

## Type 2 surge protection plug - F-MS 12 ST - 2817990


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Surge protection plug type 2, with N-PE total current spark gap for base element.



### Key commercial data

Packing unit	10 pc
GTIN	 4 017918 163648
Weight per Piece (excluding packing)	35.56 g
Custom tariff number	85363010
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
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# Type 2 surge protection plug - F-MS 12 ST - 2817990

## Technical data

### General

	EN 61643-11 2012
IEC test classification	II
	T2
EN type	T2
SPD design	Voltage-switching type
Mode of protection	N-PE
Mounting type	On base element
Color	black
Housing material	PA 6.6
Pollution degree	2
Inflammability class 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 - only N-PE)
	240/415 V AC (TT - only N-PE)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$	260 V AC
Residual current $I_{PE}$	$\leq 5 \mu A$
Standby power consumption $P_C$	$\leq 1.5 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu s$	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu s$	40 kA
Follow current interrupt rating $I_{fi}$	100 A (260 V)
Voltage protection level $U_p$	$\leq 1.5 \text{ kV}$
Residual voltage $U_{res}$	$\leq 0.4 \text{ kV}$ (at $I_n$ )
	$\leq 0.25 \text{ kV}$ (at 10 kA)
	$\leq 0.15 \text{ kV}$ (at 5 kA)
	$\leq 0.1 \text{ kV}$ (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$	$\leq 1.5 \text{ kV}$
TOV behavior at $U_T$	1200 V AC (200 ms / withstand mode)
Response time $t_A$	$\leq 100 \text{ ns}$

### Connection data

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

UL class	Type 4 SPD for Type 2 applications
Maximum continuous operating voltage MCOV (N-G)	260 V AC
Mode of protection	N-G

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## Technical data

### UL specifications

Power distribution system	1
Voltage protection rating VPR (N-G)	1 kV
Nominal discharge current I <sub>n</sub> (N-G)	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

### ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
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

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#### Approvals

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

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#### Ex Approvals

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#### Approvals submitted

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## Approvals

### Approval details

ÖVE

IECEE CB Scheme

UL Recognized

KEMA-KEUR

cUL Recognized

GL

CCA

ÖVE

CSA

EAC

cULus Recognized

## Accessories

Accessories

Device marking

## Type 2 surge protection plug - F-MS 12 ST - 2817990

### Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

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### Labeled device marker

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589



Marker for terminal blocks, Strip, white, labeled, Horizontal: Grounding symbol, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576



Marker for terminal blocks, Strip, white, labeled, Horizontal: L1, L2, L3, N, GND, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

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### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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### Additional products

Type 2 surge protection device - F-MS 12/FM - 2817974



Surge arrester type 2, consisting of base element with remote indicator contact and protective plug with N-PE total current spark gap for mounting on NS 35/7.5, housing width: 17.5 mm (1 Div.)

## Type 2 surge protection plug - F-MS 12 ST - 2817990

### Accessories

Type 2 surge protection device - F-MS 12 - 2817987



Surge arrester type 2, consisting of base element and protective plug with N-PE total current spark gap for mounting on NS 35/7.5, housing width: 17.5 mm (1 Div.)

Type 2 surge protection base element - VAL-MS BE/FM - 2817738



Base element for type 2 arresters of the VALVETRAB MS series of products, with remote indication contact. Design: 1-channel

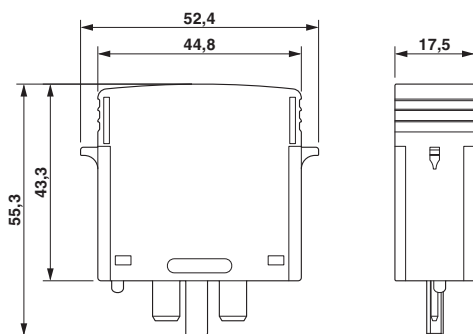
Type 2 surge protection base element - VAL-MS BE - 2817741



Base element for type 2 arresters of the VALVETRAB MS series of products. Design: 1-channel

### Drawings

Dimensioned drawing



Circuit diagram

