

## Type 2 surge protection plug - VAL-MS 320 ST - 2838843

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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 320 V AC

### Product Features

- Single-channel, DIN-rail mountable protective devices
- Base element with/without floating remote indication contact
- Consists of base element and plug
- Disconnect device on each individual plug
- Optical, mechanical status indication for the individual arresters
- Mechanical coding of all slots



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	45.9 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
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## Technical data

### Ambient conditions

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 (half sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

### General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN
	TT
SPD design	Voltage-limiting type
Mode of protection	L-PEN
	L-N
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
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Surge protection fault message	optical

### Protective circuit

Nominal voltage $U_N$	240/415 V AC (TN)
	240/415 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	335 V AC
Residual current $I_{PE}$	≤ 0.45 mA
Standby power consumption $P_C$	≤ 150 mVA
Nominal discharge current $I_n$ (8/20) $\mu$ s	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Short-circuit current rating $I_{SCCR}$	25 kA

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#### Protective circuit

Voltage protection level $U_p$	$\leq 1.5$ kV
Residual voltage $U_{res}$	$\leq 1.5$ kV (at $I_n$ )
	$\leq 1.3$ kV (at 10 kA)
	$\leq 1.2$ kV (at 5 kA)
	$\leq 1.1$ kV (at 3 kA)
TOV behavior at $U_T$	415 V AC (5 s / withstand mode)
	440 V AC (120 min / safe failure mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with branch wiring	125 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)	320 V AC
Nom. voltage	320 V AC
Mode of protection	L-N
Power distribution system	1
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	2030 V
Nominal discharge current $I_n$ (L-N)	20 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

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## Classifications

### ETIM

ETIM 4.0	EC000941
ETIM 5.0	EC000941

### UNSPSC

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

## Approvals

### Approvals

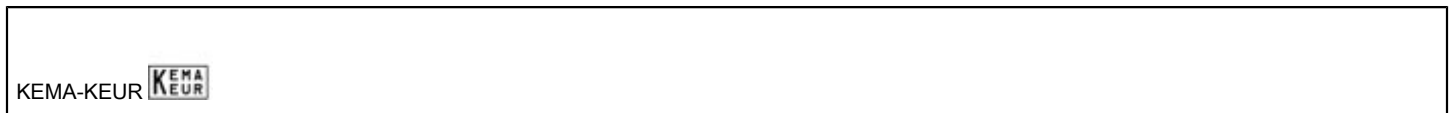
#### Approvals

KEMA-KEUR / ÖVE / CCA / IECCE CB Scheme / UL Recognized / cUL Recognized / GL / CSA / EAC / EAC / cULus Recognized

#### Ex Approvals

#### Approvals submitted

## Approval details



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## Approvals

UL Recognized

cUL Recognized

GL

CSA

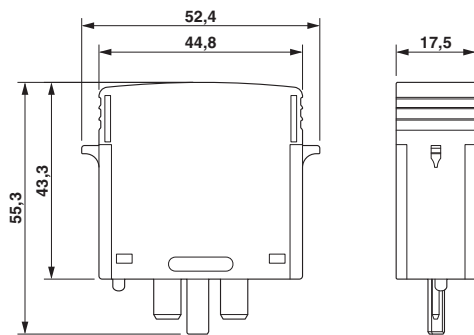
EAC

EAC

cULus Recognized

## Drawings

Dimensional drawing



Circuit diagram

