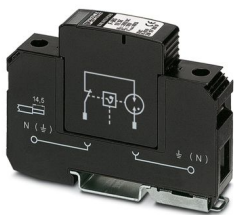


F-MS 12 - Type 2 surge arrester



2817987
<https://www.phoenixcontact.com/us/products/2817987>

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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.)

Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Wide range of applications due to various nominal voltages
- High degree of modularity provides individual solutions for every application

Commercial data

Item number	2817987
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1321
Catalog page	Page 55 (C-4-2017)
GTIN	4017918163662
Weight per piece (including packing)	128.7 g
Weight per piece (excluding packing)	106.1 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN
	TT
Type	DIN rail module, two-section, divisible
Product type	Surge arrester
Product family	VALVETRAB MS
Number of positions	1
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1.5 mm² ... 16 mm²)
	4.5 Nm (25 mm² ... 35 mm²)
Stripping length	16 mm
Conductor cross section flexible	1.5 mm² ... 25 mm²
Conductor cross section rigid	1.5 mm² ... 35 mm²
Conductor cross section AWG	15 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 16 mm²

Dimensions

Dimensional drawing	
Width	17.6 mm
Height	89.8 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

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Material specifications

Color	black (RAL 9005)
	Copper
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6/PBT
Material group	I
Housing material	PA 6.6
	PBT

Protective circuit

Mode of protection	N-PE
Direction of action	N-PE
Nominal voltage U_N	240/415 V AC (TN - only N-PE)
	240/415 V AC (TT - only N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	260 V AC
Rated load current I_L	80 A
Residual current I_{PE}	$\leq 5 \mu A$
Standby power consumption P_C	$\leq 1.50 \text{ mVA}$
Nominal discharge current I_n (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Follow current interrupt rating I_{fi}	100 A
Voltage protection level U_p	$\leq 1.5 \text{ kV}$
Residual voltage U_{res}	$\leq 0.4 \text{ kV}$ (at I_n)
	$\leq 0.25 \text{ kV}$ (at 10 kA)
	$\leq 0.15 \text{ kV}$ (at 5 kA)
	$\leq 0.1 \text{ kV}$ (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) μs	$\leq 1.5 \text{ kV}$
TOV behavior at U_T	1200 V AC (200 ms / withstand mode)
Response time t_A	$\leq 100 \text{ ns}$
Max. backup fuse with V-type through wiring	80 A (gG)

Additional technical data

Maximum continuous voltage U_C	305 V AC
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %

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Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV (N-G)	260 V AC
Nominal discharge current I_n (N-G)	20 kA
Mode of protection	N-G
Power distribution system	Single phase
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (N-G)	1490 V
SPD Type	4CA

UL connection data

Tightening torque	30 lb _f -in.
Conductor cross section AWG	14 ... 2

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	DIN rail: 35 mm
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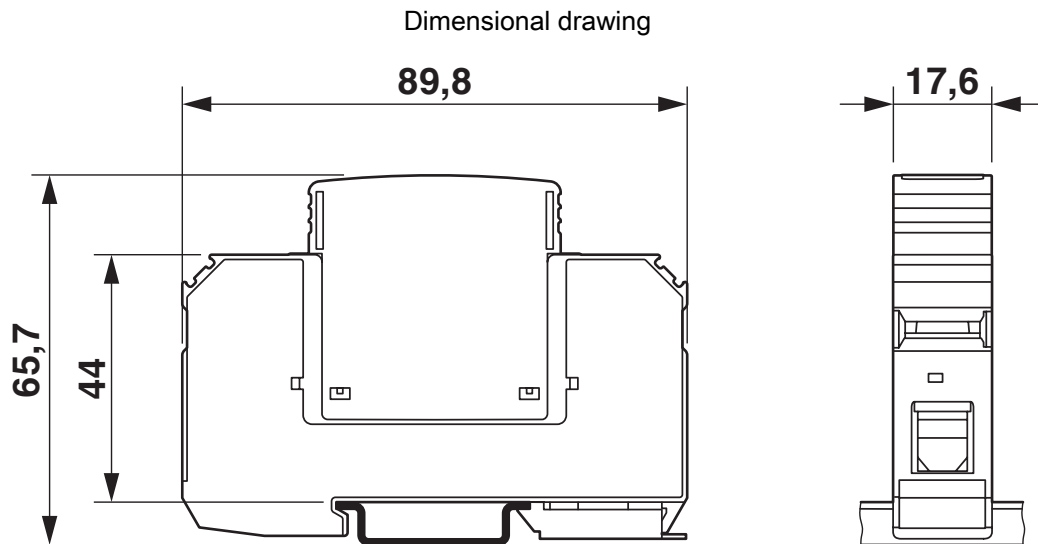
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Drawings



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Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2817987>



cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: AT 2905/M1



EAC
Approval ID: RU C-DE.*09.B.00169

CCA

Approval ID: NTR-AT 1947-A



KEMA-KEUR
Approval ID: 71-113273 REV.1



DNV GL
Approval ID: TAE000041M



CSA
Approval ID: 13631



ÖVE
Approval ID: 18583-001-17

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

ETIM

ETIM 9.0	EC000941
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com