

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

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

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
- ✓ Protection against aggressive environmental influences, particularly harsh industrial environments, thanks to coated PCB
- ✓ Dielectric strength of up to 4 kV
- ✓ Approval for railway applications (rolling stock) according to EN 50155 and EN 50121
- ✓ Transmission speed of up to 1000 Mbps
- ✓ Continuous insulation voltage of 250 V_{rms}
- ✓ Extended temperature range of -25°C to +85°C
- ✓ 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	
GTIN	4046356575072

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	92 mm

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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 _{rms}
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Net weight	90 g
Housing material	PA 6.6-FR
Color	green
MTBF	5575 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	3094 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Interfaces

Interface 1	Ethernet interface, 10/100Base-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 Mbps
Interface 2	Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet
No. of ports	1
Connection method	COMBICON screw terminal block
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	16

Conformance/approvals

Designation	EAC
Identification	EAC

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Technical data

Conformance/approvals

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

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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

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Classifications

eCl@ss

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
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



<https://approvalfinder.dnvgl.com/>

TAA00001KR

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Approvals

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



EAC-Zulassung

cULus Listed



Accessories

Accessories

Network isolator

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.

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).

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Accessories

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

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

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Accessories

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

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

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Accessories

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

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

Patch panels - PP-RJ-RJ - 2703015



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

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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Accessories

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

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

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

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

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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Accessories

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

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

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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