

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




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.

### 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
- ✓ Extended temperature range of -25°C to +85°C
- ✓ Continuous insulation voltage of 250 V<sub>rms</sub>
- ✓ Electrical isolation of data cables and cable shielding
- ✓ Mounting on EN DIN rails
- ✓ Shipbuilding approval in accordance with DNV GL



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 575089
GTIN	4046356575089
Weight per Piece (excluding packing)	120.000 g
Custom tariff number	85437090
Country of origin	Germany

### Technical data

#### Dimensions

Width	22.5 mm
-------	---------

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

## Technical data

### Dimensions

Height	99 mm
Depth	92 mm

### 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	118.9 g
Housing material	PA 6.6-FR
Color	green
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))

### Serial interface

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

### Conformance/approvals

Designation	EAC
-------------	-----

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

## Technical data

### Conformance/approvals

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

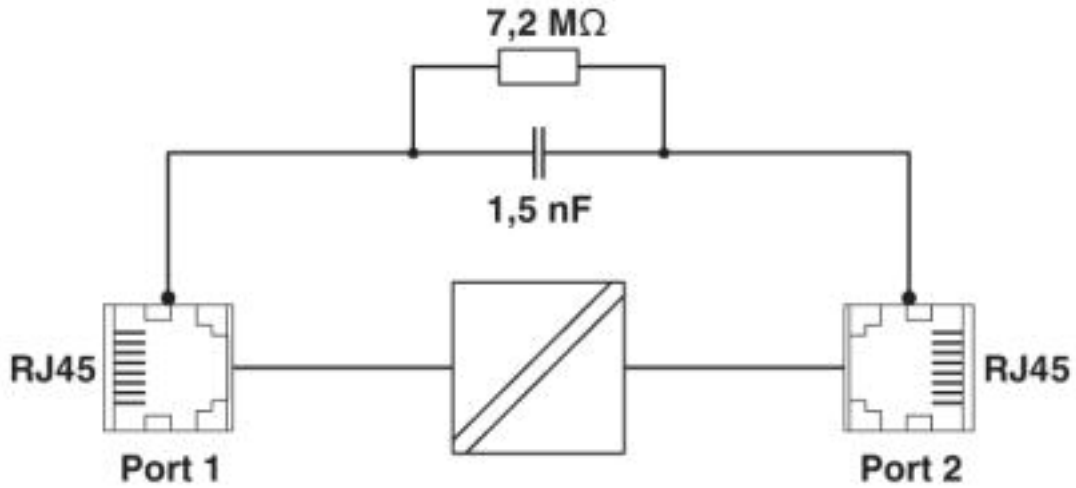
### Environmental Product Compliance

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

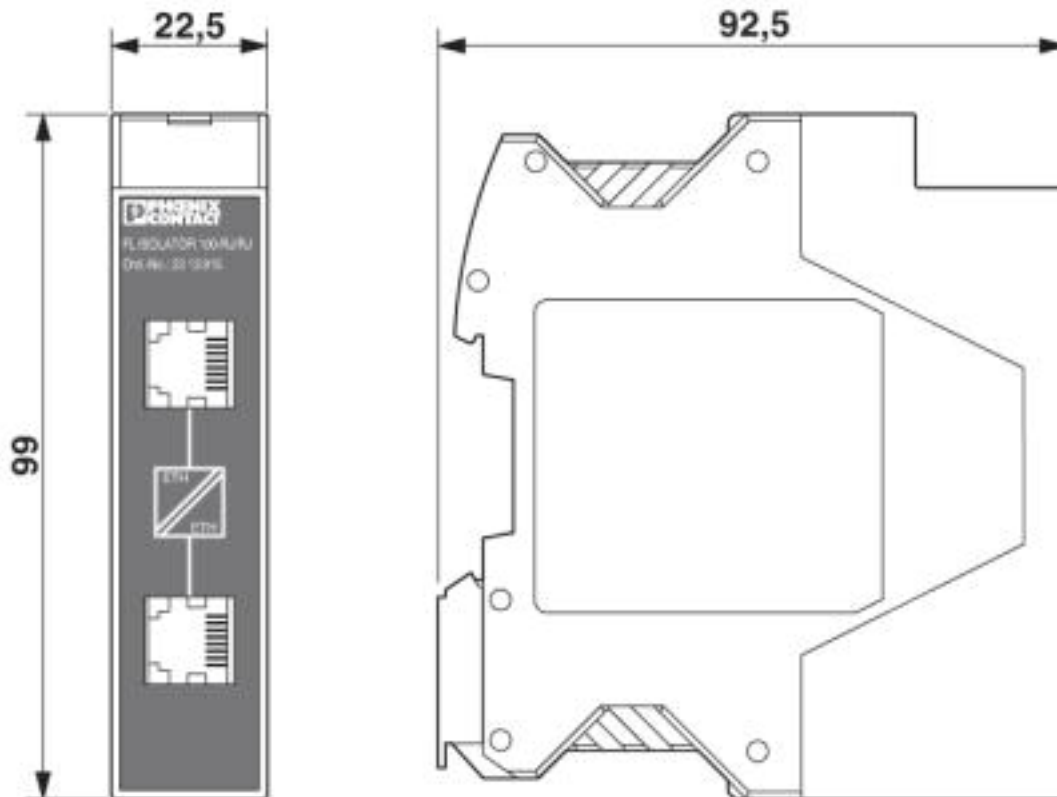
## Drawings

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

Block diagram

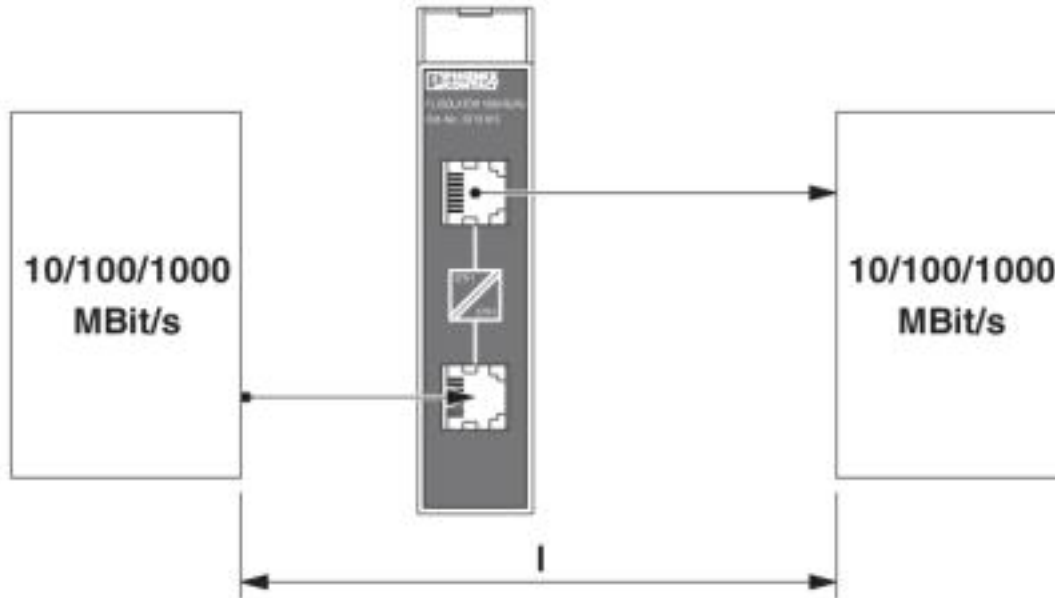


Dimensional drawing



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

Schematic diagram



## Classifications

### eCl@ss

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

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

## Classifications

### UNSPSC

UNSPSC 11	26121607
UNSPSC 12.01	26121607
UNSPSC 13.2	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
--------	--	---	------------

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
-----------	--	---	---------------

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
------------	--	---	---------------

EAC			EAC-Zulassung
-----	--	--	---------------

cULus Listed			
--------------	--	--	--

## Accessories

### Accessories

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

### Accessories

#### Network isolator

##### 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.

---

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

---

##### 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).

---

#### Patch cable

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



Patch cable, CAT5, assembled, 0.3 m

---

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



Patch cable, CAT5, assembled, 0.5 m

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

### Accessories

---

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

---

Patch cable - FL CAT5 PATCH 1,5 - 2832221



Patch cable, CAT5, assembled, 1.5 m

---

Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m

---

Patch cable - FL CAT5 PATCH 3,0 - 2832292



Patch cable, CAT5, assembled, 3 m

---

Patch cable - FL CAT6 PATCH 0,3 - 2891181



Patch cable, CAT6, pre-assembled, 0.3 m

---



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

### Accessories

Patch cable - FL CAT6 PATCH 0,5 - 2891288



Patch cable, CAT6, pre-assembled, 0.5 m

---

Patch cable - FL CAT6 PATCH 1,0 - 2891385



Patch cable, CAT6, pre-assembled, 1.0 m

---

Patch cable - FL CAT6 PATCH 1,5 - 2891482



Patch cable, CAT6, pre-assembled, 1.5 m

---

Patch cable - FL CAT6 PATCH 2,0 - 2891589



Patch cable, CAT6, pre-assembled, 2.0 m

---

Patch cable - FL CAT6 PATCH 3,0 - 2891686



Patch cable, CAT6, pre-assembled, 3.0 m

---

Patch panel

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

### Accessories

#### Patch panels - FL CAT5 TERMINAL BOX - 2744610



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

---

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



Patch panel, two RJ45 sockets, 10/100/1000 Mbps, DIN rail mounting, IP20

---

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



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

---

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



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

---

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



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

---

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

### Accessories

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



Patch panel, two RJ45 sockets, 10/100/1000 Mbps, DIN rail mounting, IP20, shield current monitoring, surge protection

---

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



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

---

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



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

---

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



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

---

#### Patch panels - FL-PP-RJ45-LSA - 2901645



Patch panel, one RJ45 socket to 8 IDC connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers

---

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

### Accessories

Patch panels - FL-PP-RJ45/RJ45-B - 2904933



Patch panel, narrow design width, extended temperature range, two RJ45 sockets, 1:1 assignment, consistent shield, CAT5e, 10/100 Mbps, DIN rail mounting, IP20