

FL SWITCH MM HS


Order No.: 2832328



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Modular switch system, head station, can be expanded to 24 Ethernet ports



Commercial data	
GTIN (EAN)	 4 017918 929091
sales group	K000
Pack	1 pcs.
Customs tariff	85176200
Catalog page information	Page 187 (AX-2009)

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Technical data	
Interfaces	
Interface 1	Ethernet
No. of ports	8 (Can be extended to a maximum of 24 ports)
Connection method	8 ports via FL IF (interface) modules
Transmission physics	Copper
Transmission speed	10/100 MBit/s
Interface 2	Ethernet FO
No. of ports	8 (Can be extended to a maximum of 24 ports)
Connection method	Via interface modules

Transmission physics	Multimode glass fiber
Transmission speed	100 MBit/s (full duplex)
Transmission length	Up to 10000 m (depending on the fiber used)
	1300 nm
Interface 3	Serial (V.24 (RS-232))
Connection method	V.24 (RS-232-C), 6-pos. MINI-DIN female connector (PS/2)

Function

Basic functions	Store and forward switch complies with IEEE 802.3 2 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), port security, PROFINET-IO-device, DHCP option 82 relay agent
Management	Integrated Management Agent, SNMP protocol (private MIB, MIB-2, RMON MIB, Bridge MIB), integrated Web server function
Supported browsers	Internet Explorer 5.5 or higher
Redundancy	Spanning Tree 802.1d, Rapid Spanning Tree 802.1w, Fast Ring Detection, Media Redundancy Protocol (MRP) as per IEC 62439
Status and diagnostic indicators	Per Ethernet 2 status LEDs: LINK and switch-over Status Activity, 100, full duplex, supply voltage U_{S1} und U_{S2} (redundant supply voltage) and FAIL, two-digit 7-segment display

Network expansion parameters

Cascading depth	Network, linear, and star structure: any
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 ... 30.2 V DC
Typical current consumption	350 mA (Up to 3500 mA, depending on the configuration)
Max. current consumption	3.5 A

Mechanical tests

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

Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m

Conformity with EMC directives

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 B
Test standard	IEC 61000-4-6 (immunity to conducted interference)
Test result	Criterion A
Test standard	EN 55022 (emitted interference)
Test result	Class A

General data

Width	214 mm
Height	95 mm
Depth	115 mm
Mounting type	DIN rail
Type AX	Stand-alone
Weight	1350 g
Degree of protection	IP20
Ambient temperature (operation)	0 °C ... 55 °C (no condensation)
Ambient temperature (storage/transport)	-20 °C ... 70 °C
Permissible humidity (operation)	10 % ... 95 % (no condensation)
Permissible humidity (storage/transport)	10 % ... 95 % (no condensation)
Air pressure (operation)	80 kPa ... 108 kPa (2000 above sea level)
Air pressure (storage/transport)	70 kPa ... 108 kPa (3000 above sea level)
Housing material	Zinc die-cast, surface bronzed and nickel-plated
Noise emission	EN 61000-6-3/-4
Noise immunity	EN 61000-6-2:2005

Certificates / Approvals



Certification CUL, GOST, UL
 Certification Ex: CUL-EX LIS, UL-EX LIS

Accessories

Item	Designation	Description
Cable/conductor		
2313410	FL FOC PN-C-HCS-GI-200/230	HCS-GI cable for inner laying, duplex 200/230 µm, by the meter without connector, with an increased bandwidth ideal for Ethernet applications, rugged PUR outer sheath , 8 mm outside diameter, color green.
2989161	FL MM PATCH 1,0 LC-SC	Assembled fiber optic cable, break-out cable, glass fiber multi-mode 50/125 µm, connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901805	FL MM PATCH 1,0 SC-SC	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SC-Duplex, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901805	FL MM PATCH 1,0 SC-SC	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SC-Duplex, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901812	FL MM PATCH 1,0 SC-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901809	FL MM PATCH 1,0 SC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2989268	FL MM PATCH 2,0 LC-SC	Assembled fiber optic cable, break-out cable, glass fiber multi-mode 50/125 µm, connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 meter
2989268	FL MM PATCH 2,0 LC-SC	Assembled fiber optic cable, break-out cable, glass fiber multi-mode 50/125 µm, connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 meter

2901813	FL MM PATCH 2,0 SC-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901813	FL MM PATCH 2,0 SC-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901810	FL MM PATCH 2,0 SC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901808	FL MM PATCH 5,0 SC-SC	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SC-Duplex, protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901811	FL MM PATCH 5,0 SC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
1402193	FOC-GDM-RUGGED-1016/...	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.
2901558	FOC-GDM-RUGGED-1016/IP20/...	rugged GOF installation cable (IP20 heads only) 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.
1402194	FOC-GDO-1017/...	Highly rugged GOF round cable 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.
2901559	FOC-GDO-1017/IP20/...	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.
1402189	FOC-PN-HCS-GI-1005/...	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.
2901554	FOC-PN-HCS-GI-1005/IP20/...	HCS-GI installation cable (IP20 heads only) 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.

2799322	PSM-LWL-GDM-RUGGED-50/125	Glass fiber cable, duplex 50/125 µm, by the meter, without connector, for indoor installation
2799432	PSM-LWL-GDO- 50/125	Glass fiber cable, duplex 50/125 µm, by the meter, without connector, for outdoor installation
2744911	PSM-LWL/GDM-RUGGED	Glass fiber cable, duplex 50/125 µm, by the meter, with connector, for indoor installation
2744924	PSM-LWL/GDO	Glass fiber cable, duplex 50/125 µm, by the meter, with connector, for outdoor installation

General

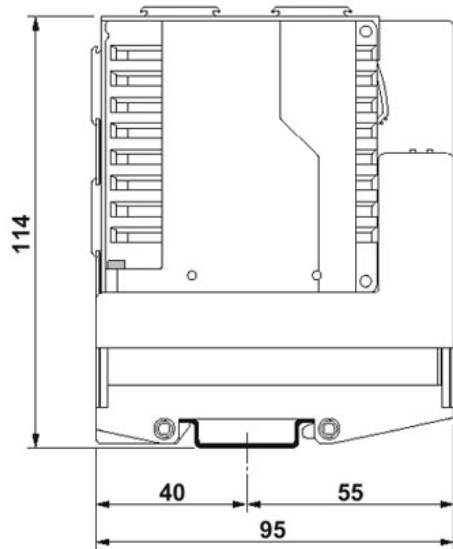
2832425	FL IF 2FX SC-D	FO media module for connecting 100Base-FX multimode glass fibers (1300 nm), connection direction downwards
2832412	FL IF 2FX SC-F	FO media module for connecting 100Base-FX multimode glass fibers (1300 nm), connection direction forwards
2832205	FL IF 2FX SM SC-D	FO interface module for connecting single mode (monomode) glass fibers (1300 nm) to the Factoryline Modular Managed Switch, output downwards
2884033	FL IF 2FX ST-D	Interface module
2891084	FL IF 2POF SCRJ-D	Interface modules, 2 ports, SCRJ for POF/HCS, diagnosis-capable
2832357	FL IF 2TX VS-RJ-D	Media module with two twisted pair ports for the modular managed switch system
2832344	FL IF 2TX VS-RJ-F	Media module with two twisted-pair ports for the modular managed switch system, output towards the front
2832331	FL MXT	Expansion, 8 Ethernet ports

Memory

2832483	FL IF MEM 2TX-D	Memory module, 2 port twisted pair module for saving the switch configuration
2891770	FL IF MEM 2TX-D/MRM	Memory module, 2-port twisted pair module for storing the switch configuration. In addition, the Media Redundancy Manager (MRM) license for use is stored within the Media Redundancy protocol (MRP).

Diagrams/Drawings

Dimensioned drawing



The illustration shows the head station FL SWITCH MM HS with interface module

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