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Fiber optic interface module for connecting 100 Base-FX multi-mode glass fibers (1300 nm), SC, connection direction downward

The figure shows a version with front connection

### **Product Description**

For customers who wish to use this Interface module in the FL SWITCH MM HS (Order No. 2832328), please refer to the document entitled "Customer information for IF modules" in the download area for this Interface module.

#### Your advantages

Robust Ethernet transmission even for medium-range environments prone to interference



# **Key Commercial Data**

Packing unit	1 pc
GTIN	4 017918 929138
GTIN	4017918929138
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85176200
Country of origin	Germany
Note	Made to Order (non-returnable)

## Technical data

#### Note

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

Caption	The figure shows a version of the interface module with the head station FL SWITCH MM HS
Width	31 mm
Height	75.7 mm



# Technical data

## Dimensions

Depth	72.5 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C 55 °C (non-condensing)
Ambient temperature (storage/transport)	-20 °C 70 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % 95 % (non-condensing)

### Interfaces

Interface	Ethernet: 100Base-FX in acc. with IEEE 802.3
No. of ports	2
Transmission speed	100 Mbps (connection direction downwards)
Transmission length	10000 m (maximum (depends on the fiber used))
Interface	Ethernet: 100Base-FX in acc. with IEEE 802.3
No. of ports	2
Transmission speed	100 Mbps
Transmission length	2800 m (fiberglass with F-G 50/125 1.6 dB/km F800)
	6400 m (fiberglass with F-G 50/125 0.7 dB/km F1200)
	3000 m (fiberglass with F-G 62.5/125 2.6 dB/km F600)
	2800 m (fiberglass with F-G 50/125 1.6 dB/km F800)
Wavelength	1300 nm

### Function

Basic functions	Media module for modular managed switch
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### Supply voltage

Supply voltage	via head station
Typical current consumption	200 mA

### General

Mounting type	In the host system
Type AX	Stand-alone
Net weight	80 g
Housing material	PA

### Mechanical tests

Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Operation: 25g, 11 ms duration, semi-sinusoidal shock impulse
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Storage/Transport: 50g, 11 ms duration, semi-sinusoidal shock impulse
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	Operation/Storage/Transport: 5g, 150 Hz, Criterion 3
Flammability rating according to UL 94	V0



# Technical data

## Conformity with EMC directives

Developed in acc. with standard	IEC 61000-6-2
Test standard	IEC 61000-4-2 (ESD)
Test result	Criterion B
Test standard	IEC 61000-4-3 (immunity to radiated interference)
Test result	Criterion A
Test standard	IEC 61000-4-4 (burst)
Test result	Criterion A
Test standard	IEC 61000-4-5 (surge)
Test result	Criterion A
Test standard	IEC 61000-4-6 (immunity to conducted interference)
Test result	Criterion A
Test standard	IEC 61000-4-8 (immunity to magnetic fields)
Test result	Criterion A
Test standard	EN 55022 (emitted interference)
Test result	Criterion A

## Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Operation: 25g, 11 ms duration, semi-sinusoidal shock impulse
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	Storage/Transport: 50g, 11 ms duration, semi-sinusoidal shock impulse
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	Operation/Storage/Transport: 5g, 150 Hz, Criterion 3
Noise emission	EN 61000-6-3/-4
Noise immunity	EN 61000-6-2:2005
Vibration (storage/transport)	5g, 150 Hz, in acc. with IEC 60068-2-6
Free from substances that could impair the application of coating	In acc. with VW specification
Connection in acc. with standard	CUL
Electrical isolation	100Base-FX // supply
Flammability rating according to UL 94	V0
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz

## **Environmental Product Compliance**

	Lead 7439-92-1	
China RoHS	Environmentally friendly use period: unlimited = EFUP-e	
	No hazardous substances above threshold values	

# Classifications

## eCl@ss

eCl@ss 4.0	27250500



# Classifications

## eCl@ss

eCl@ss 4.1	27250500
eCI@ss 5.0	19030100
eCl@ss 5.1	19030100
eCI@ss 6.0	19170100
eCl@ss 7.0	19170390
eCl@ss 8.0	19170390
eCl@ss 9.0	19170390

### **ETIM**

ETIM 2.0	EC000734
ETIM 3.0	EC000734
ETIM 4.0	EC001467
ETIM 5.0	EC000309
ETIM 6.0	EC000309
ETIM 7.0	EC000309

### **UNSPSC**

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201410
UNSPSC 13.2	43201410
UNSPSC 18.0	43223108
UNSPSC 19.0	43223108
UNSPSC 20.0	43223108
UNSPSC 21.0	43223108

# Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / KC / EAC / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details



# Approvals

UL Recognized	<b>7</b> .1	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Recognized	<b>.R</b> 2	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
КС		http://eng.kcc.go.kr/user/ehpMain.do	KCC-REI- PCK-FL283242
EAC	EAE	1	RU*DE*08.B.00731/19
cULus Recognized	c <b>'71</b> .us		

### Accessories

Accessories

Data cable by the meter

FO cable - PSM-LWL-GDM-RUGGED- 50/125 - 2799322



Fiber glass cable, duplex 50  $\mu$ m/125  $\mu$ m, by the meter, without male connector, for installation in stationary systems and machines

FO cable - PSM-LWL-GDO- 50/125 - 2799432



Fiberglass cable, duplex 50/125  $\mu m,$  by the meter, without connector, for outdoor installation



### Accessories

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



PROFINET HCS GI fiber cables, duplex  $200/230 \, \mu m$ , 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

### Data cable preassembled

FO patch cable - FL MM PATCH 1,0 LC-SC - 2989161



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 LC-SC - 2989268



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 2,0 LC-SC - 2989268



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 1,0 SC-SC - 2901805



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m



### Accessories

FO patch cable - FL MM PATCH 1,0 SC-SC - 2901805



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 5,0 SC-SC - 2901808



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 1,0 SC-ST - 2901809



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: SC duplex/B-FOC(ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 SC-ST - 2901810



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: SC duplex/B-FOC(ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 SC-ST - 2901811



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu$ m (OM2), connector: SC duplex/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m



### Accessories

FO patch cable - FL MM PATCH 1,0 SC-SCRJ - 2901812



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 SC-SCRJ - 2901813



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 2,0 SC-SCRJ - 2901813



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FOC-GDM-RUGGED-1016/IP20/... - 2901558



Robust GOF installation cable for assembly (IP20 heads only) for installation in stationary systems and machines, aramid strain-relief elements, with individual elements made from FRNC material, halogen-free, ozone and UV resistant, with a polyurethane (PUR) outer sheath

FO patch cable - FOC-GDM-RUGGED-1016/... - 1402193



rugged GOF installation cable for inner areas with highly tear-proof aramid strain-relief elements. Individual elements consist of highly flexible FRNC material. The cable is halogen-free, ozone and UV resistant and has a rugged polyurethane (PUR) outer sheath.



### Accessories

FO patch cable - FOC-GDO-1017/IP20/... - 2901559



Highly rugged GOF round cable (IP20 heads only) for assembly and for outdoor installation with integrated moisture barrier as well as rodent-proof scrim. Individual elements made from highly flexible FRNC material. The wire is ozone and UV resistant with a very rugged polyethylene outer sheath.

FO patch cable - FOC-PN-HCS-GI-1005/IP20/... - 2901554



PROFINET HCS GI installation cable for assembly (IP20 heads only), suitable for drag chains, for indoor installation, gradient index fibers. Individual elements made from highly flexible FRNC material. Halogen-free, ozone and UV resistant with a polyurethane (PUR) outer sheath.

FO patch cable - FOC-PN-HCS-GI-1005/... - 1402189



HCS-GI installation cable for assembly for fixed installation in the inner area, with gradient index fibers for the highest performance requirements, as well as individual elements made of highly flexible FRNC material. The cable is halogen-free, ozone and UV resistant and has a rugged polyurethane (PUR) outer sheath.

### Terminal marking

Zack Marker strip, flat - ZBF 29:UNBEDRUCKT - 0829003



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 29 mm, lettering field size: 29 x 6.4 mm, Number of individual labels: 3

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