

# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

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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 1 Gbps. 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
- ✓ Approval for railway applications (rolling stock) according to EN 50155 and EN 50121
- ✓ Electrical isolation of data cables and cable shielding
- ✓ Extended temperature range of -25°C to +85°C
- ✓ Mounting on EN DIN rails
- ✓ Transmission speed of up to 1000 Mbps
- ✓ Continuous insulation voltage of 250 V<sub>rms</sub>
- ✓ Shipbuilding approval in accordance with DNV GL



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356574563

## Technical data

### Dimensions

Width	22.5 mm
Height	99 mm
Depth	92 mm

# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

## Technical data

### Ambient conditions

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

### General

Electrical isolation	Ethernet // Ethernet
Test voltage data interface/data interface	4 kV AC (50 Hz, 1 min.)
Insulation voltage input/output	250 V <sub>rms</sub>
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Net weight	119 g
Housing material	PA 6.6-FR
Color	green
MTBF	5446 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	2959 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

### Interfaces

Interface 1	Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet
No. of ports	1
Connection method	RJ45 jack, shielded
Transmission length	≤ 100 m (Total length across both ports (dependent on data rate and cable used))
Serial transmission speed	10/100/1000 Mbps
Interface 2	Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet
No. of ports	1
Connection method	RJ45 jack, shielded
Serial transmission speed	10/100/1000 Mbps

### Conformance/approvals

Designation	EAC
Identification	EAC
Designation	UL, USA/Canada
Identification	508 Listed
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

## Technical data

### Conformance/approvals

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

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	25g, 11 ms period, half-sine shock pulse
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
Frequency range	26 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Standards/regulations	EN 50121 and EN 50155 (for railway applications)

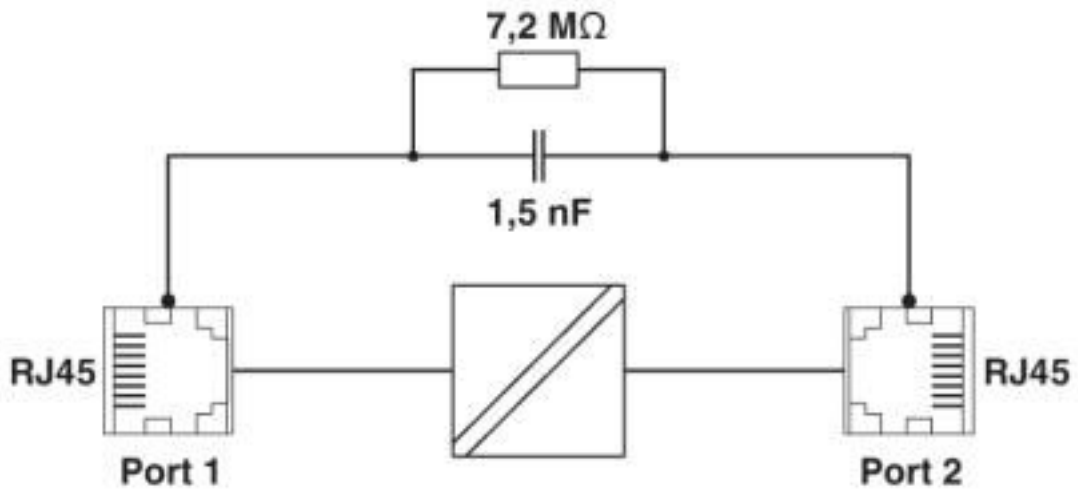
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

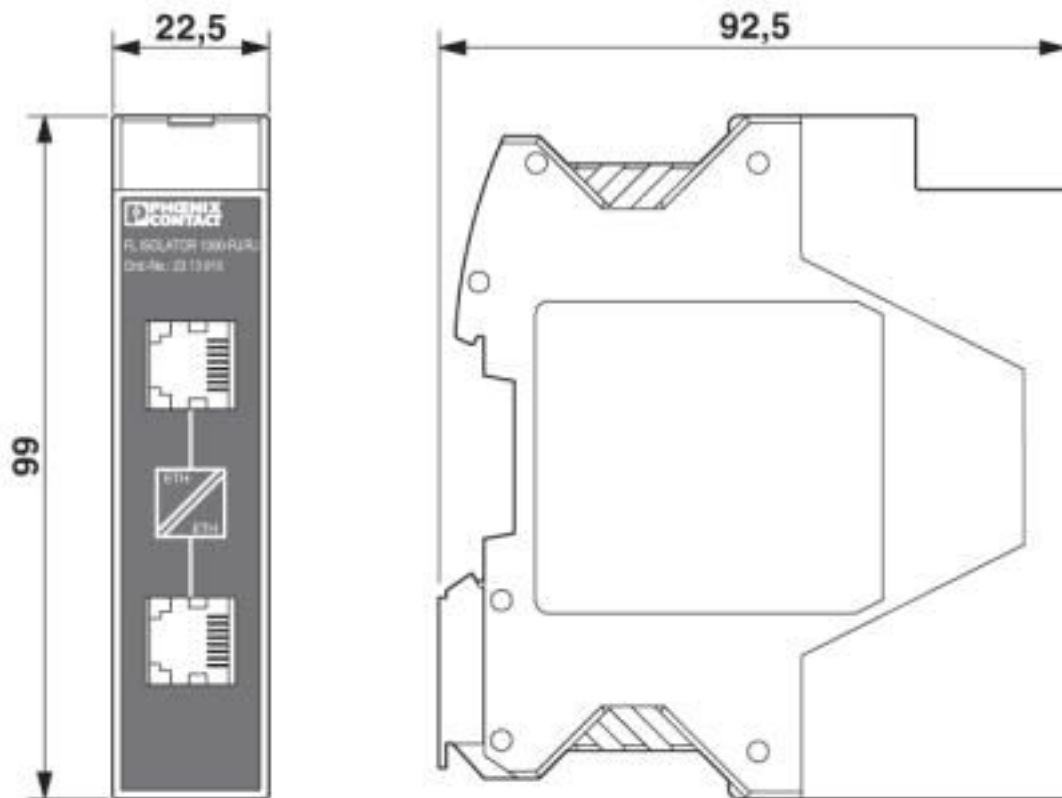
## Drawings

# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

Block diagram

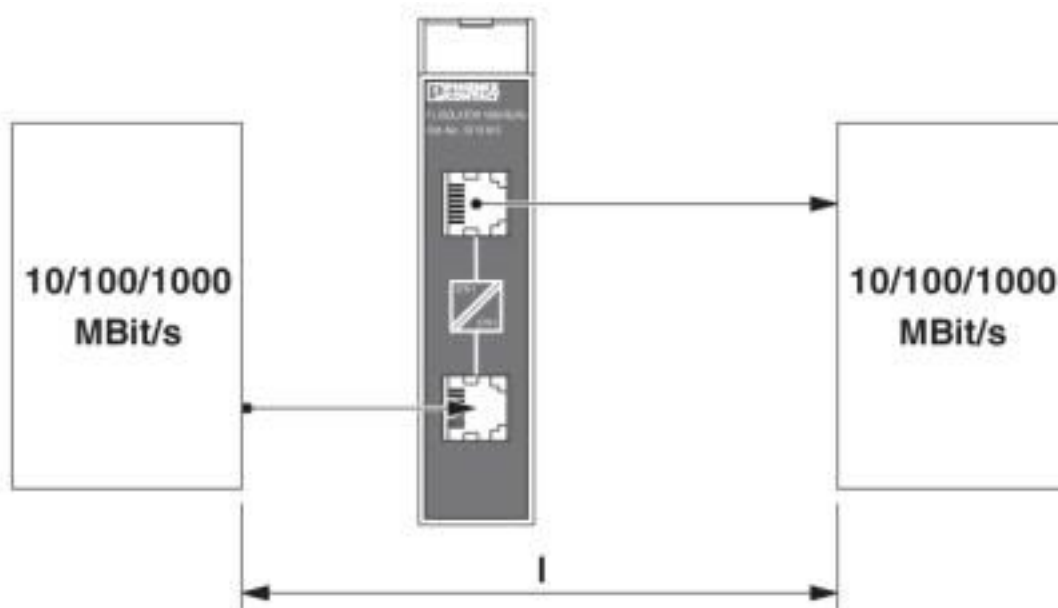


Dimensional drawing



# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

Schematic diagram



## Classifications

### eCl@ss

eCl@ss 10.0.1	27240692
eCl@ss 4.0	27250500
eCl@ss 4.1	27230200
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27249200
eCl@ss 7.0	27249290
eCl@ss 8.0	27249290
eCl@ss 9.0	27240692

### ETIM

ETIM 3.0	EC000313
ETIM 4.0	EC000467
ETIM 5.0	EC002584
ETIM 6.0	EC002584
ETIM 7.0	EC002584

### UNSPSC

UNSPSC 6.01	26121607
UNSPSC 7.0901	26121607
UNSPSC 11	26121607
UNSPSC 12.01	26121607
UNSPSC 13.2	39121552

# Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

## Classifications

### UNSPSC

UNSPSC 18.0	39121552
UNSPSC 19.0	39121552
UNSPSC 20.0	39121552
UNSPSC 21.0	39121552

## Approvals

### Approvals

#### Approvals

DNV GL / UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00001KR
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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EAC			RU *- DE.A*30.B.01735
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cULus Listed			
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## Accessories

### Accessories

Network isolator

## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

#### Network isolator - FL ISOLATOR 100-RJ/SC - 2313928



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. Connection using RJ45 and COMBICON plug-in screw terminal block.

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#### Network isolator - FL ISOLATOR 100-RJ/RJ - 2313931



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.

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#### Network isolator - FL ISOLATOR 100-M12 - 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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### Patch cable

#### Patch cable - FL CAT5 PATCH 0,3 - 2832250



Patch cable, CAT5, assembled, 0.3 m

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#### Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

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Patch cable - FL CAT5 PATCH 1,5 - 2832221



Patch cable, CAT5, assembled, 1.5 m

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Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m

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Patch cable - FL CAT5 PATCH 3,0 - 2832292



Patch cable, CAT5, assembled, 3 m

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Patch cable - FL CAT6 PATCH 0,3 - 2891181



Patch cable, CAT6, pre-assembled, 0.3 m

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## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

Patch cable - FL CAT6 PATCH 0,5 - 2891288



Patch cable, CAT6, pre-assembled, 0.5 m

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Patch cable - FL CAT6 PATCH 1,0 - 2891385



Patch cable, CAT6, pre-assembled, 1.0 m

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Patch cable - FL CAT6 PATCH 1,5 - 2891482



Patch cable, CAT6, pre-assembled, 1.5 m

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Patch cable - FL CAT6 PATCH 2,0 - 2891589



Patch cable, CAT6, pre-assembled, 2.0 m

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Patch cable - FL CAT6 PATCH 3,0 - 2891686



Patch cable, CAT6, pre-assembled, 3.0 m

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Patch panel

## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

#### Patch panels - FL CAT5 TERMINAL BOX - 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

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#### Patch panels - PP-RJ-RJ - 2703015



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

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#### Patch panels - PP-RJ-SC - 2703016



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

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#### Patch panels - PP-RJ-SCC - 2703018



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

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#### Patch panels - PP-RJ-IDC - 2703019



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

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## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

#### Patch panels - PP-RJ-RJ-F - 2703020



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

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#### Patch panels - PP-RJ-SC-F - 2703021



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

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#### Patch panels - PP-RJ-SCC-F - 2703022



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

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#### Patch panels - PP-RJ-IDC-F - 2703023



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

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#### Patch panels - FL-PP-RJ45-LSA - 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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## Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

### Accessories

Patch panels - FL-PP-RJ45/RJ45-B - 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

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