

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

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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.)

### Why buy this product

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



### Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 38 (TT-2011)
GTIN	 4 017918 163655
Custom tariff number	85363010
Country of origin	GERMANY

### Technical data

#### Standards

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	EN 60664-1
Standards for air and creepage distances	EN 61643-11
Degree of protection	IP20
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	1
Ambient temperature (operation)	-40 °C ... 80 °C

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### Technical data

#### Standards

Message: Surge protection fault	Optical, remote indicator contact
Direction of action	N-PE
Width	17.7 mm
Height	96.8 mm
Depth	65.5 mm
Pitch unit	1 Div.

#### Protective circuit

IEC category	II
IEC category	T2
EN type	T2
Nominal voltage UN	230 V AC
Nominal DC sparkover voltage Uagn	500 V ±20 %
Arrester rated voltage UC	260 V AC
Arrester rated voltage UC (N-PE)	260 V AC
UT (TOV-proof)	1200 V AC (200 ms / N-PE)
Nominal frequency fN	50 Hz
Nominal frequency fN	60 Hz
Ground conductor current IPE	≤ 1 µA
Standby power consumption PC	0.3 mVA
Max. discharge surge current I <sub>max</sub> (8/20) µs	40 kA
Max. discharge surge current I <sub>max</sub> (8/20) µs maximum (N-PE)	40 kA
Nominal discharge surge current I <sub>n</sub> (8/20) µs	20 kA
Nominal discharge surge current I <sub>n</sub> (8/20) µs (N-PE)	20 kA
Lightning test current (10/350) µs, charge	6 As
Lightning test current (10/350) µs, peak value limp	12 kA
Impulse operate voltage at 6 kV (1.2/50)µs (N-PE)	≤ 1.5 kV
Insulation resistance Riso:	> 1 GΩ
Protection level Up	≤ 1.5 kV
Protection level UP (N-PE)	≤ 1.5 kV
Residual voltage	≤ 150 V (at 5 kA)
Residual voltage (N-PE)	≤ 150 V (at 5 kA)
Residual voltage (N-PE)	≤ 400 V
Residual voltage (N-PE)	≤ 250 V (at 10 kA)
Residual voltage (N-PE)	≤ 100 V (at 3 kA)
Response time	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Follow current quenching capacity I <sub>f</sub> (N-PE)	100 A (260 V)

#### Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Screw thread	M5

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### Technical data

#### Connection, protective circuit

Tightening torque	4.5 Nm
Stripping length	14.5 mm
Conductor cross section stranded min.	0.5 mm <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	2

#### Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT contact
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max</sub> AC	250 V AC
Maximum operating voltage U <sub>max</sub> DC	125 V DC
Max. operating current I <sub>max</sub>	1 A AC (inductive)
Max. operating current I <sub>max</sub>	1 A AC (ohmic)
Max. operating current I <sub>max</sub>	30 mA DC (inductive)
Max. operating current I <sub>max</sub>	200 mA DC (ohmic)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

#### Standards

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

### Classifications

#### eClass

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

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## Classifications

### etim

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	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

IECEE CB Scheme / UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / GOST / GL / CCA / cULus Recognized

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

IECEE CB Scheme


UL Recognized

KEMA-KEUR

ÖVE

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### Approvals

cUL Recognized 

GOST 

GL

CCA

cULus Recognized 

### Accessories

#### Accessories

#### Assembly

Wiring bridge end cover - MPB 18/4-D - 2809335



End cover for lateral connection of wiring bridges, 4-phase

Wiring bridge end cover - MPB 18/3- D - 2809322

End cover for lateral connection of wiring bridges, 3-phase

### Bridges

Wiring bridge - MPB F600X16/ 1GS - 2818355



Wiring bridge flexible, diameter: 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 600 mm

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### Accessories

Wiring bridge - MPB F400X16/ 1GS - 2818342



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 400 mm

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Wiring bridge - MPB F200X16/ 1GS - 2818339



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 200 mm

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Wiring bridge - MPB 18/1-20/1.2.5 - 2830168



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 20 pitches with contact sequence 1-2-0-0-5

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Wiring bridge - MPB 18/4-12 - 2809296



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

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Wiring bridge - MPB 18/4- 8 - 2809283



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

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Wiring bridge - MPB 18/3- 6 - 2809241



Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.

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### Accessories

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Wiring bridge - MPB 18/1-57 - 2809238



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

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Wiring bridge - MPB 18/1-12 - 2748593



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

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Wiring bridge - MPB 18/1- 9 - 2748580



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

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Wiring bridge - MPB 18/1- 8 - 2748577



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

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Wiring bridge - MPB 18/1- 6 - 2748564



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

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

### Accessories

Wiring bridge - MPB 18/1- 4 - 2809225



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

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Wiring bridge - MPB 18/1- 3 - 2809212



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

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Wiring bridge - MPB 18/1- 2 - 2809209



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.

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### Marking

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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Zack marker strip - ZBN 18,LGS:ERDE - 2749589



Zack marker strip, 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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## Type 2 surge protection device - F-MS 12/FM - 2817974

### Accessories

Zack marker strip - ZBN 18,LGS:L1-N,ERDE - 2749576



Zack marker strip, 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

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

Type 2 surge protection connector - F-MS 12 ST - 2817990



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

Wiring bridge - MPB 18/1-10/1.0.0 - 2830443

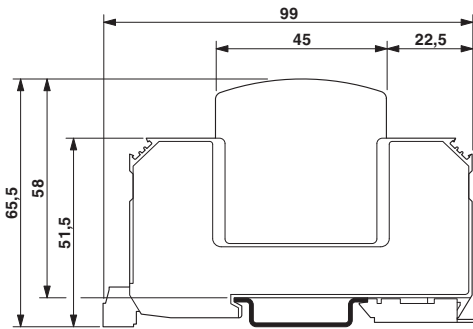


Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

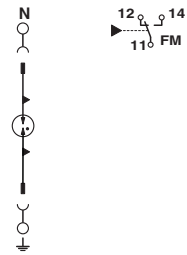
### Drawings

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

Dimensioned drawing



Circuit diagram



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