

# Industrial Ethernet Switch - FL SWITCH 2608 PN - 1106616

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Managed Switch 2000, 8 M12 ports 10/100 Mbps, degree of protection: IP65, PROFINET Conformance-Class B

## Your advantages

- ✓ Robust IP67 housing
- ✓ Easy panel mounting

## Key Commercial Data

Packing unit	1 pc
GTIN	 4 063151 001650
GTIN	4063151001650
Weight per Piece (excluding packing)	1,400.000 g
Custom tariff number	85176200
Country of origin	Germany

## Technical data

### Dimensions

Width	60 mm
Height	226 mm
Depth	46 mm

### Ambient conditions

Degree of protection	IP65
	IP66
	IP67
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 %
Permissible humidity (storage/transport)	5 % ... 95 %

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## Technical data

### Ambient conditions

Air pressure (operation)	79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating)
Air pressure (storage/transport)	79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating)

### Interfaces

Interface	Ethernet
No. of ports	8 (M12 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status

### Function

Basic functions	Store-and-forward switch, complies with IEEE 802.3
Configuration memory	max. 8 GByte (SD card)
Management	Web-based management (HTTP/HTTPS)
	Role-based user management
	SNMPv1/v2/v3
	Command-line interface (Telnet, SSH)
Diagnostic functions	RMON History
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	N:1-Portmirroring
	ACD (Address Conflict Detection)
	SysLog
	CRC-Surveillance
Filter functions	Quality of Service (8 priority classes)
	Class of Service
	DiffServ/DSCP
	Port-Priorisierung
	VLAN (up to 32 VLANs)
	IGMP Snooping/Querier (v1/v2)
	Auto-Query-Port
	Extended Multicast Filtering
Redundancy	MRP (Media Redundancy Protocol)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support

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## Technical data

### Function

	LACP (Link Aggregation Control Protocol)
Additional functions	Transmission of MMS and GOOSE (IEC 61850-8-1)
	Transmission of Modbus TCP
MAC address table	8k
Latency	$\geq 6.5 \mu\text{s}$ (Store and Forward mode, 10/100 Mbps, depending on the frame size)
IP parameterization	DHCP-Client
	DHCP Option 82 (Relay Agent)
	DHCP server (pool-based, port-based)
	BootP
	DCP (Discovery and Configuration Protocol)
PROFINET device function	PROFINET device
	Fast Startup
PROFINET conformance class	Conformance-Class B
Time synchronization	SNTP (Simple Network Time Protocol)
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail, 2 LEDs per Ethernet port (Link/Activity and Speed)

### 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 (redundant)
Residual ripple	3.6 V <sub>pp</sub> (within the permitted voltage range)
Supply voltage range	9 V DC ... 57 V DC
Typical current consumption	180 mA (at U <sub>S</sub> = 24 V DC and 25 °C ambient temperature)
Max. current consumption	0.52 A (U <sub>S</sub> = min, T <sub>amb</sub> = max)
Current consumption	180 mA

### General

Mounting type	Wall mounting
Type AX	Stand-alone
Net weight	1400 g
Housing material	Zinc die-cast
Note	Support by phone or on-site (fee is charged)
Latency	$\geq 6.5 \mu\text{s}$ (Store and Forward mode, 10/100 Mbps, depending on the frame size)
MTTF	461.15 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)

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## Technical data

### General

	149.69 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	19.78 Years (SN 29500 standard, temperature 70°C, operating cycle 100%)

### Connection data

Connection method	M12 connector (L-coded)
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### Standards and Regulations

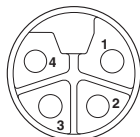
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Interference emission	EN 61000-6-3 (conducted emissions) Class B
Conducted noise emission	EN 61000-6-3 (conducted emissions) Class B
Immunity to surge	EN 61000-6-2 EN 61000-4-5 (surge) Criterion B
Immunity to burst	EN 61000-6-2 EN 61000-4-4 (EFT burst) Criterion A
Immunity to EF	EN 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A
Immunity to ESD	EN 61000-6-2 EN 61000-4-2 (ESD) Criterion B
Immunity to conducted interference	EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A
Type of test	Free fall in accordance with EN 61131-2
Noise emission	EN 61000-6-3
Noise immunity	EN 61000-6-2
Vibration (storage/transport)	5g, 150 Hz, in acc. with IEC 60068-2-6
Free from substances that could impair the application of coating	Yes
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
Shock (operation)	30g (EN 60068-2-27)

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

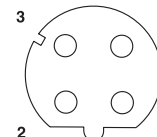
## Drawings

Schematic diagram



Connection of the supply voltage  
 PIN 1 Us1  
 PIN 2 GND  
 Pin 3 GND

Schematic diagram



Assignment of the LAN socket  
 Pin 1 Transmit +  
 Pin 2 Receive +  
 Pin 3 Transmit -

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Pin 4 Us2  
Pin 5 N.C.

Pin 4 Receive -

## Classifications

### eCl@ss

eCl@ss 10.0.1	19170401
eCl@ss 11.0	19170401
eCl@ss 9.0	19170106

### ETIM

ETIM 7.0	EC000734
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### UNSPSC

UNSPSC 18.0	43222612
UNSPSC 19.0	43222612
UNSPSC 20.0	43222612
UNSPSC 21.0	43222612

## Approvals

### Approvals

Approvals

EAC / cULus Listed / PROFINET

Ex Approvals

### Approval details

EAC		RU D- DE.GB09.B.00312
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cULus Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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PROFINET	Z13092
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## Industrial Ethernet Switch - FL SWITCH 2608 PN - 1106616

### Accessories

#### Accessories

#### Data cable preassembled

Network cable - VS-M12MS-M12MS-93C-LI/2,0 - 1416200



Network cable, PROFINET CAT5 (100 Mbps), 4-position, PUR, green RAL 6018, Plug straight M12, on Plug straight M12, cable length: 2 m

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Network cable - NBC-MRD-MRD SCO-PN/.../... - 1408624



Network cable, PROFINET CAT5 (100 Mbps), EtherCAT® CAT5 (100 Mbps), 4-position, Variable cable type, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on Plug angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

### Drivers and interfaces

Software - FL SNMP OPC SERVER V3 - 2701139



SNMP-OPC server, German and English, for monitoring and configuration of SNMP-capable equipment in HMI and SCADA systems

### Network management software

Software - FL NETWORK MANAGER BASIC - 2702889



FL Network Manager, SNMP-based configuration and firmware update software, for easy startup of Managed Switches