

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.

Why buy this product

- ✓ 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 VRMS



Key Commercial Data

| | |
|--------------|--------------|
| Packing unit | 1 STK |
| GTIN | |
| GTIN | 404635674563 |

Technical data

Dimensions

| | |
|--------|---------|
| Width | 22.5 mm |
| 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) |

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Ambient conditions

| | |
|------------------------------------------|----------------------------------------------------------|
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| Altitude | 5000 m (For restrictions see manufacturer's declaration) |
| 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 _{rms} |
| Standards/regulations | EN 50121 and EN 50155 (for railway applications) |
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Net weight | 122.3 g |
| Housing material | PA 6.6-FR |
| Color | green |
| MTBF | 25932 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
| | 8640 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day)) |
| UL, USA/Canada | 508 Listed |

Serial interface

| | |
|---------------------------|----------------------------------------------------------------------------------|
| Interface 1 | Ethernet interface, 10/100/1000Base-T(X) according to 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 | 10/100/1000 Mbps |
| Interface 2 | Ethernet interface, 10/100/1000Base-T(X) according to IEEE 802.3u |
| Interface | Ethernet |
| No. of ports | 1 |
| Connection method | RJ45 socket, shielded |
| Serial transmission speed | 10/100/1000 Mbps |

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 |
| Contact discharge | ± 6 kV (Test Level 3) |
| Standards/regulations | EN 61000-4-3 |
| Frequency range | 26 MHz ... 3 GHz (Test Level 3) |

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Standards and Regulations

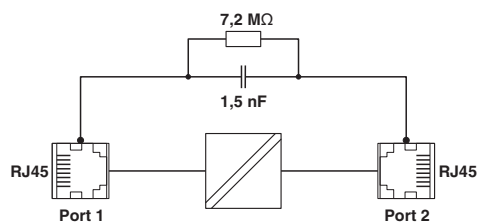
| | |
|-----------------------|--------------------------------------------------|
| Standards/regulations | EN 61000-4-4 |
| Comments | Criterion B |
| Standards/regulations | EN 61000-4-5 |
| Signal | ± 1 kV (Data line, asymmetrical) |
| Standards/regulations | EN 61000-6-4 |
| | EN 61000-4-6 |
| Frequency range | 0.15 MHz ... 80 MHz |
| Standards/regulations | EN 50121 and EN 50155 (for railway applications) |
| UL, USA/Canada | 508 Listed |
| Noxious gas test | ISA-S71.04-1985 G3 Harsh Group A |

Environmental Product Compliance

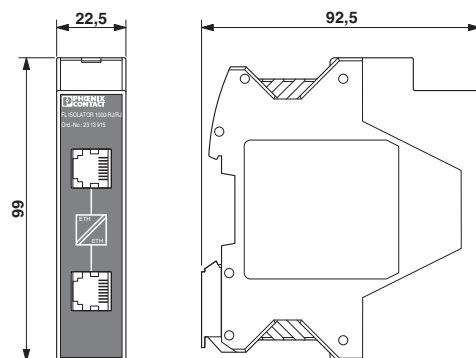
| | |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

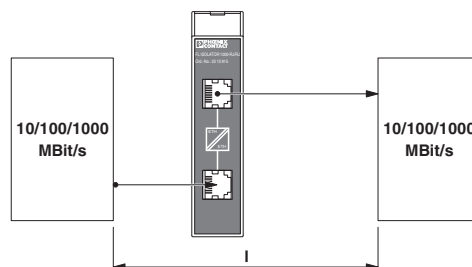
Block diagram



Dimensional drawing



Schematic diagram



Approvals

Approvals

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Approvals

Approvals

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

Ex Approvals

Approval details

| | | | |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| EAC |  | | RU *- DE.A*30.B.01735 |
| DNV GL | | http://exchange.dnv.com/tari/ | TAA00001KR |
| cULus Listed |  | | |

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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>