## Industrial Ethernet Switch - FL SWITCH SFN 5GT - 2891444

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Ethernet switch, five TP-RJ45 ports with 10/100/1000 Mbps on all ports, automatic detection of data transmission speed of 10/100/1000 Mbps (RJ45), autocrossing function, and QoS

## Product Description

The FL SWITCH SFN... range of Factoryline switches with standard functions in numerous versions can be used for quick and cost-effective Ethernet network expansion to the field level. Due to their narrow housing design, the components are suitable for universal remote use in control cabinets and junction boxes. The switches have five or eight ports.

The FL SWITCH SFN 5GT support the auto negotiation function at the twisted pair ports and offer transmission speeds of 10/100/1000 Mbps. Mixed operation for the connection of segments with different data transmission speeds is also supported.

The RJ45 ports offer an auto crossing function, which means it is not necessary to make a distinction between 1:1 and crossover cables.
Switching properties
-Multi-address function
The switch independently learns the addresses for termination devices. The switch can store up to 8192 MAC addresses in its address table. -Quality of service
In case of heavy traffic, packets tagged with higher priority 802.1Q or Differentiated Services values will be given preference. The switch has four internal priority queues
-Multicast filtering
The multicast filter will block PROFINET PTCP-Delay traffic. This is accomplished by filtering frames with the destination MAC address in the range 01-80-C2-00-00-02 through 01-80-C2-00-00-0F. Note that the filter blocks LLDP traffic because PTCP-Delay uses the same MAC address, 01-80-C2-00-00-0E.

Power connection is via a removable COMBICON connector. US is 24 V DC and GND is 0 V DC. \# FE, functional earth.

## Your advantages

$\boxed{\square}$ Auto negotiation and autocrossing detection simplifies installation and setup
$\square$ Jumbo frame support (frame size up to 10,240 bytes/frame)
$\square$ QoS-prioritized (Quality of Service) messages
$\square$ Local diagnostic indicators with LEDs
$\checkmark$ All ports offer transmission speeds of 1000 Mbps

## Key Commercial Data

| Packing unit | 1 pc |
| :---: | :---: |
| GTIN |  |

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## Technical data

## Note

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

## Dimensions

| Width | 28 mm |
| :--- | :--- |
| Height | 110 mm |
| Depth | 70 mm |

Ambient conditions

| Degree of protection | IP 20 |
| :--- | :--- |
| Ambient temperature (operation) | $-10^{\circ} \mathrm{C} \ldots 60^{\circ} \mathrm{C}$ |
| Ambient temperature (storage/transport) | $-10^{\circ} \mathrm{C} \ldots 70^{\circ} \mathrm{C}$ |
| Permissible humidity (operation) | $5 \% \ldots 95 \%$ (non-condensing) |
| Air pressure (operation) | $62 \mathrm{kPa} \ldots 108 \mathrm{kPa}$ (up to 4850 m above mean sea level) |
| Air pressure (storage/transport) | $62 \mathrm{kPa} \ldots 108 \mathrm{kPa}$ (up to 4850 m above mean sea level) |

## Interfaces

| Interface | Ethernet (RJ45) |
| :--- | :--- |
| No. of ports | 5 (RJ45 ports) |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission physics | Ethernet in RJ45 twisted pair |
| Transmission speed | $10 / 100 / 1000 \mathrm{Mbps}$ |

## Function

| Basic functions | Unmanaged switch / auto negotiation, complies with IEEE 802.3, store <br> and forward switching mode |
| :--- | :--- |
| Additional functions | Autonegotiation |
|  | Jumbo frames (Max. 10,240 bytes) |
| PROFINET conformance class | Conformance-Class A |
| Status and diagnostic indicators | LEDs: $U_{\mathrm{s}}$, link and activity per port |

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 | $3.6 \mathrm{~V}_{\mathrm{PP}}$ (within the permitted voltage range) |
| Supply voltage range | $10 \mathrm{~V} \mathrm{DC} \ldots 60 \mathrm{~V}$ DC |
| Typical current consumption | 200 mA (at $\mathrm{U}_{\mathrm{S}}=24 \mathrm{~V}$ DC) |
| Max. current consumption | $580 \mathrm{~mA}(10 \mathrm{~V}$ DC) |

## General

## Industrial Ethernet Switch - FL SWITCH SFN 5GT - 2891444

Technical data
General

| Mounting type | DIN rail |
| :--- | :--- |
| Type AX | Block design |
| Net weight | 205 g |
| Housing material | Aluminum |
| MTTF | 205.1 Years (MIL-HDBK-217F standard, temperature $25^{\circ} \mathrm{C}$, operating <br> cycle 100\%) |

Standards and Regulations

| Noise emission | EN 61000-6-4 |
| :--- | :--- |
| Noise immunity | EN 61000-6-2:2005 |

Environmental Product Compliance

| REACh SVHC | Lead 7439-92-1 |
| :--- | :--- |
| China RoHS | Environmentally Friendly Use Period = 10; |
|  | For details about hazardous substances go to tab "Downloads", <br> Category "Manufacturer's declaration" |

## Drawings

Connection diagram


Classifications
eCl@ss

| eCl@ss 10.0.1 | 19170402 |
| :--- | :--- |
| eCl@ss 11.0 | 19170402 |
| eCl@ss 5.0 | 19030100 |
| eCl@ss 5.1 | 19030100 |
| eCl@ss 6.0 | 19170100 |
| eCl@ss 7.0 | 19170106 |
| eCl@ss 8.0 | 19170106 |
| eCl@ss 9.0 | 19170106 |

ETIM

| ETIM 4.0 | EC000734 |
| :--- | :--- |
| ETIM 5.0 | EC000734 |

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Classifications
ETIM

| ETIM 6.0 | EC000734 |
| :--- | :--- |
| ETIM 7.0 | EC000734 |

UNSPSC

| UNSPSC 13.2 | 43222612 |
| :--- | :--- |
| UNSPSC 18.0 | 43222612 |
| UNSPSC 19.0 | 43222612 |
| UNSPSC 20.0 | 43222612 |
| UNSPSC 21.0 | 4322612 |

Approvals
Approvals

Approvals

UL Listed / cUL Listed / KC / EAC / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

## Approval details

UL Listed (U) http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 140324
cUL Listed
http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm
FILE E 140324

| KC | 「(「) | http://eng.kcc.go.kr/user/ehpMain.do | R-REI-PCK-2891444 |
| :---: | :---: | :---: | :---: |
| EAC | $E \cdot$ |  | $\begin{gathered} \mathrm{RU}^{*}- \\ \text { DE...B. } 00741 / 19 \end{gathered}$ |

cULus Listed

## Industrial Ethernet Switch - FL SWITCH SFN 5GT - 2891444

## Accessories

Accessories
Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../.. - 1411854

Patch cable, degree of protection: IP20, number of positions: $8,10 \mathrm{Gbps}^{2} \mathrm{CAT}_{\mathrm{A}}$, cable outlet: straight

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0-1408360

Patch cable, CAT6 ${ }_{\text {A }}$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0-1408365


Patch cable, CAT6 $_{\text {A }}$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

End block

End clamp - E/NS 35 N-0800886


End clamp, width: 9.5 mm , color: gray

Mounting rail adapter

DIN rail adapter - FL DIN RA - 2891053

The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

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## Accessories

Patch cable

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 2,0-2832289


Patch cable, CAT5, assembled, 2 m

## PCB plug

Printed-circuit board connector - MSTB 2,5/ 3-ST - 1754465
PCB connector, nominal cross section: $2.5 \mathrm{~mm}^{2}$, color: green, nominal current: 12 A , rated voltage (III/2): 320 V , contact surface: Tin, type of contact: Female connector, Number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MSTB 2,5/..-ST, pitch: 5 mm , connection method: Screw connection with tension sleeve, conductor/PCB connection direction: $0^{\circ}$, Stecksystem: CLASSIC COMBICON Locking: without, type of packaging: packed in cardboard

Protective cap
Dust protection - FL RJ45 PROTECT CAP - 2832991


Dust protection caps for RJ45 socket

Safety locking

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## Accessories

Port Guard Security Element - FL SEC PAC 4TX - 2832865

## Layer1 security elements for four RJ45 network connections for use with patch boxes and panels

Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007

Surge protection in accordance with Class $\mathrm{E}_{\mathrm{A}}$ (CAT6 $\mathrm{A}_{\mathrm{A}}$ ), for Gigabit Ethernet (up to 10 Gbps ), token ring, FDDI/ CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

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