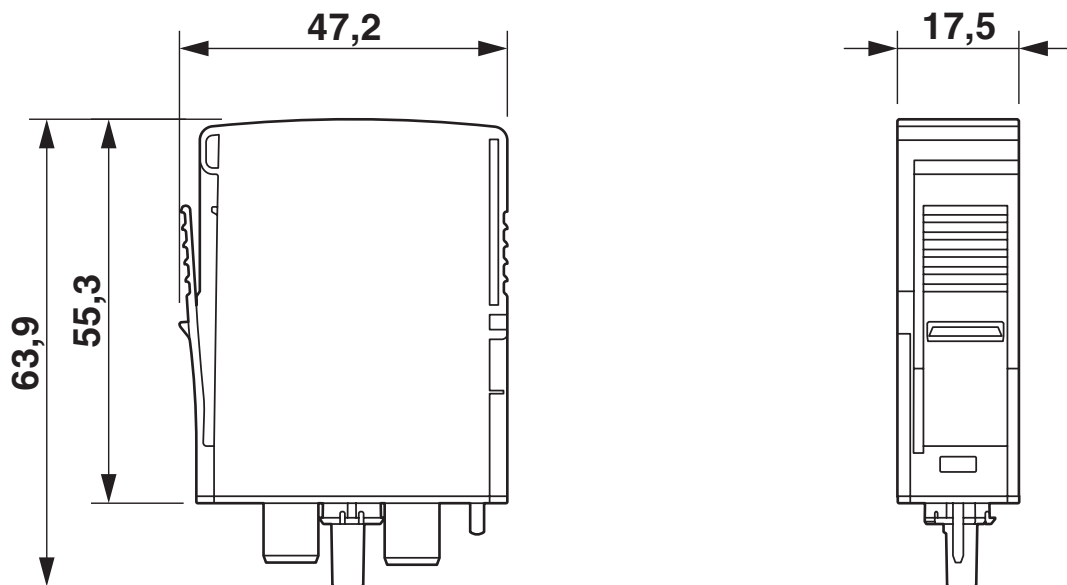


Drawings

Circuit diagram



Dimensional drawing



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



2910331

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

Approvals

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



cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181

cULus Recognized

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



2910331

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

Classifications

ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

ETIM

ETIM 8.0	EC002496
----------	----------

UNSPSC

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

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



2910331

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

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%
-------------------------------------	----------------------------

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



2910331

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

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-P - Type 1 surge protection plug

2910331

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



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.

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

2910331

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



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

2910380

<https://www.phoenixcontact.com/us/products/2910380>



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

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