

## Industrial Ethernet Switch - FL SWITCH 1708 M12 POE - 2701883

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PoE+ Ethernet switch, 8 Ethernet ports in M12 format, automatic detection of the data transmission speed of 10/100/1000 Mbps, jumbo frames up to 9600 bytes, coupling of network segments with different transmission speeds, autocrossing function, degree of protection IP67

### Product Description

The Gigabit Power over Ethernet switch, which is suitable for industrial applications, enables both energy and data to be transmitted via an Ethernet cable according to IEEE 802.3at/802.3af. Up to 30 W feed power per port is possible. The device is a compact switch in robust IP67 metal housing. It has eight 8-pos. M12 Ethernet connectors, which enable PoE/PoE+ devices to be supplied and operation with speeds of 10/100/1000 Mbps. As it supports jumbo frames up to 9720 bytes, the switch is ideal for networking cameras. A total power of 200 W is available for supplying up to eight PoE/PoE+ devices. The switch generates the required 54 V DC for Power over Ethernet according to IEEE 802.3at/802.3af from the 24 V module supply for the connected termination devices.

### Your advantages

- Robust IP67 housing
- Easy panel mounting
- PoE+ supply to 8 ports
- Gigabit support
- Jumbo frames with up to 9720 bytes
- Metal housing

**RoHS**

### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 004181
GTIN	4055626004181
Weight per Piece (excluding packing)	2,600.000 g
Custom tariff number	85176200
Country of origin	Germany

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## Technical data

### Dimensions

Width	176 mm
Height	112 mm
Depth	100 mm

### Ambient conditions

Degree of protection	IP65
	IP66
	IP67
Ambient temperature (operation)	-40 °C ... 70 °C (non-condensing)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Permissible humidity (operation)	10 % ... 95 %
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Air pressure (operation)	86 kPa ... 108 kPa (2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (3500 m above sea level)

### Interfaces

Interface	Ethernet (PoE)
No. of ports	8 (RJ45 POE ports)
Connection method	M12 connector, 8-pos.
Note on the connection method	X-coded
Transmission physics	Copper
Transmission speed	10/100/1000 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status
Interface	Signal contact
Connection method	M12 connector (A-coded)

### Function

Basic functions	Store-and-forward switch, 10/100/1000 Mbps, auto negotiation, complies with standard IEEE 802.3, 4 priority classes according to IEEE 802.1p, PoE according to IEEE 802.3at/802.3af, jumbo frames up to 9720 bytes
Additional functions	Autonegotiation
PROFINET conformance class	Conformance-Class A
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 3 LEDs per Ethernet port (Link, Activity, and PoE Status), and PoE performance
Signal contact control voltage	24 V DC (typical)
Signal contact control current	100 mA (24 V DC)

### Network expansion parameters

Cascading depth	Network, linear, and star structure: any
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## Technical data

### Network expansion parameters

Maximum conductor length (twisted pair)	100 m
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### Supply voltage

Supply voltage	24 V DC (M12 connector)
Residual ripple	3.6 V <sub>PP</sub>
Supply voltage range	18.7 V DC ... 30.5 V DC
Typical current consumption	300 mA (at U <sub>S</sub> = 24 V DC)
Max. current consumption	12 A (Maximum, nominal load)

### General

Mounting type	Wall mounting
Type AX	Stand-alone
Net weight	2300 g
Housing material	Zinc die-cast, surface bronzed and nickel-plated
Note	NOTE: Meet noise immunity requirements Connect FE using a mounting screw when mounting on a conductive surface. When mounting on a non-conductive surface, FE is connected using the mounting screw via a cable lug.
MTTF	208.85 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	93.43 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	9.98 Years (SN 29500 standard, temperature 70°C, operating cycle 100%)

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	10g, 16 ms, 1000 shocks, in all space directions
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	30g, half-sine shock pulse
Noise emission	EN 55022 / Class B
Noise immunity	EN 61000-4-2
Free from substances that could impair the application of coating	Yes

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Industrial Ethernet Switch - FL SWITCH 1708 M12 POE - 2701883

### Classifications

#### eCl@ss

eCl@ss 10.0.1	19170401
eCl@ss 11.0	19170401
eCl@ss 5.0	19030100
eCl@ss 5.1	19030100
eCl@ss 6.0	19170100
eCl@ss 7.0	19170106
eCl@ss 9.0	19170106

#### ETIM

ETIM 4.0	EC000734
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	43222612

### Accessories

#### Accessories

##### Circular connector (cable-side)

Data connector - VS-08-M12MS-10G-P SCO - 1417430



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, shielded, Plug straight M12 SPEEDCON, Coding: X, Piercecon<sup>®</sup>, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Power connector - SACC-M12FST-3PECON-PG11-M - 1404644



Power connector, Power, 4-position, unshielded, Socket straight M12, Coding: T, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg11, external cable diameter 8 mm ... 10 mm, For direct current up to 12 A/63 V

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### Accessories

#### Data cable preassembled

Network cable - NBC-M12MSX/ 1,0-94F/M12MSX - 1407483



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight M12 / IP67, coding: X, cable length: 1 m

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Network cable - NBC-M12MSX/ 2,0-94F/M12MSX - 1407484



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight M12 / IP67, coding: X, cable length: 2 m

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Network cable - NBC-M12MSX/ 5,0-94F/M12MSX - 1407485



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight M12 / IP67, coding: X, cable length: 5 m

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Network cable - NBC-M12MSX-M12MSX-10G/.../... - 1408644



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on Plug straight M12 SPEEDCON / IP67, coding: X, cable length: Free input (0.2 ... 40.0 m)

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Network cable - NBC-M12MSX/ 1,0-94F/R4AC - 1407471



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight RJ45 / IP20, coding: X, cable length: 1 m

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### Accessories

Network cable - NBC-M12MSX/ 2,0-94F/R4AC - 1407472



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight RJ45 / IP20, cable length: 2 m

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Network cable - NBC-M12MSX/ 5,0-94F/R4AC - 1407473



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug straight RJ45 / IP20, coding: X, cable length: 5 m

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Network cable - NBC-M12MSX-R4AC-10G/.../... - 1408647



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on Plug straight RJ45 / IP20, cable length: Free input (0.2 ... 40.0 m)

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Network cable - NBC-M12MSX/ 1,0-94F - 1407467



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on free cable end, coding: X, cable length: 1 m

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Network cable - NBC-M12MSX/ 2,0-94F - 1407468



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on free cable end, coding: X, cable length: 2 m

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### Accessories

Network cable - NBC-M12MSX/ 5,0-94F - 1407469



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on free cable end, coding: X, cable length: 5 m

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Network cable - NBC-M12MSX-10G/.../... - 1408648



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on free cable end, cable length: Free input (0.2 ... 40.0 m)

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Network cable - NBC-M12MSX-R4RC-10G/.../... - 1408646



Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps), CC-Link IE CAT6<sub>A</sub> (10 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON / IP67, coding: X, on Plug straight RJ45 Push Pull / IP67, cable length: Free input (0.2 ... 40.0 m)

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### Plug for cable screw gland

Screw plug - PROT-M12 - 1680539



An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

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### Protective cap

Sealing cap - PROT-M12 FS - 1560251



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

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### Accessories

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