

Type 2 surge arrester - VAL-MS 385/65/3+1



2920890

<https://www.phoenixcontact.com/in/products/2920890>

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.



Type 2 surge protective device for 5-conductor power supply systems (L1, L2, L3, N, PE), with plug latching.

Commercial Data

Item number	2920890
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	CL1
Product Key	CL1322
Catalog Page	Page 49 (C-6-2015)
GTIN	4046356280914
Weight per Piece (including packing)	594.9 g
Weight per Piece (excluding packing)	594.9 g
Customs tariff number	85363030
Country of origin	DE

Type 2 surge arrester - VAL-MS 385/65/3+1

2920890

<https://www.phoenixcontact.com/in/products/2920890>

Technical Data

Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TT
	TN-C
	TN-S
Type	DIN rail module, two-section, divisible
Product type	Surge arrester
Product family	VALVETRAB MS
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

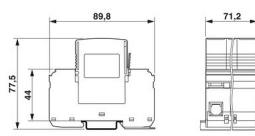
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
-------------------------	---------------

Connection data

Connection method	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)
Stripping length	16 mm
Conductor cross section flexible	1.5 mm ² ... 25 mm ²
Conductor cross section solid	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

Dimensions

Dimensional drawing	
Width	71.2 mm
Height	89.8 mm
Depth	77.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 Div.

Type 2 surge arrester - VAL-MS 385/65/3+1



2920890

<https://www.phoenixcontact.com/in/products/2920890>

Material specifications

Color	jet 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-PE
	N-PE
Direction of action	3L-N & N-PE
Nominal voltage U_N	240/415 V AC (TN-S)
	240/415 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	385 V AC
Maximum continuous operating voltage U_C (L-PE)	385 V AC
Maximum continuous operating voltage U_C (N-PE)	264 V AC
Rated load current I_L	80 A
Residual current I_{PE}	$\leq 5 \mu A$
Standby power consumption P_C	$\leq 690 \text{ mVA}$
Nominal discharge current I_n (8/20) μs (L-N)	30 kA
Nominal discharge current I_n (8/20) μs (L-PE)	30 kA
Nominal discharge current I_n (8/20) μs (N-PE)	40 kA
Maximum discharge current I_{max} (8/20) μs (L-N)	65 kA
Maximum discharge current I_{max} (8/20) μs (L-PE)	65 kA
Maximum discharge current I_{max} (8/20) μs (N-PE)	80 kA
Impulse discharge current (10/350) μs (L-N), charge	1.25 As
Impulse discharge current (10/350) μs (L-N), specific energy	1.56 kJ/ Ω
Impulse discharge current (10/350) μs (L-N), peak current value I_{imp}	2.5 kA
Impulse discharge current (10/350) μs (L-PE), charge	1.25 As
Impulse discharge current (10/350) μs (L-PE), specific energy	1.56 kJ/ Ω
Impulse discharge current (10/350) μs (L-PE), peak current value I_{imp}	2.5 kA
Impulse discharge current (10/350) μs (N-PE), charge	5 As
Impulse discharge current (10/350) μs (N-PE), specific energy	25 kJ/ Ω
Impulse discharge current (10/350) μs (N-PE), peak current value I_{imp}	10 kA
Total discharge current I_{total} (8/20) μs	80 kA
Total discharge current I_{total} (10/350) μs	10 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A

Type 2 surge arrester - VAL-MS 385/65/3+1



2920890

<https://www.phoenixcontact.com/in/products/2920890>

Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-N)	≤ 1.8 kV
Voltage protection level U_p (L-PE)	≤ 2 kV
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage U_{res} (L-N)	≤ 1.8 kV (at I_n)
	≤ 1.4 kV (at 10 kA)
	≤ 1.25 kV (at 5 kA)
	≤ 1.2 kV (at 3 kA)
Residual voltage U_{res} (L-PE)	≤ 2 kV (at I_n)
	≤ 1.5 kV (at 10 kA)
	≤ 1.4 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
Residual voltage U_{res} (N-PE)	≤ 0.6 kV (at I_n)
	≤ 0.5 kV (at 10 kA)
	≤ 0.5 kV (at 5 kA)
	≤ 0.4 kV (at 3 kA)
TOV behavior at U_T (L-N)	480 V AC (5 s / withstand mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_A (L-N)	≤ 25 ns
Response time t_A (L-PE)	≤ 100 ns
Response time t_A (N-PE)	≤ 100 ns
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm ²)
Max. backup fuse with branch wiring	250 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 (above mean sea level))
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)

Standards and regulations

Standards/specifications	IEC 61643-11
Standards/specifications	EN 61643-11

Mounting

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

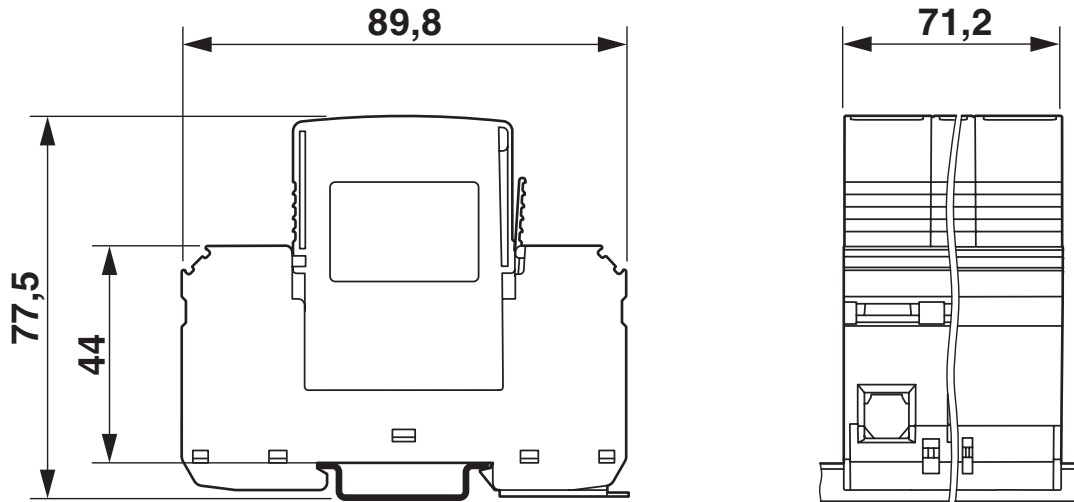
Type 2 surge arrester - VAL-MS 385/65/3+1

2920890

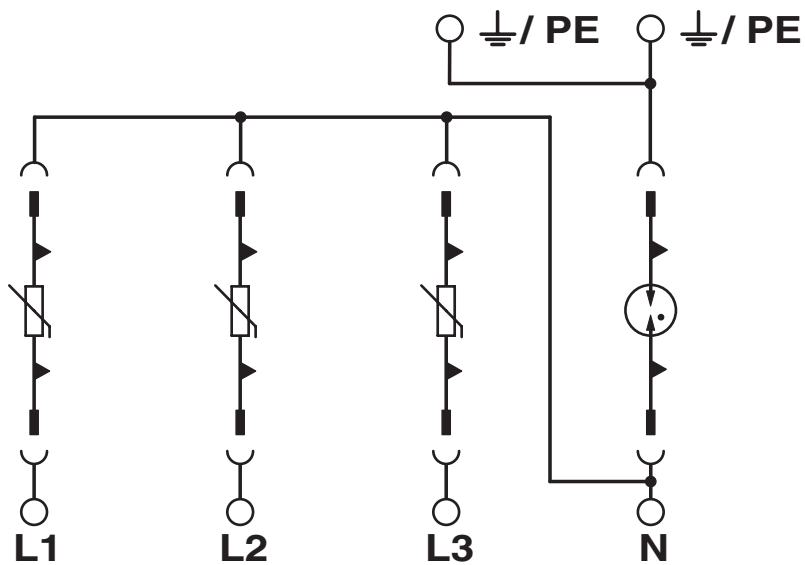
<https://www.phoenixcontact.com/in/products/2920890>

Drawings

Dimensional drawing



Circuit diagram



Type 2 surge arrester - VAL-MS 385/65/3+1



2920890

<https://www.phoenixcontact.com/in/products/2920890>

Classifications

ECLASS

ECLASS-9.0

27130805

ETIM

ETIM 7.0

EC000941

Type 2 surge arrester - VAL-MS 385/65/3+1



2920890

<https://www.phoenixcontact.com/in/products/2920890>

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Type 2 surge arrester - VAL-MS 385/65/3+1

2920890

<https://www.phoenixcontact.com/in/products/2920890>



Accessories

Type 2 surge protection plug

Type 2 surge protection plug - VAL-MS 385/65 ST - 2920308

<https://www.phoenixcontact.com/in/products/2920308>



Type 2 surge protection plug with varistor for VAL-MS 385/65/..., thermal monitoring, visual fault warning.

Type 2 surge protection plug

Type 2 surge protection plug - F-MS 80 ST - 2921307

<https://www.phoenixcontact.com/in/products/2921307>



Type 2 surge protection plug with N-PE total current spark gap.

Type 2 surge arrester - VAL-MS 385/65/3+1

2920890

<https://www.phoenixcontact.com/in/products/2920890>

Type 2 surge protection plug

Type 2 surge protection plug - VAL-MS 385/65 ST - 2920308

<https://www.phoenixcontact.com/in/products/2920308>



Type 2 surge protection plug with varistor for VAL-MS 385/65/..., thermal monitoring, visual fault warning.

Type 2 surge protection plug

Type 2 surge protection plug - F-MS 80 ST - 2921307

<https://www.phoenixcontact.com/in/products/2921307>



Type 2 surge protection plug with N-PE total current spark gap.

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.
A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420
info@phoenixcontact.co.in