

FO converters - FL MC ETH/FO 660 T - 2313164

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Ethernet T-coupler for converting from 2 x RJ45 to 2 x SCRJ FO, 660 nm, 300 m distance with HCS GI fiber, for all network structures, redundancy with RSTP + FRD, configuration with WBM, IGMP snooping, multicast filtering, VLAN, SNMP, and port mirroring integrated.

Product description

The compact 4-port media converter facilitates the flexible and economic establishment of managed Ethernet networks in an automation environment. Thanks to its SCRJ connections and extended temperature range of -20°C to +55°C, it fulfills the requirements of industrial applications perfectly. Its integrated software enables networks to be established, diagnosed, and monitored on a redundant basis using IT standard protocols.

Why buy this product

- Configuration via web-based management
- Compact housing
- Continuous fiber optic monitoring via LED bar graph
- Alarm signal contacts
- Multicast filtering with IGMP snooping
- Redundant power supply
- Extended temperature range of -20°C to +55°C
- SNMP traps and values
- Port prioritization with V-LAN 802.1Q
- Port mirroring



Key commercial data

Packing unit	1 pc
GTIN	4 046356 477376
Weight per Piece (excluding packing)	325.2 g
Weight per piece (including packing)	325.2 g
Custom tariff number	85176200
Country of origin	Germany
Sales Key	M1 - Communication Techn.

FO converters - FL MC ETH/FO 660 T - 2313164

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	45 mm
Height	99 mm
Depth	123 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2:2005

Interfaces

Interface 1	Ethernet (RJ45)
No. of ports	2 (RJ45 ports)
Connection method	RJ45
Note on connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 MBit/s
Transmission length	100 m (per segment)
Interface 2	POF/HCS
No. of ports	2 (SCRJ)
Connection method	SC-RJ
Transmission physics	POF-SCRJ
Transmission speed	10/100 MBit/s (full duplex)
Transmission length	up to 250 m (depending on the fiber used)

Function

Basic functions	Store-and-forward media converter standard-compliant IEEE 802.3 2, priority classes according to IEEE 802.1 P, TCP/IP protocol, BootP-compatible, port mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP)
Management	Web-based management, SNMP or Factory Manager Software FL SWT
Supported browsers	Internet Explorer 5.5 or higher
Redundancy	Rapid Spanning Tree 802.1w, Fast Ring Detection
Status and diagnostic indicators	2 status LEDs per Ethernet: activity and duplex mode, supply voltage U _{S1} and U _{S2} (redundant supply voltage) as well as LED BAR GRAPH for FO ports for displaying the system reserve for each optical interface.
Control voltage	24 V

Network expansion parameters

FO converters - FL MC ETH/FO 660 T - 2313164

Technical data

Network expansion parameters

Cascading depth	Line, star, tree and redundant ring; any cascading depth
Maximum conductor length ((twisted pair)	100 m

Supply voltage

Supply voltage	24 V DC
Residual ripple	3.6 V _{PP} (within the permitted voltage range)
Supply voltage range	18.5 V DC ... 30.5 V DC
Typical current consumption	400 mA (at U _S = 24 V DC)

General

Mounting type	DIN rail
Type AX	Book type
Weight	230 g
Housing material	PA V0, color green
Noise emission	EN 61000-6-3/-4

Classifications

eCl@ss

eCl@ss 4.0	27250504
eCl@ss 4.1	27250504
eCl@ss 5.0	27250504
eCl@ss 5.1	27250504
eCl@ss 6.0	27250504
eCl@ss 7.0	27250504
eCl@ss 8.0	19170125

ETIM

ETIM 2.0	EC000310
ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC001467

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed 

cUL Listed 

cULus Listed 

Accessories

Accessories

Assembly tool

Assembly tool - PSM-HCS-KONFTOOL/SC-RJ - 2708876



HCS assembly kit for SCRJ quick mounting connectors, including stripping blade, stripping pliers, aramide yarn scissors, fiber stripper, microscope, fiber cleaving tool for standard HCS and HCS GI fibers, and documentation

Assembly tool - PSM-POF-KONFTOOL - 2744131



Polymer fiber DIY case, consisting of: Stripping knife, stripping pliers, polishing wheels for F-SMA and SCRJ quick mounting connectors, polishing pad and emery paper

FO converters - FL MC ETH/FO 660 T - 2313164

Accessories

Connector set

RJ45 connector - FL PLUG RJ45 GR/2 - 2744856



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, gray for straight cables, for assembly on site. For connections that are not crossed, it is recommended that you use the connector set with gray bend protection sleeve.

RJ45 connector - FL PLUG RJ45 GN/2 - 2744571



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, green for crossed cables, for assembly on site. For connections that are crossed, it is recommended that the connector set with green bend protection sleeves is used.

FO connectors - PSM-SET-SCRJ-DUP/2-POF - 2708656



SCRJ connector set for polymer fiber, for self assembly, consisting of 2 duplex quick mounting connectors with bending protection

FO connectors - PSM-SET-SCRJ-DUP/2-HCS/PN - 2313546



SCRJ connector set for standard PROFINET HCS fiber cables with 2.2 mm diameter of the individual elements. Consisting of 2 duplex quick mounting connectors with bend protection for self-assembly.

FO connectors - PSM-SET-SCRJ-DUP/2-HCS - 2313070



SCRJ connector set for HCS fiber, for self assembly, consisting of 2 duplex quick mounting connectors with bending protection

Data cable by the meter

FO converters - FL MC ETH/FO 660 T - 2313164

Accessories

Cable - FL CAT5 HEAVY - 2744814



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

Network cable - FL CAT5 FLEX - 2744830



CAT5-SF/UTP cable (J-LI02YS(ST)C H 2 x 2 x 26 AWG), light-duty, flexible installation cable 2 x 2 x 0.14 mm², stranded, shielded, outer sheath: 5.75 mm ± 0.15 mm diameter

FO cable - FL FOC PN-C-HCS-GI-200/230 - 2313410



PROFINET HCS GI fiber cables, duplex 200/230 µm, increased bandwidth for Ethernet applications in particular. Robust PUR outer sheath. Heavy version suitable for drag chains and indoor installation, sold by the meter without plugs

FO cable - FL FOC PN-B-980/1000 - 2313397



PROFINET polymer fiber cable, duplex, 980/1000 µm, heavy-weight design, for permanent indoor installation, by the meter, without connector

FO cable - FL FOC PN-C-FLEX-980/1000 - 2313407



PROFINET polymer fiber cable, duplex, 980/1000 µm, heavy-weight highly flexible design, for flexible cable conduit applications, by the meter, without connector

Data plug

FO converters - FL MC ETH/FO 660 T - 2313164

Accessories

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, IP20, CAT5e, 8-pos., with QUICKON fast connection technology, for 26 ... 23 AWG 1-wire and 7-wire conductors, for 4.5 mm ... 8.0 mm cable diameter, labeling: TIA 568 B, color: gray

DIN rail connector

Cable - ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - 2707437



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



DIN rail power supply unit, primary-switched mode, narrow design, output: 24 V DC / 1.5 A

Universal tools

Assembly tool - FL CRIMPTOOL - 2744869



Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site

Drawings

FO converters - FL MC ETH/FO 660 T - 2313164

Functional drawing

