

# FL ISOLATOR 100-M12 RMS - Network isolator



2904671

<https://www.phoenixcontact.com/us/products/2904671>

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The figure shows version

Passive network isolator with pre-installed adapter for mounting on a DIN rail. Electrical isolation in Ethernet networks. For protection against potential differences up to 4 kV. Transmission speed of up to 100 Mbps. M12 sockets (D-coded).

## Your advantages

- Extended temperature range of -40 °C ... +75 °C
- Easy installation
- Approval for railway applications (rolling stock) in accordance with EN 50155 and EN 50121
- No power supply required
- Dielectric strength of up to 4 kV
- Protection against aggressive environmental influences, particularly harsh industrial environments, thanks to coated PCB

## Commercial data

Item number	2904671
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN07
Product key	DNC332
GTIN	4046356872898
Weight per piece (including packing)	343.6 g
Weight per piece (excluding packing)	343.6 g
Customs tariff number	85176200
Country of origin	DE

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## Set consists of

### FL ISOLATOR 100-M12 - Network isolator

2902985

<https://www.phoenixcontact.com/us/products/2902985>



Passive network isolator for electrical isolation in Ethernet networks. For the protection of Ethernet devices against potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Ethernet connection via two M12 sockets (D-coded).

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### FL EPA RMS - DIN rail adapter

2701133

<https://www.phoenixcontact.com/us/products/2701133>

Set for mounting devices with EPA design on a DIN rail



## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Network isolator
MTTF	18372 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	13381 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	3348 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
MTBF	38062 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	12264 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

### Electrical properties

Electrical isolation	Port X1//port X2
Insulation voltage input/output	250 V <sub>rms</sub>
Test voltage data interface/data interface	4 kV AC (50 Hz, 1 min.)

#### Supply

Supply voltage range	passive module, no supply voltage required
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### Interfaces

Signal	Ethernet
	PROFINET

Data: Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3

Serial transmission speed	10/100 Mbps
Connection method	M12 connector, D-coded (female)
No. of channels	1
Transmission length	≤ 100 m (Total length across both ports (dependent on data rate and cable used))
Protocols supported	Transparent protocol for IPv4 and IPv6

Data: Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3

Connection method	M12 connector, D-coded (female)
No. of channels	1

### Dimensions

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Dimensional drawing	
Width	66 mm
Height	91 mm
Depth	50 mm

## Material specifications

Color (Housing)	black (RAL 9005)
Material Housing	FR 2010
Flammability rating according to UL 94	V0

## Cable/line

Shielding	no connection to protective earth ground (PE) capacitive isolation between both shield connections
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## Mechanical tests

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	: 5g, 10...150 Hz, 2.5 h, in XYZ direction
Vibration resistance according to IEC 61373, EN 61373	Vibration (operation): Category 1, Class B
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Shock (operation): 15g, 11 ms period, half-sine shock pulse Shock (storage/transport): 30g, 18 ms period, half-sine shock pulse

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP54
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 75 °C (85°C for 10 min.; thereafter function can no longer be guaranteed - check device)
Permissible humidity (operation)	10 % ... 95 %
Permissible humidity (storage/transport)	5 % ... 95 %

## Approvals

### CE

Certificate	CE-compliant
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### Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
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## EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Fast transients (burst)	
Standards/regulations	EN 61000-4-4
Emitted interference	
Standards/regulations	EN 61000-6-4
Radio interference voltage in acc. with EN 55011	Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	Class B, area of application: Industry and residential

## Standards and regulations

Standards/regulations	EN 50121 and EN 50155 (for railway applications)
	IEC 60571

## Mounting

Mounting type	DIN rail mounting
Mounting position	Alignable on DIN rail

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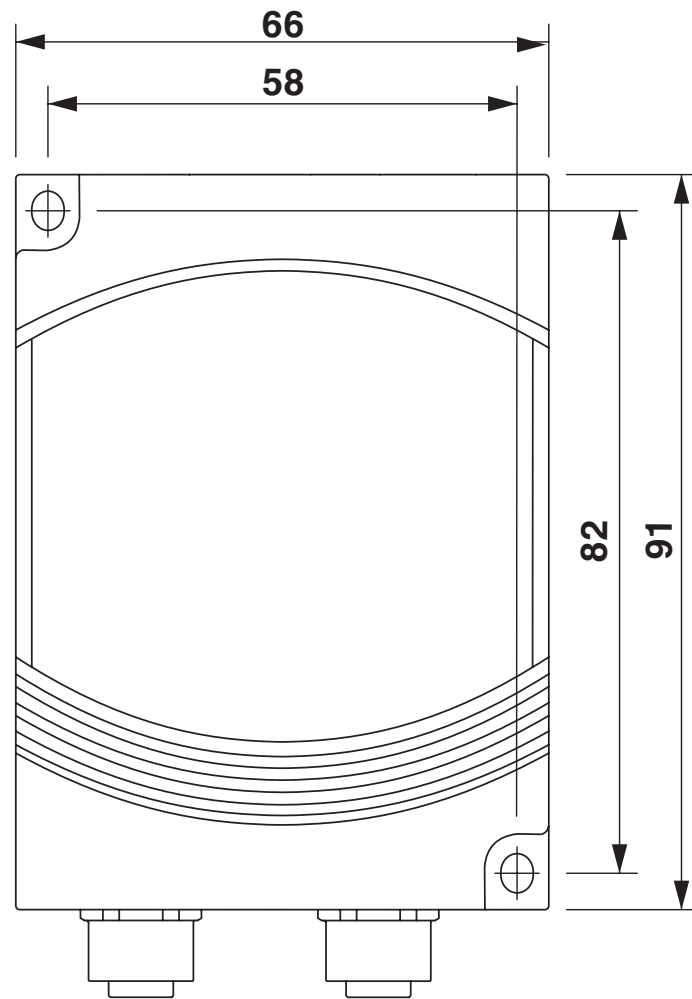


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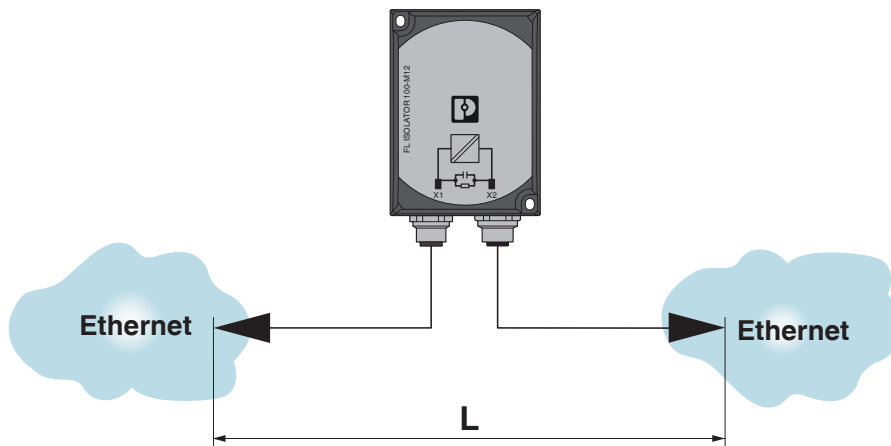
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## Drawings

Dimensional drawing



Application drawing



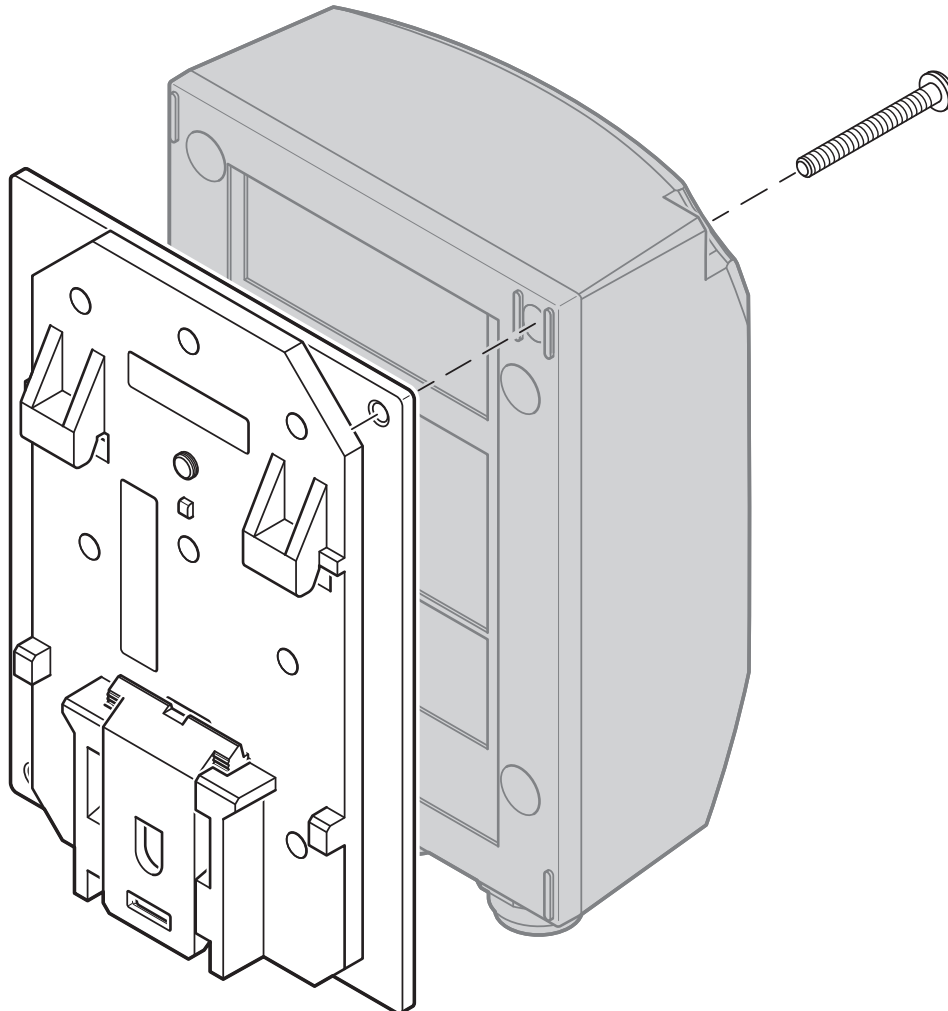
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Schematic diagram



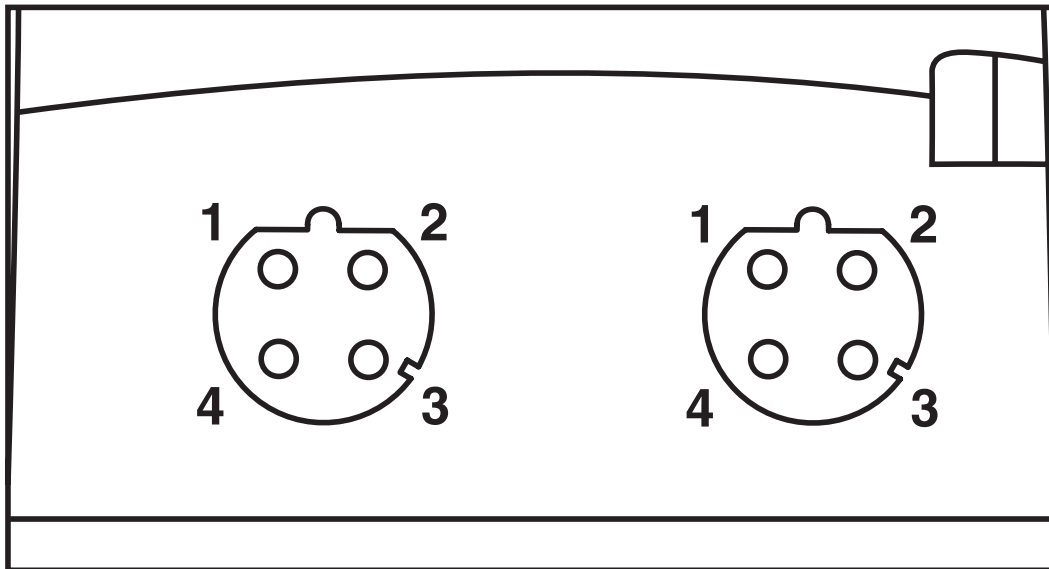
# FL ISOLATOR 100-M12 RMS - Network isolator



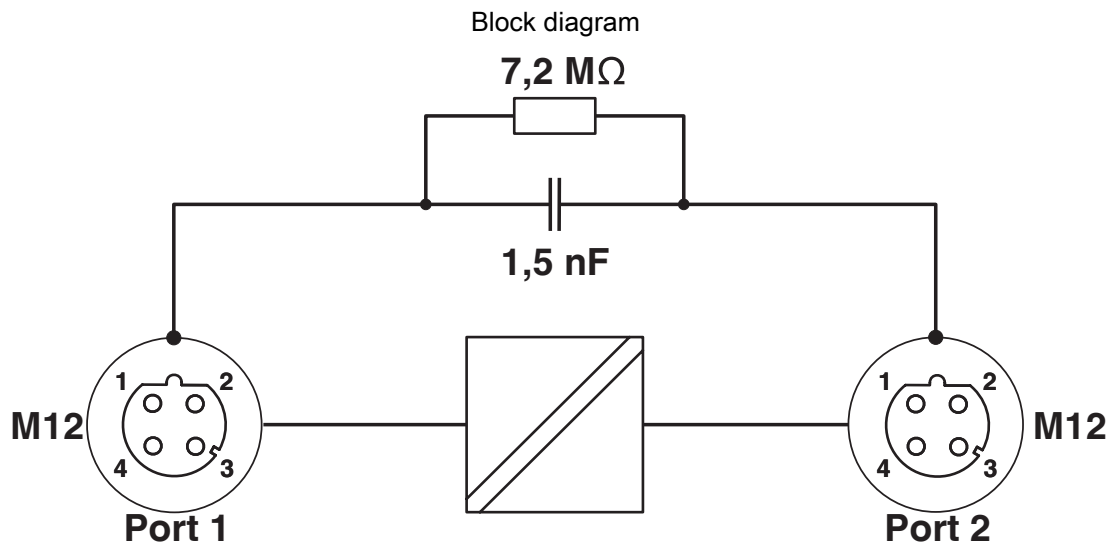
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Schematic diagram



View from below



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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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