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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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## 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 $\pm 20$ %
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	$\leq 1 \mu\text{A}$
Standby power consumption PC	0.3 mVA
Max. discharge surge current I <sub>max</sub> (8/20) $\mu\text{s}$	40 kA
Max. discharge surge current I <sub>max</sub> (8/20) $\mu\text{s}$ maximum (N-PE)	40 kA
Nominal discharge surge current I <sub>n</sub> (8/20) $\mu\text{s}$	20 kA
Nominal discharge surge current I <sub>n</sub> (8/20) $\mu\text{s}$ (N-PE)	20 kA
Lightning test current (10/350) $\mu\text{s}$ , charge	6 As
Lightning test current (10/350) $\mu\text{s}$ , peak value I <sub>imp</sub>	12 kA
Impulse operate voltage at 6 kV (1.2/50) $\mu\text{s}$ (N-PE)	$\leq 1.5 \text{ kV}$
Insulation resistance R <sub>iso</sub> :	$> 1 \text{ G}\Omega$
Protection level U <sub>p</sub>	$\leq 1.5 \text{ kV}$
Protection level U <sub>P</sub> (N-PE)	$\leq 1.5 \text{ kV}$
Residual voltage	$\leq 150 \text{ V}$ (at 5 kA)
Residual voltage (N-PE)	$\leq 150 \text{ V}$ (at 5 kA)
Residual voltage (N-PE)	$\leq 400 \text{ V}$
Residual voltage (N-PE)	$\leq 250 \text{ V}$ (at 10 kA)
Residual voltage (N-PE)	$\leq 100 \text{ V}$ (at 3 kA)
Response time	$\leq 100 \text{ ns}$
Response time (N-PE)	$\leq 100 \text{ ns}$
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

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

#### Ex Approvals

#### Approvals submitted

#### Approval details

IECEE CB Scheme


UL Recognized 

KEMA-KEUR 

ÖVE 

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


### 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

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

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

Wiring bridge - MPB 18/4-12 - 2809296



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

Wiring bridge - MPB 18/4- 8 - 2809283



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

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.

Wiring bridge - MPB 18/1- 3 - 2809212



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

Wiring bridge - MPB 18/1- 2 - 2809209



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

### Marking

Marker pen - B-STIFT - 1051993



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

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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### 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

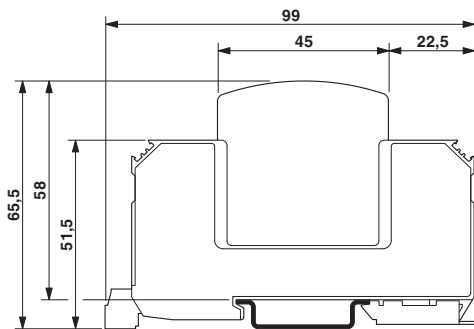


Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

### Drawings

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Dimensioned drawing



Circuit diagram

