

## Type 2 surge protection plug - F-MS 12-UD ST - 2858328

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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	
Weight per Piece (excluding packing)	35.38 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)	25 g
Vibration (operation)	5 g

#### General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	II

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## Technical data

### General

	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
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)
Nominal frequency $f_N$	50 Hz (60 Hz)
Nominal DC sparkover voltage $U_{agn}$	500 V $\pm$ 20 %
Maximum continuous operating voltage $U_C$	260 V AC
Residual current $I_{PE}$	$\leq 5 \mu A$
Standby power consumption $P_C$	$\leq 1.5$ 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 $U_p$	$\leq 1.5$ kV
Residual voltage $U_{res}$	$\leq 0.4$ kV (at $I_n$ )
	$\leq 0.25$ kV (at 10 kA)
	$\leq 0.15$ kV (at 5 kA)
	$\leq 0.1$ kV (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$	$\leq 1.5$ kV
TOV behavior at $U_T$	1200 V AC (200 ms / withstand mode)
Response time $t_A$	$\leq 100$ ns

### NEMA/UL protective circuit

UL class	Type 4 SPD for Type 2 applications
Maximum continuous operating voltage MCOV (N-G)	260 V AC
Mode of protection	N-G
Power distribution system	1
Voltage protection rating VPR (N-G)	1 kV
Nominal discharge current $I_n$ (N-G)	20 kA

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## 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

### 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

UL Recognized / KEMA-KEUR / cUL Recognized / GOST / GL / KEMA-KEUR / CSA / cULus Recognized

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#### Ex Approvals

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#### Approvals submitted

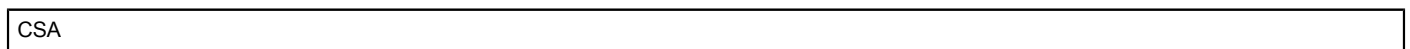
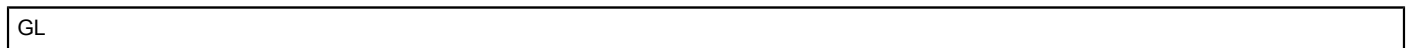
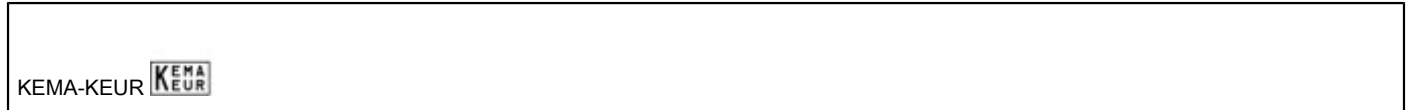
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#### Approval details

UL Recognized
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## Approvals



## 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

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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### Accessories

#### 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

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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 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

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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



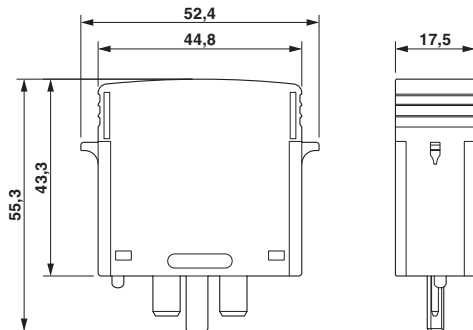
Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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### Drawings

## Type 2 surge protection plug - F-MS 12-UD ST - 2858328

Dimensioned drawing



Circuit diagram



1 = Remote indicator contact  
2 = base element