


## 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	52.5 mm
Width	17.7 mm
Depth	55.5 mm
Horizontal pitch	1 Div.

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 %

#### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	EN 60664-1
	EN 61643-11

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## Technical data

### General

Surge voltage category	III
Pollution degree	2
Mounting type	On base element
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
Direction of action	N-PE

### Protective circuit

IEC test classification	II
	T2
EN type	T2
Nominal voltage $U_N$	230 V AC
Nominal DC sparkover voltage $U_{agn}$	500 V $\pm$ 20 %
Maximum continuous operating voltage $U_C$	260 V AC
Maximum continuous operating voltage $U_C$ (N-PE)	260 V AC
$U_T$ (TOV-proof)	1200 V AC (200 ms / N-PE)
Nominal frequency $f_N$	50 Hz
	60 Hz
Residual current $I_{PE}$	$\leq 1 \mu A$
Standby power consumption $P_C$	0.3 mVA
Max. discharge current $I_{max}$ (8/20) $\mu s$	40 kA
Max. discharge current $I_{max}$ (8/20) $\mu s$ maximum (N-PE)	40 kA
Nominal discharge current $I_n$ (8/20) $\mu s$	20 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (N-PE)	20 kA
Impulse discharge current (10/350) $\mu s$ , charge	6 As
Impulse discharge current (10/350) $\mu s$ , peak value $I_{imp}$	12 kA
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$ (N-PE)	$\leq 1.5$ kV
Insulation resistance $R_{iso}$	$> 1$ G $\Omega$
Voltage protection level $U_p$	$\leq 1.5$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.5$ kV
Residual voltage	$\leq 150$ V (at 5 kA)
Residual voltage (N-PE)	$\leq 150$ V (at 5 kA)
	$\leq 400$ V
	$\leq 250$ V (at 10 kA)
	$\leq 100$ V (at 3 kA)
Response time	$\leq 100$ ns
Response time (N-PE)	$\leq 100$ ns
Follow current quenching capacity $I_f$ (N-PE)	100 A (260 V)

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## Technical data

### Connection, protective circuit

Connection type IN	FLASHTRAB/VALVETRAB plug-in system
Connection type OUT	FLASHTRAB/VALVETRAB plug-in system

### Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11/A11 2007

## 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 / GOST / GL / CCA / ÖVE / KEMA-KEUR / CSA / cULus Recognized

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#### Ex Approvals

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## Approvals

Approvals submitted


### Approval details

ÖVE 

IECEE CB Scheme 

UL Recognized 

KEMA-KEUR 

cUL Recognized 

GOST 

GL

CCA


ÖVE 

KEMA-KEUR 

CSA

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

### Approvals

cULus Recognized 

### Accessories

#### Accessories

#### Device marking

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

#### 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

#### 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

#### Additional products

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

### Accessories

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.)

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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.)

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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

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



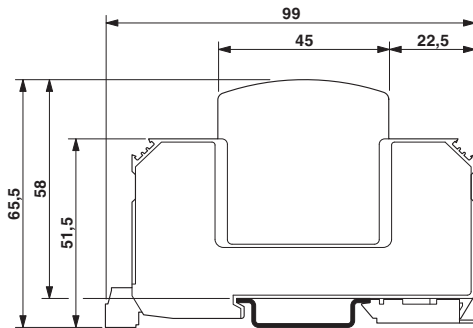
Base element for type 2 arresters of the VALVETRAB MS series of products. Design: 1-channel

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### Drawings

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

Dimensioned drawing



Circuit diagram

