

# 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)               | <br>4 017918 929091 |
| Note                     | Made-to-order   |
| sales group              | K000  |
| Pack                     | 1 pcs.  |
| Customs tariff           | 85176200  |
| Catalog page information | Page 187 (AX-2009)  |

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| Technical data       |  |
|----------------------|--|
| <b>Interfaces</b>    |  |
| Interface            | Ethernet                                     |
| No. of ports         | 8 (Can be extended to a maximum of 24 ports) |
| Type of connection   | 8 ports via FL IF (interface) modules        |
| Transmission physics | Copper                                       |
| Transmission speed   | 10/100 MBit/s                                |
| Interface            | Ethernet FO                                  |
| No. of ports         | 8 (Can be extended to a maximum of 24 ports) |

|                      |  |
|----------------------|--|
| Type of connection   | 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            | Serial (V.24 (RS-232))                                   |
| Type of connection   | 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 <sub>PP</sub> (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**

|  |  |
|--|--|
| Weight                                   | 1350 g   |
| Width                                    | 214 mm   |
| Height                                   | 95 mm  |
| Depth                                    | 115 mm   |
| 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**



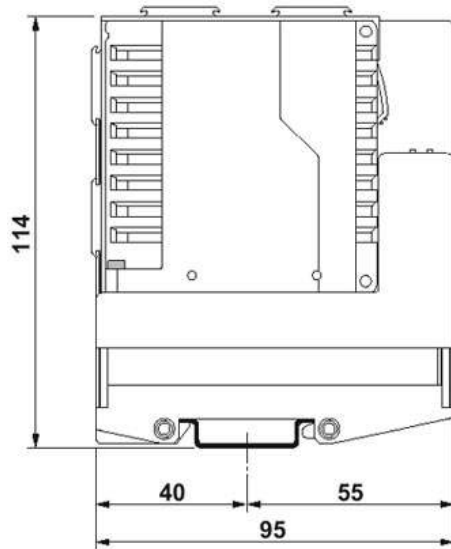
Certification: ABS, CUL, GOST, UL  
 Certification Ex: CUL-EX LIS, UL-EX LIS

**Accessories**

| Item           | Designation           | Description  |
|----------------|-----------------------|--|
| <b>General</b> |                       |  |
| 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   |
| 2832742        | FL IF 2HCS 100-D      | Interface module, 2 ports, 100 Mbps, full duplex, for the Modular Managed Switch System, exit downward                                       |
| 2832852        | FL IF 2POF 10/100-D   | Interface module, 2 ports, 10/100 Mbps, autonegotiation for the Modular Managed Switch System, exit downward                                 |
| 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                                     |
| 2832483        | FL IF MEM 2TX-D       | Memory module, 2 port twisted pair module for saving the switch configuration  |
| 2832739        | FL IF TX/HCS 100-D    | Interface module, one port twisted pair, one port HCS, exit downward   |
| 2832807        | FL IF TX/POF 10/100-D | Interface module, one port twisted pair, one port POF, exit downward   |
| 2832331        | FL MXT                | Expansion, 8 Ethernet ports  |

## Diagrams/Drawings

### Dimensioned drawing



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

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