

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

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 arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element with remote indication contact and protective connectors, for mounting on NS 35.

Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Wide range of applications due to various nominal voltages
- High degree of modularity provides individual solutions for every application

Commercial data

Item number	2920447
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1321
GTIN	4046356163569
Weight per piece (including packing)	388 g
Weight per piece (excluding packing)	386.1 g
Customs tariff number	85363030
Country of origin	DE

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

Technical data

Notes

General

Note	For use in all low-voltage systems between L-PEN. Only for use in IT systems between L-PE if the bodies of the equipment in the low-voltage system are connected to the grounding system of the transformer station. (common grounding of the HV transformer station and the bodies of the LV consumer's installation. $R_E = R_A$ according to IEC 60364-4-442/VDE 0100-442 Figure 44D/example a)
------	---

Product properties

Product type	Surge arrester
Product family	VALVETRAB MS
IEC test classification	II T2
EN type	T2
IEC power supply system	TN-C IT
Type	DIN rail module, two-section, divisible
Distance between live and grounded parts	5 mm
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

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	3 Nm (1.5 mm ² ... 16 mm ²) 4.5 Nm (25 mm ² ... 35 mm ²)

VAL-MS 580/3+0-FM - Type 2 surge arrester

2920447

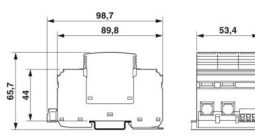
<https://www.phoenixcontact.com/us/products/2920447>

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
Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm ² ... 16 mm ²

Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
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	53.4 mm
Height	98.7 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 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-PE L-PEN
Direction of action	3L-PEN
Nominal voltage U_N	400/690 V AC (TN-C) 500 V AC (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	580 V AC

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

Rated load current I_L	80 A
Protective conductor current I_{PE}	≤ 0.75 mA
Standby power consumption P_C	≤ 450 mVA
Nominal discharge current I_n (8/20) μ s	15 kA
Maximum discharge current I_{max} (8/20) μ s	30 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 2.5 kV
Residual voltage U_{res}	≤ 2.5 kV (at I_n)
	≤ 2.3 kV (at 10 kA)
	≤ 2.1 kV (at 5 kA)
	≤ 1.9 kV (at 3 kA)
TOV behavior at U_T	690 V AC (5 s / withstand mode)
	762 V AC (120 min / withstand 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)

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)	25g (Half-sine / 11 ms / 3x \pm X, \pm Y, \pm Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV (L-L)	1160 V AC
Maximum continuous operating voltage MCOV (L-G)	580 V AC
Nominal discharge current I_n (L-L)	10 kA
Nominal discharge current I_n (L-G)	10 kA
Mode of protection	L-L
	L-G
Nominal voltage	400/690 V AC
Power distribution system	Delta
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	4270 V
Measured limiting voltage MLV (L-G)	2310 V
SPD Type	4CA

UL indicator/remote signaling

Operating voltage	125 V AC
-------------------	----------

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

AC operating current	1 A AC
----------------------	--------

UL connection data

Tightening torque	30 lb _F -in.
Conductor cross-section AWG	14 ... 2

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

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

VAL-MS 580/3+0-FM - Type 2 surge arrester

2920447

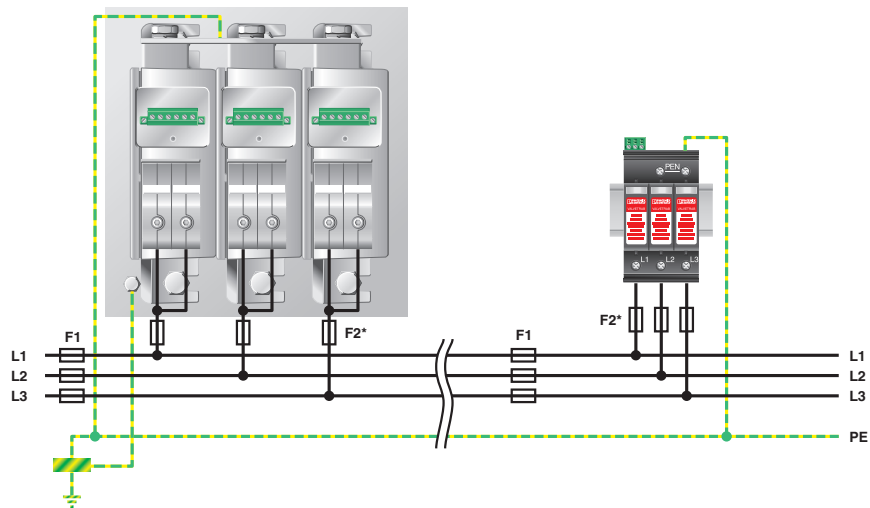
<https://www.phoenixcontact.com/us/products/2920447>

Drawings

Dimensional drawing



Application drawing



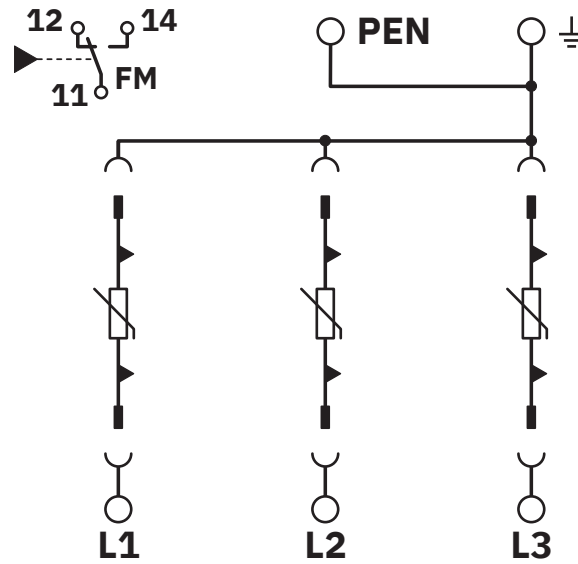
VAL-MS 580/3+0-FM - Type 2 surge arrester

2920447

<https://www.phoenixcontact.com/us/products/2920447>



Circuit diagram



VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2920447>



cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: AT 2905/M1

CCA

Approval ID: NTR-AT 1947-A



KEMA-KEUR
Approval ID: 71-148002



CSA
Approval ID: 13631



ÖVE
Approval ID: 18583-001-17

UAE-RoHS

Approval ID: 22-09-51251



ÖVE
Approval ID: 18583-001-18

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

ETIM

ETIM 10.0	EC000941
-----------	----------

UNSPSC

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

VAL-MS 580/3+0-FM - Type 2 surge arrester



2920447

<https://www.phoenixcontact.com/us/products/2920447>

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

EF3.1 Climate Change

CO2e kg	8.47 kg CO2e
---------	--------------

Phoenix Contact 2026 © - 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