

# VAL-MS 580-ST - Type 2 surge protection plug



2920434

<https://www.phoenixcontact.com/us/products/2920434>

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Type 2 surge protection plug with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 580 V AC

## 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	2920434
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL18
Product key	CL1321
Catalog page	Page 70 (C-4-2019)
GTIN	4046356163682
Weight per piece (including packing)	61.04 g
Weight per piece (excluding packing)	59.63 g
Customs tariff number	85363030
Country of origin	DE

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## 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)
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### Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN
	IT
Type	Male
Distance between live and grounded parts	5 mm
Product type	Replacement plug
Product family	VALVETRAB MS
Number of positions	1
Surge protection fault message	optical

#### Insulation characteristics

Overvoltage category	III
Pollution degree	2

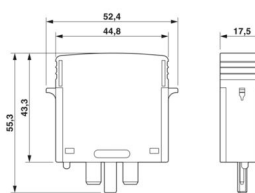
### Electrical properties

Nominal frequency $f_N$	50 Hz (60 Hz)
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### Connection data

Connection method	pluggable
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### Dimensions

Dimensional drawing	
Width	17.5 mm
Height	52.4 mm
Depth	55.3 mm

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Horizontal pitch	1 Div.
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## Material specifications

Color	black (RAL 9005)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6
Material group	I
Housing material	PA 6.6

## Protective circuit

Mode of protection	L-PE
	L-PEN
Direction of action	1L-N/PE
Nominal voltage $U_N$	400/690 V AC (TN)
	500 V AC (IT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	580 V AC
Residual current $I_{PE}$	$\leq 0.25$ mA
Standby power consumption $P_C$	$\leq 150.00$ mVA
Nominal discharge current $I_n$ (8/20) $\mu$ s	15 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	30 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	$\leq 2.5$ kV
Residual voltage $U_{res}$	$\leq 2.5$ kV (at $I_n$ )
	$\leq 2.3$ kV (at 10 kA)
	$\leq 2.1$ kV (at 5 kA)
	$\leq 1.9$ 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 $t_A$	$\leq 25$ ns
Max. backup fuse with branch wiring	125 A (gG)

## 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	$\leq 2000$ 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

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## UL specifications

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

## 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
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## Classifications

### ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

### ETIM

ETIM 9.0	EC002496
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

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

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