

2859987

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Device protection, according to type 3/class III, with mains interference filter to prevent high-frequency interference voltages, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE), with remote indication contact.

Product description

Device protection with interference filter

Your advantages

- Optimized protective effect with combined protective circuit for absorbing transient overvoltages for attenuating high-frequency interference
- Symmetrical design of the protective circuit with surge protection components on the input and output sides of the filter
- Protection against excessive heating with thermal monitoring of the protective circuit
- Versatile in use with universal circuit design

Commercial data

Item number	2859987
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL06
Product key	CLC131
Catalog page	Page 208 (C-4-2019)
GTIN	4046356098175
Weight per piece (including packing)	616.3 g
Weight per piece (excluding packing)	616 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Product properties

Type	DIN rail module, one-piece
Product type	EMC filters
Product family	SFP
Number of positions	2
For country-specific use in	D, A, I, NL, S, E, FIN, P
Surge protection fault message	Optical, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	2
IEC test classification	III
	T3
EN type	T3
Number of ports	Two

Electrical properties

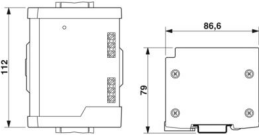
Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	12 V AC ... 250 V AC
	250 V DC (250 mA DC)
Operating current	100 mA AC ... 1 A AC
	1 A DC (48 V DC)

Connection data

Connection method	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
	4.5 lb _F -in. ... 5.5 lb _F -in.
Conductor cross section flexible	2.5 mm² ... 4 mm²
Conductor cross section rigid	2.5 mm² ... 6 mm²
Conductor cross section AWG	14 ... 10

Dimensions

Dimensional drawing	
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SFP 1-20/230AC - EMC filter surge protection device



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Width	112 mm
Height	86.6 mm
Depth	79 mm

Material specifications

Color	black (RAL 9005)
	Silver
Flammability rating according to UL 94	V-0
Insulating material	ABS
Housing material	Aluminum

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	L-N & L(N)-PE
Nominal voltage U_N	240 V AC (TN)
	240 V AC (TT - only in use with RCD)
	240 V AC (IT - only in use with RCD)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	264 V AC
Rated load current I_L	20 A (40 °C)
Residual current I_{PE}	≤ 0.6 mA
Standby power consumption P_C	≤ 25.00 VA (at U_{REF})
	≤ 27.50 VA (at U_C)
Reference test voltage U_{REF}	264.00 V AC
Nominal discharge current I_n (8/20) μ s	5 kA
Combination wave U_{OC}	10 kV (5 kA)
Voltage protection level U_p	≤ 1 kV
TOV behavior at U_T (L-N)	350 V AC (5 s / withstand mode)
	457 V AC (120 min / safe failure mode)
TOV behavior at U_T (L-PE)	457 V AC (5 s / withstand mode)
	350 V AC (120 min / withstand mode)
	1464 V AC (200 ms / safe failure mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / safe failure mode)
Response time t_A	≤ 25 ns
Capacity (L-N)	1 μ F ± 10 %
	10 nF ± 10 % (X2-275 V)
Capacity (L-PE)	2.2 nF ± 20 % (Y2-250 V)
Capacity (N-PE)	2.2 nF ± 20 % (Y2-250 V)

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Max. required back-up fuse	20 A (MCB B/general purpose)
	16 A (IT - MCB B/general purpose)
Input attenuation aE, sym.	20 dB (≥ 100 kHz / 50 Ω)
Input attenuation aE, asym.	30 dB (≥ 1 MHz / 50 Ω)
Short-circuit current rating I_{SCCR}	5 kA AC (TN/TT)
	1 kA AC (IT)

Filter data

Discharge resistance	820 k Ω
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-1
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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SFP 1-20/230AC - EMC filter surge protection device

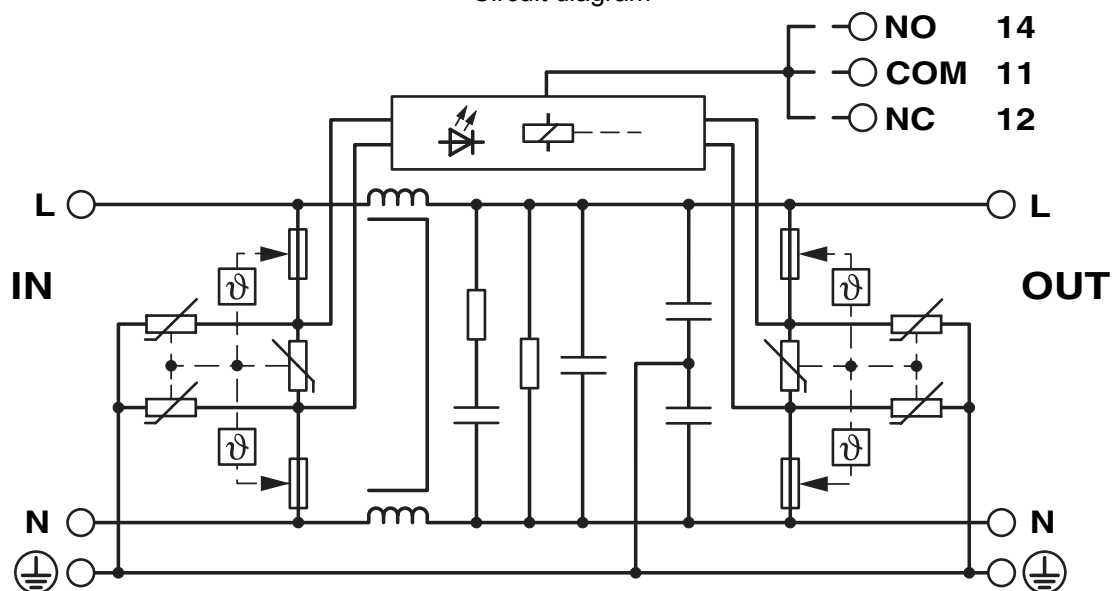


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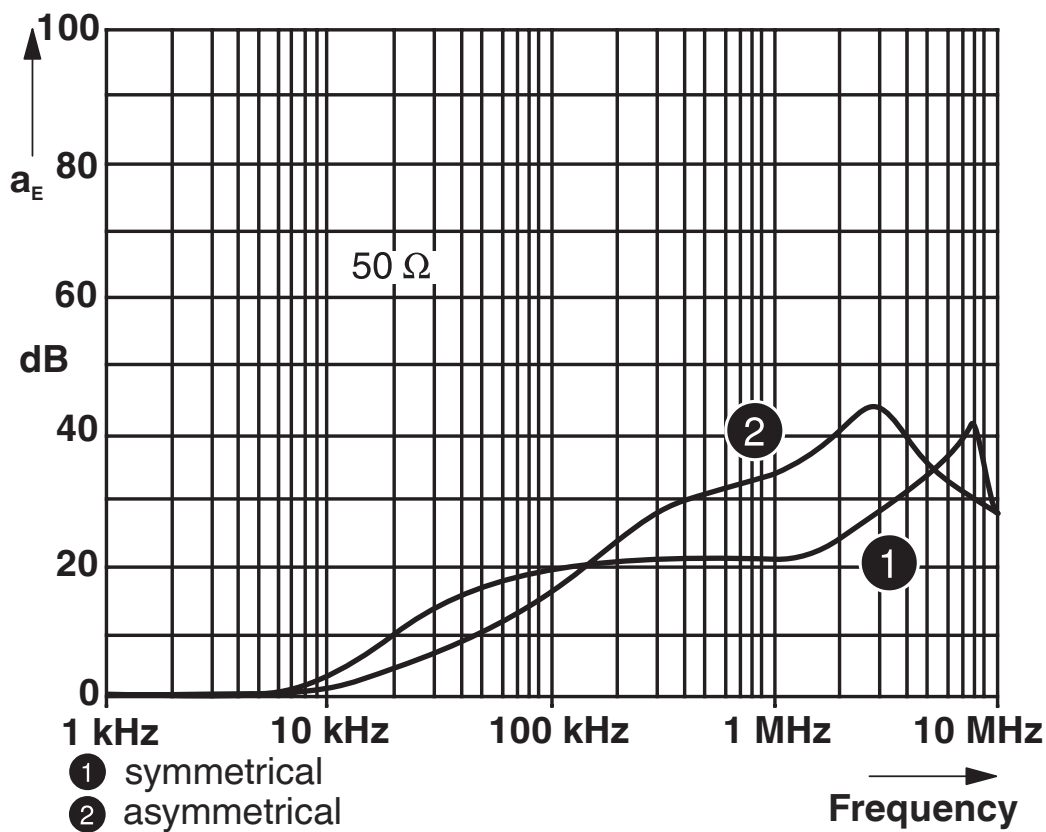
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Drawings

Circuit diagram



Diagram



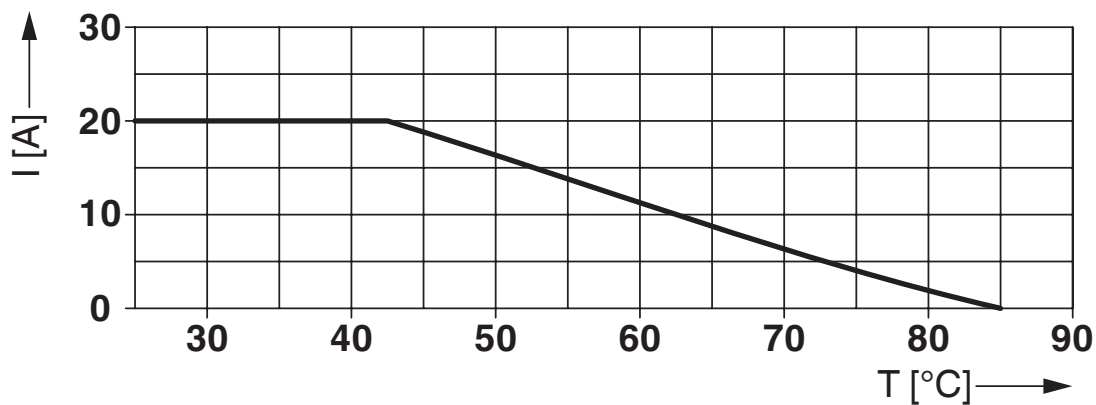
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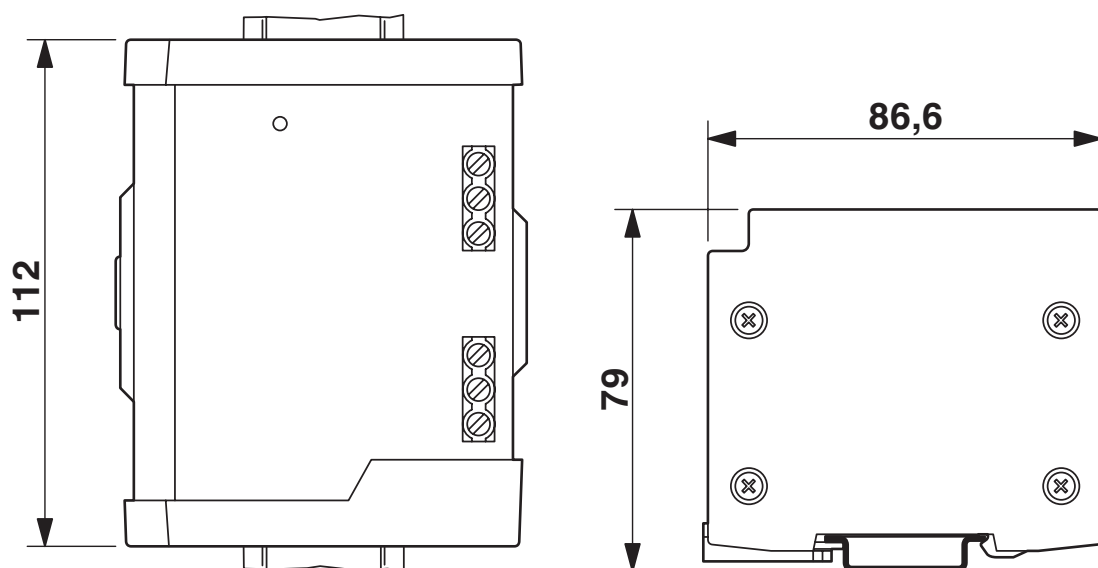
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Diagram



Dimensional drawing



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Approvals

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EAC

Approval ID: EAC-Zulassung



EAC

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

UAE-RoHS

Approval ID: 23-10-88892

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Classifications

ECLASS

ECLASS-11.0	27130806
ECLASS-13.0	27171203

ETIM

ETIM 9.0	EC000942
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
	Dechlorane Plus
	Hexahydromethylphthalic anhydride
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

SZS 0,6X3,5 VDE - Screwdriver

1212602

<https://www.phoenixcontact.com/us/products/1212602>



Screwdriver, slot-headed, VDE insulated, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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