FL ISOLATOR 100-RJ/RJ - Network isolator

2313931

https://www.phoenixcontact.com/us/products/2313931

PHŒNIX CONTACT

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Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Possible to connect two RJ45 plugs.

Product description

The FL ISOLATOR is used for electrical isolation in copper-based Ethernet networks. In industrial environments, potential differences pose a constant problem with regard to interference-free data transmission. The high-quality isolation for up to 4 kV provides reliable protection for Ethernet devices and interfaces. This results in considerably higher immunity to interference in industrial applications.

Your advantages

- No power supply required
- Dielectric strength of up to 4 kV
- Protection against aggressive environmental influences, particularly harsh industrial environments, thanks to coated PCB
- Electrical isolation of data cables and cable shielding
- Extended temperature range of -25 °C ... +85 °C
- Mounting on EN DIN rails
- Continuous insulation voltage of 250 VRMS
- Shipbuilding approval in accordance with DNV GL

Commercial data

Item number	2313931
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN07
Product key	DNC332
Catalog page	Page 365 (C-6-2019)
GTIN	4046356575089
Weight per piece (including packing)	116.8 g
Weight per piece (excluding packing)	116.8 g
Customs tariff number	85176990
Country of origin	DE

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Technical data

Notes

Note on application

Note on application	Only for industrial use

Product properties

Product type	Network isolator
MTBF	7993 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	4201 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Data management status

Article revision	03

Electrical properties

Electrical isolation	Ethernet // Ethernet
Insulation voltage input/output	250 V_{rms}
Test voltage data interface/data interface	4 kV AC (50 Hz, 1 min.)

Connection data

Supply

Tightening torque	0.56 Nm ... 0.79 Nm

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	RJ45 jack
No. of channels	1
Transmission length	≤ 100 m (Total length across both ports (dependent on data rate and cable used))

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

Serial transmission speed	10/100 Mbps
Connection method	RJ45 jack
No. of channels	1

Dimensions
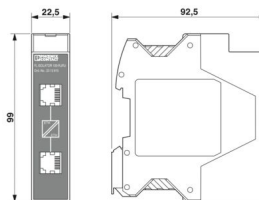
Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	92 mm

Material specifications

Color (Housing)	green (RAL 6021)
Material (Housing)	PA 6.6-FR

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 75 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant

UL, USA/Canada

Identification	508 Listed

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A

Shipbuilding

Identification	DNV GL

DNV GL data

Temperature	B
Humidity	A
Vibration	A
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Electrostatic discharge

Standards/regulations	EN 61000-4-2

Electromagnetic HF field

Standards/regulations	EN 61000-4-3

Electromagnetic HF field

Frequency range	26 MHz ... 3 GHz (Test Level 3)
Field intensity	20 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4

Conducted interference

Standards/regulations	EN 61000-4-6

Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

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)

Mounting

Mounting type	DIN rail mounting

Drawings

Dimensional drawing
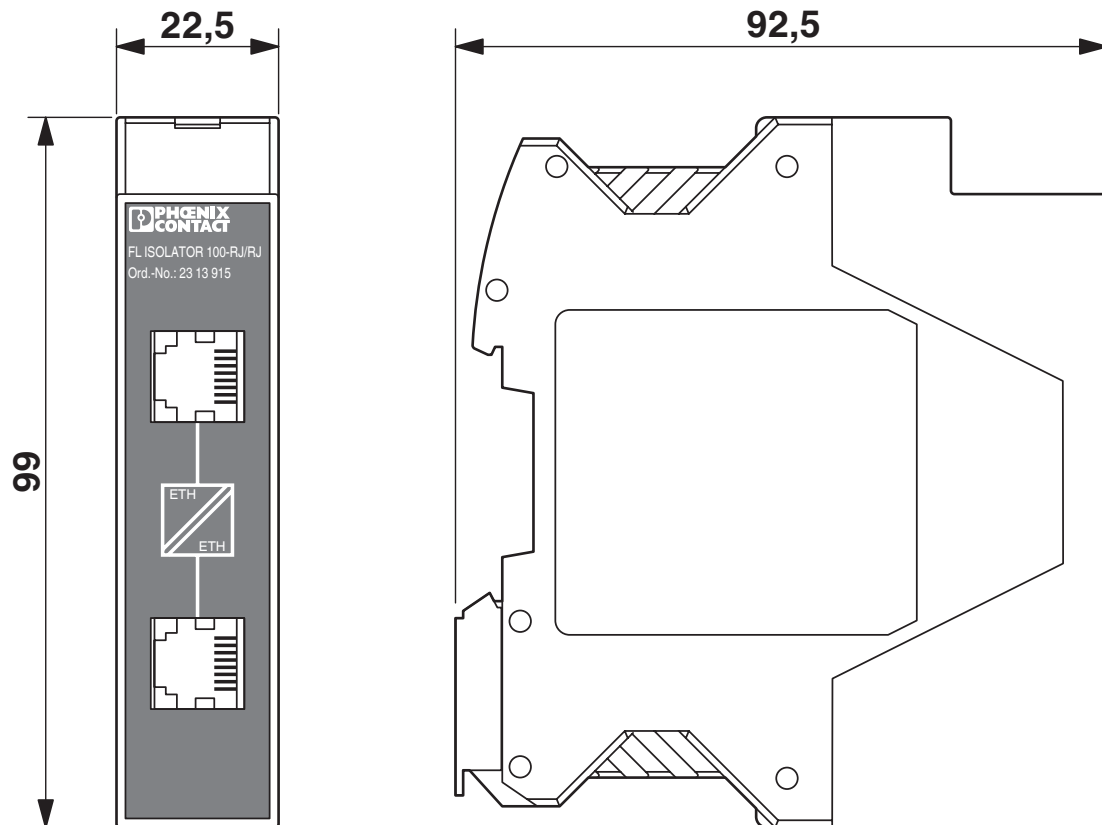
Block diagram
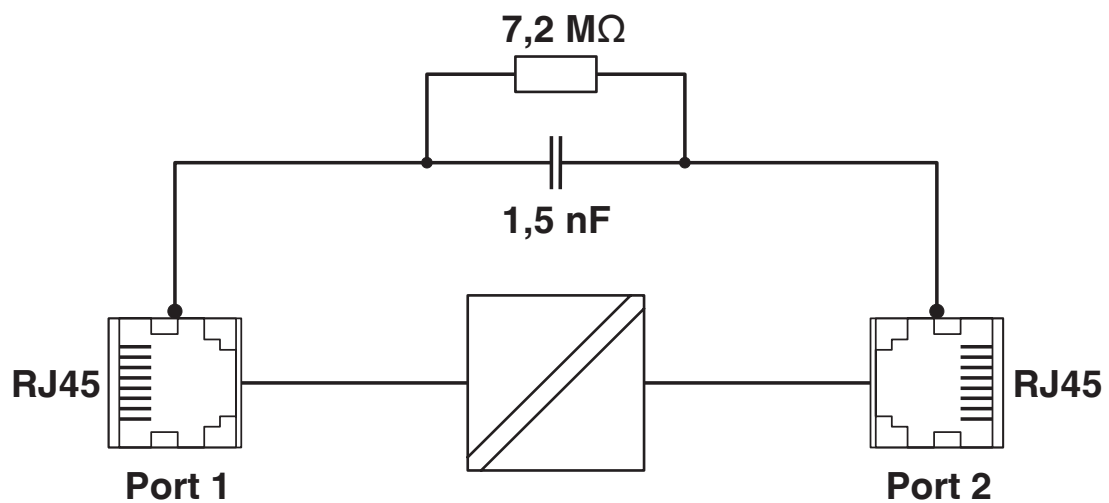
Schematic diagram
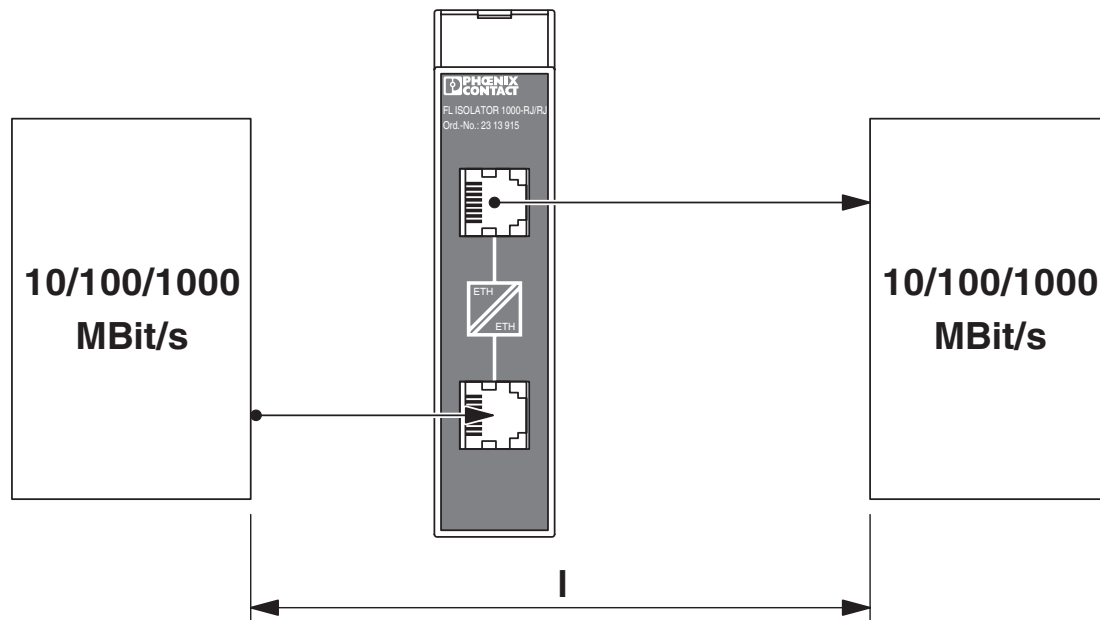
Approvals

💡 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2313931

EAC
Approval ID: RU D-DE.GB09.B.00312

DNV GL
Approval ID: TAA00001KR

cULus Listed
Approval ID: E238705

Classifications

ECLASS

ECLASS-11.0	27240692
ECLASS-12.0	27240692
ECLASS-13.0	27240692

ETIM

ETIM 9.0	EC002584

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

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

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Accessories

FL CAT5 TERMINAL BOX - Patch panel

2744610

https://www.phoenixcontact.com/us/products/2744610

Patch panel, one RJ45 jack to 4 screw connection terminal blocks (assignment 1, 2, 3, 6), CAT5e, 10/100 Mbps, DIN rail adapter, IP20, shield contacting on DIN rail

FL ISOLATOR 1000-RJ/RJ - Network isolator

2313915

https://www.phoenixcontact.com/us/products/2313915

Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 1 Gbps. Possible to connect two RJ45 plugs.

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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).

PP-RJ-RJ - Patch panel

2703015

https://www.phoenixcontact.com/us/products/2703015

Patch panel, two RJ45 jacks, CAT6, 10/100/1000 Mbps, DIN rail adapter, IP20

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PP-RJ-SC - Patch panel

2703016

https://www.phoenixcontact.com/us/products/2703016

Patch panel, RJ45 jack on screw terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

PP-RJ-SCC - Patch panel

2703018

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Patch panel, RJ45 jack on Push-in terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

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PP-RJ-IDC - Patch panel

2703019

https://www.phoenixcontact.com/us/products/2703019

Patch panel, RJ45 jack on IDC terminal blocks, CAT6, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

PP-RJ-RJ-F - Patch panel

2703020

https://www.phoenixcontact.com/us/products/2703020

Patch panel, two RJ45 jacks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield current monitoring, surge protection

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PP-RJ-SC-F - Patch panel

2703021

https://www.phoenixcontact.com/us/products/2703021

Patch panel, RJ45 jack on screw terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief, shield current monitoring, surge protection

PP-RJ-SCC-F - Patch panel

2703022

https://www.phoenixcontact.com/us/products/2703022

Patch panel, RJ45 jack on push-in terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief, shield current monitoring, surge protection

PP-RJ-IDC-F - Patch panel

2703023

https://www.phoenixcontact.com/us/products/2703023

Patch panel, RJ45 jack on IDC terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief, shield current monitoring, surge protection

FL-PP-RJ45-LSA - Patch panel

2901645

https://www.phoenixcontact.com/us/products/2901645

Patch panel, one RJ45 jack to 8 LSA connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via bridges

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FL-PP-RJ45/RJ45-B - Patch panel

2904933

https://www.phoenixcontact.com/us/products/2904933

Patch panel, narrow overall width, extended temperature range, two RJ45 jacks, 1:1 assignment, all-around shield, CAT5, 10/100 Mbps, DIN rail adapter, IP20

FL CAT5 PATCH 0,3 - Patch cable

2832250

https://www.phoenixcontact.com/us/products/2832250

Patch cable, CAT5, assembled, 0.3 m

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FL CAT5 PATCH 0,5 - Patch cable

2832263

https://www.phoenixcontact.com/us/products/2832263

Patch cable, CAT5, assembled, 0.5 m

FL CAT5 PATCH 1,0 - Patch cable

2832276

https://www.phoenixcontact.com/us/products/2832276

Patch cable, CAT5, assembled, 1 m

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FL CAT5 PATCH 1,5 - Patch cable

2832221

https://www.phoenixcontact.com/us/products/2832221

Patch cable, CAT5, assembled, 1.5 m

FL CAT5 PATCH 2,0 - Patch cable

2832289

https://www.phoenixcontact.com/us/products/2832289

Patch cable, CAT5, assembled, 2 m

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FL CAT5 PATCH 3,0 - Patch cable

2832292

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Patch cable, CAT5, assembled, 3 m

FL CAT6 PATCH 0,3 - Patch cable

2891181

https://www.phoenixcontact.com/us/products/2891181

Patch cable, degree of protection: IP20, cable length: 0.3 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

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FL CAT6 PATCH 0,5 - Patch cable

2891288

https://www.phoenixcontact.com/us/products/2891288

Patch cable, degree of protection: IP20, cable length: 0.5 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

FL CAT6 PATCH 1,0 - Patch cable

2891385

https://www.phoenixcontact.com/us/products/2891385

Patch cable, degree of protection: IP20, cable length: 1 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

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FL CAT6 PATCH 1,5 - Patch cable

2891482

https://www.phoenixcontact.com/us/products/2891482

Patch cable, degree of protection: IP20, cable length: 1.5 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

FL CAT6 PATCH 2,0 - Patch cable

2891589

https://www.phoenixcontact.com/us/products/2891589

Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

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FL CAT6 PATCH 3,0 - Patch cable

2891686

https://www.phoenixcontact.com/us/products/2891686

Patch cable, degree of protection: IP20, cable length: 3 m, number of positions: 8, 1 Gbps, CAT6, Ethernet

FL DIN RA - DIN rail adapter

2891053

https://www.phoenixcontact.com/us/products/2891053

The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

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