

## Type 2 surge protection plug - VAL-MS 75 VF ST - 2805318

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Surge protection plug type 2 with series connection consisting of varistor and gas-filled spark gap for VAL-MS base element, thermal monitoring, visual fault warning.



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	34.0 g
Custom tariff number	85363030
Country of origin	Germany

### Technical data

#### Dimensions

Height	52.4 mm
Width	17.5 mm
Depth	55.3 mm
Horizontal pitch	1 Div.

#### 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 (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g
Vibration (operation)	5g

#### General

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

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### Technical data

#### General

IEC test classification	II
	T2
EN type	T2
SPD design	Combination type
Mode of protection	L-PE
	L-L
Mounting type	On base element
Color	jet black RAL 9005
Housing material	PA 6.6
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	optical

#### Additional descriptions

Note	The values specified for the L-L protective path are only valid in connection with VAL-MS/2+0-BE/FM/S2
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#### Protective circuit

Nominal voltage $U_N$	5 V AC ... 48 V AC
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	75 V AC
Residual current $I_{PE}$	$\leq 5 \mu A$
Standby power consumption $P_C$	$\leq 1 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu s$	10 kA
Maximum discharge current $I_{max}$ (8/20) $\mu s$	20 kA
Short-circuit current rating $I_{SCCR}$	10 kA
Voltage protection level $U_p$	$\leq 1.4 \text{ kV}$
Voltage protection level $U_p$ (L-L)	$\leq 1.8 \text{ kV}$
Residual voltage $U_{res}$	$\leq 0.45 \text{ kV}$ (at $I_n$ )
	$\leq 0.35 \text{ kV}$ (at 5 kA)
	$\leq 0.3 \text{ kV}$ (at 3 kA)
Residual voltage $U_{res}$ (L-L)	$\leq 0.9 \text{ kV}$ (at $I_n$ )
	$\leq 0.7 \text{ kV}$ (at 5 kA)
	$\leq 0.6 \text{ kV}$ (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$	$\leq 1.4 \text{ kV}$
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$ (L-L)	$\leq 1.8 \text{ kV}$

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#### Protective circuit

Response time $t_A$	$\leq 100$ ns
Max. backup fuse with branch wiring	63 A (gG)

#### Connection data

Connection method	VALVETRAB plug-in system
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#### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-N)	75 V AC
Maximum continuous operating voltage MCOV (L+) - (L-)	100 V DC
Nom. voltage	48 V AC
Nominal voltage	60 V DC
Mode of protection	L-N (L+) - (L-)
Power distribution system	1
Measured limiting voltage MLV (L-N)	1760 V
Measured limiting voltage MLV (L+) - (L-)	1760 V
Nominal discharge current $I_n$ (L-N)	10 kA
Nominal discharge current $I_n$ (L+) - (L-)	10 kA

### Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805
eCl@ss 9.0	27130805

#### ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

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## Classifications

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

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#### Ex Approvals


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#### Approvals submitted


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## Approval details

UL Recognized 

cUL Recognized 

EAC

cULus Recognized 

## Drawings

## Type 2 surge protection plug - VAL-MS 75 VF ST - 2805318

Circuit diagram



Dimensional drawing

