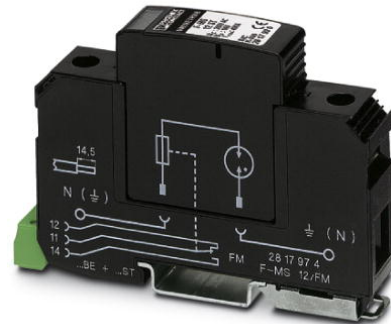


F-MS 12/FM


Order No.: 2817974



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=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.)



Commercial data	
GTIN (EAN)	 4 017918 163655
sales group	J022
Pack	1 pcs.
Customs tariff	85363010
Catalog page information	Page 32 (TT-2009)

Product notes

WEEE/RoHS-compliant since:
01/31/2006



<http://www.download.phoenixcontact.com>
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Standards	
Housing material	PA
Inflammability class acc. to UL 94	V0
Color	black

Standards for air and creepage distances	EN 60664-1
	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
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	N-PE
Width	17.70 mm
Height	65.50 mm
Length	96.80 mm
Pitch unit	1 Div.

Protective circuit

IEC category	II
	T2
EN type	T2
Nominal voltage U_N	230 V AC
Nominal DC sparkover voltage U_{agn}	500 V \pm 20 %
Arrester rated voltage U_C	260 V AC
Arrester rated 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
Ground conductor current I_{PE}	$\leq 1 \mu A$
Standby power consumption P_C	0.3 mVA
Max. discharge surge current I_{max} (8/20) μs	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (N-PE)	40 kA
Nominal discharge surge current I_n (8/20) μs	20 kA
Nominal discharge surge current I_n (8/20) μs (N-PE)	20 kA
Lightning test current (10/350) μs , charge	6 As
Lightning test current (10/350) μs , peak value I_{imp}	12 kA
Impulse operate voltage at 6 kV (1.2/50) μs (N-PE)	≤ 1.5 kV

Insulation resistance R_{iso} :	> 1 G Ω
Protection level U_p	≤ 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)
	≤ 400 V
	≤ 250 V (at 10 kA)
	≤ 100 V (at 3 kA)
Response time	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Follow current quenching capacity I_f (N-PE)	100 A (260 V)

Connection, protective circuit

Type of connection	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	14.5 mm
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	35 mm ²
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
Type of connection	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²

Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U _{max.} AC	250 V AC
Maximum operating voltage U _{max.} DC	125 V DC
Max. operating current I _{max}	1 A AC (inductive)
	1 A AC (ohmic)
	30 mA DC (inductive)
	200 mA DC (ohmic)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

Environmental conditions

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

Certificates / Approvals

Certification

CB, CCA, CUL, GL, GOST, KEMA, OEVE, UL

Accessories

Item	Designation	Description
Assembly		
2809322	MPB 18/3- D	End cover for lateral connection of wiring bridges, 3-phase
2809335	MPB 18/4-D	End cover for lateral connection of wiring bridges, 4-phase
Bridges		
2809209	MPB 18/1- 2	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.
2809212	MPB 18/1- 3	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.
2809225	MPB 18/1- 4	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

2748564	MPB 18/1- 6	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.
2748577	MPB 18/1- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.
2748580	MPB 18/1- 9	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.
2748593	MPB 18/1-12	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.
2830168	MPB 18/1-20/1.2.5	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 20 pitches with contact sequence 1-2-0-0-5
2809238	MPB 18/1-57	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.
2809241	MPB 18/3- 6	Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.
2809283	MPB 18/4- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.
2809296	MPB 18/4-12	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.
2818339	MPB F200X16/ 1GS	Wiring bridge flexible, diameter 16 mm ² , with a fork-type cable lug on one side, length: 200 mm
2818342	MPB F400X16/ 1GS	Wiring bridge flexible, diameter 16 mm ² , with a fork-type cable lug on one side, length: 400 mm
2818355	MPB F600X16/ 1GS	Wiring bridge flexible, diameter: 16 mm ² , with a fork-type cable lug on one side, length: 600 mm

General

2817990	F-MS 12 ST	Surge protection plug type 2, with N-PE total current spark gap for base element.
2830443	MPB 18/1-10/1.0.0	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

Marking

1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White
2749576	ZBN 18,LGS:L1-N,ERDE	Marker labels, printed horizontally, strips with 5 labels, L1, L2, L3, N, GND, color: white
2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White

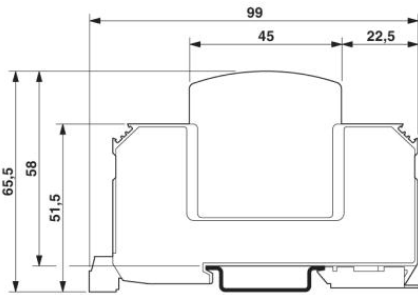
Tools

1206641	CUTFOX 50	One-hand cable cutter to cut MPB wiring bridges to length
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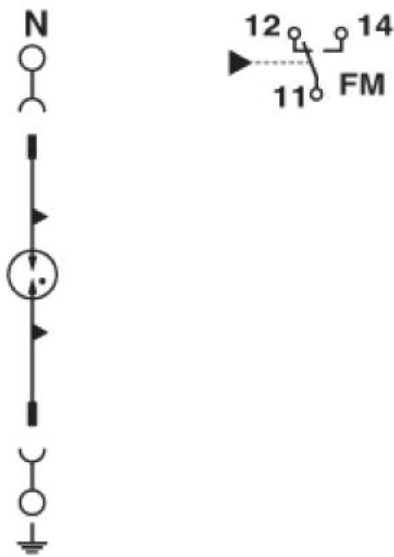
1204753	CUTFOX EB	Power front cutters, for removing individual contacts from insertion bridges.
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Diagrams/Drawings

Dimensioned drawing



Circuit diagram



Address

PHOENIX CONTACT Deutschland GmbH
Flachsmarktstr. 8
32825 Blomberg, Germany
Phone +49 5235 3 12000
Fax +49 5235 3 41200
<http://www.phoenixcontact.de>



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