

FL SWITCH 1001T-4POE-GT-SFP

1000 Mbps Ethernet switch with four PoE+ ports, one standard port, and one SFP module port

Data sheet
3889_en_E

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1 Description

The FL SWITCH 1001T-4POE-GT-SFP switch is a six-port unmanaged Ethernet switch supporting PoE+ (Power-over-Ethernet) on four ports and SFP module flexibility on one port. The switch is classified as power source equipment (PSE) and meets the IEEE 802.3at specification. When powering IEEE 802.3at-compliant powered devices (PD), the integrated power supply can provide up to 30 W from each PoE port, and eliminates the need for additional wiring.

Features

- Compliant with IEEE 802.3at
- PoE ports can supply 30 W per port
- End point PSE
- Automatic detection of IEEE 802.3at or 802.3af PD
- Alternative A power approach: Power via RJ45 data pins
- PoE status LED per port
- Wide -40°C to 75°C ambient operating temperature
- Auto negotiation and auto cross
- Wide 18 to 57 V DC power supply input range
- Redundant power supply inputs
- Jumbo frame support up to 10240 bytes



Make sure you always use the latest documentation.
It can be downloaded from the product at phoenixcontact.net/products.



This data sheet is valid for all products listed on the following page:

2 Ordering data

Description	Type	Order No.	Pcs./Pkt.
PoE+ Ethernet switch conforms to IEEE 802.3at. Includes four 10/100/1000 Mbps PoE+ ports, one standard 10/100/1000 Mbps RJ45 port, one 1000 Mbps SFP port, a total PoE system budget of 120 W, and jumbo frames up to 10240 bytes.	FL SWITCH 1001T-4POE-GT-SFP	1026932	1
Accessories	Type	Order No.	Pcs./Pkt.
PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm ² , number of positions: 7, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin	MSTB 2,5/ 7-ST	1754546	50
Primary-switched QUINT POWER power supply for DIN rail mounting with free choice of output characteristic curve and SFB (Selective Fuse Breaking) technology, input: 1-phase, output: 48 V DC/5 A	QUINT4-PS/1AC/48DC/5	2904610	1
Primary-switched QUINT POWER power supply for DIN rail mounting with free choice of output characteristic curve and SFB (Selective Fuse Breaking) technology, input: 1-phase, output: 48 V DC/10 A Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 48 V DC/10 A	QUINT4-PS/1AC/48DC/10	2904611	1
Primary-switched TRIO power supply for DIN rail mounting, input: 1-phase, output: 48 V DC/5 A, dynamic boost, tool-free fast connection technology for solid and stranded conductors with ferrule Primary-switched power supply unit, TRIO POWER, Push-in connection, DIN rail mounting, output: 48 V DC/5 A	TRIO-PS-2G/1AC/48DC/5	2903159	1
Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: single phase, output: 48 V DC/10 A Primary-switched power supply unit, TRIO POWER, Push-in connection, DIN rail mounting, output: 48 V DC/10 A	TRIO-PS-2G/1AC/48DC/10	2903160	1
Primary-switched UNO power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/150 W Primary-switched power supply unit, UNO POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC/6.25 A	UNO-PS/1AC/24DC/150W	2904376	1
Primary-switched UNO power supply for DIN rail mounting, input: single-phase, output: 24 V DC/240 W Primary-switched power supply unit, UNO POWER, Screw connection, DIN rail mounting, output: 24 V DC/10 A	UNO-PS/1AC/24DC/240W	2904372	1
Factoryline Power over Ethernet splitter (PD) for separating power and data according to IEEE 802.3af and at, no configuration required, can be used with 10, 100, 1000 Mbps networks, 24 V DC output voltage	FL PD 1001 T GT	2891042	1

Accessories	Type	Order No.	Pcs./Pkt.
Gigabit SFP module for transmission up to 1 km with a wavelength of 850 nm. (Add-ons)	FL SFP SX	2891754	1
Gigabit SFP module for transmission up to 30 km with a wavelength of 1310 nm. (Add-ons)	FL SFP LX	2891767	1
Gigabit SFP module for transmission up to 80 km with a wavelength of 1,550 nm. (Add-ons)	FL SFP LH	2989912	1
Gigabit SFP WDM set for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm.	FL SFP WDM10-SET	2702442	1
Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm.	FL SFP WDM10-A	2702440	1
Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1550/1310 nm.	FL SFP WDM10-B	2702441	1
Gigabit SFP module for transmission up to 100 m.	FL SFP GT	2989420	1
Surge protection in accordance with Class E _A (CAT6 _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.	DT-LAN-CAT.6+	2881007	1
Patch cable, CAT5, assembled, 0.5 m Patch cable, CAT5 (Cable/conductor)	FL CAT5 PATCH 0,5	2832263	1
Patch cable, CAT5, assembled, 1 m Patch cable, degree of protection: IP20, CAT5 (Cable/conductor)	FL CAT5 PATCH 1,0	2832276	1
Patch cable, CAT5, assembled, 2 m Patch cable, CAT5 (Cable/conductor)	FL CAT5 PATCH 2,0	2832289	10
Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6 _A , cable outlet: straight	NBC-R4AC-R4AC-IE8A/.../...	1411854	1
Patch cable, CAT6 _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, degree of protection: IP20, cable length: 2 m, number of positions: 8, 10 Gbps, CAT6 _A	NBC-R4AC/10G-R4AC/10G-94F/2,0	1408360	1
Patch cable, CAT6 _A , 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m Patch cable, degree of protection: IP20, number of positions: 8, CAT6 _A	NBC-R4AC/10G-R4AC/10G-94F/3,0	1408365	1
Layer1 security elements for four RJ45 network connections for use with patch boxes and panels Port Guard Security Element, degree of protection: IP20, material: Plastic	FL SEC PAC 4TX	2832865	1

Accessories	Type	Order No.	Pcs./Pkt.
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.	FL DIN RA	2891053	1
Dust protection caps for RJ45 socket. Dust protection, color: black	FL RJ45 PROTECT CAP	2832991	10
End clamp, width: 9.5 mm, color: gray End clamp, width: 9.5 mm, height: 32.8 mm, material: PA, length: 48.6 mm, color: gray (Mounting)	E/NS 35 N	0800886	50

3 Technical data

General data	
Width	30 mm
Height	149 mm
Depth	107.8 mm
Weight	492 g
Mounting type	DIN rail
Ambient temperature (operation)	-40°C ... 75°C
Ambient temperature (storage/transport)	-40°C ... 85°C
Permissible humidity (operation)	5% ... 95% (non-condensing)
Permissible humidity (storage/transport)	5% ... 95% (non-condensing)
Air pressure (operation)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)
Air pressure (storage/transport)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)
Degree of protection	IP30
Power	
Connection method	COMBICON plug-in screw terminal block
Conductor cross section, solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section [AWG]	24 ... 12
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 57 V DC
Residual ripple	3.6 V _{PP} (within the permitted voltage range)
Current consumption, typical	214 mA (at U _S = 24 V DC)
Current consumption, maximum	5.5 A
Inrush current	33.8 A (24 V DC for 3540 µs)
Ethernet	
Connection method	RJ45 socket
Transmission speed	10/100/1000 Mbps
Transmission length	100 m (Between transmitter / receiver)
No. of channels	1 (RJ45 ports)

Fiber optic interface

Connection method	SFP ports
Transmission speed	1000 Mbps (full duplex)
Transmission length	up to 80 km (Depending on the fiber/SFP module used)
No. of channels	1 (SFP ports)

Ethernet (PoE)

Connection method	RJ45 socket
Transmission speed	10/100/1000 Mbps
Transmission length	100 m (Between transmitter / receiver)
No. of channels	4 (RJ45 ports)

Signal contact

Control voltage	48 V DC
Control current	0.5 A

Conformance with EMC directives

IEC 61000-4-2 (ESD)	Criterion B
IEC 61000-4-3 (immunity to radiated interference)	Criterion A
IEC 61000-4-4 (burst)	Criterion A
IEC 61000-4-5 (surge)	Criterion B
IEC 61000-4-6 (immunity to conducted interference)	Criterion A
IEC 61000-4-8 (immunity to magnetic fields)	Criterion A
EN 55032 (emitted interference)	Criterion A

4 Structure

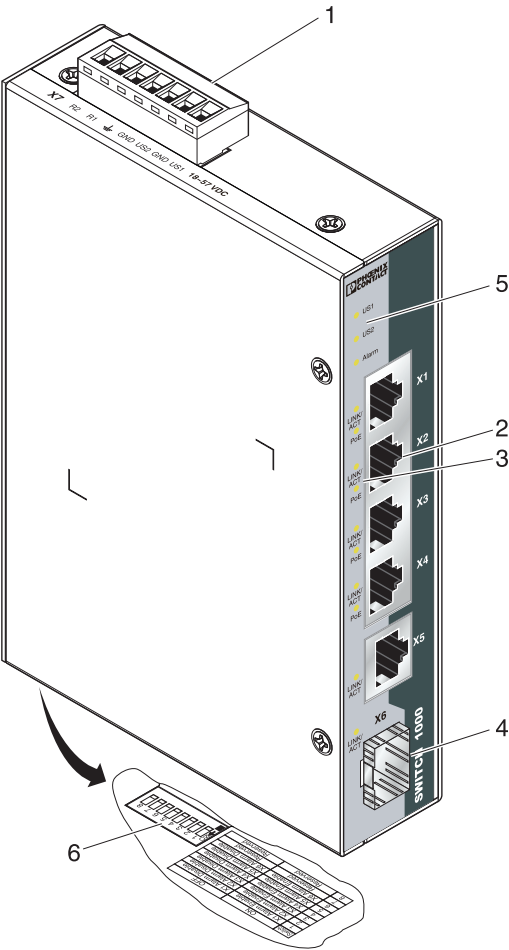


Figure 1 Connectors and LEDs

- 1 Power supply/remote alarm connector
- 2 PoE RJ45 ports
- 3 Port LEDs
- 4 SFP ports
- 5 Power LEDs (US1/US2)
- 6 DIP switch

4.1 Diagnostics and status indicators

Port LEDs

Label	Activity	Indication
LINK/ACT	Solid green	10/100 Mbps link
	Flashing green	Data transferring at 10/100 Mbps
	Solid orange	1000 Mbps link
	Flashing orange	Data transferring at 1000 Mbps
PoE	Solid orange	PoE power is present

Switch LEDs

	On	Off
US1/US2	Power is present	Power is not present
Alarm	US1 or US2 is missing or link failure	Both power inputs are ok

5 Installation



This device is designed for SELV and PELV operation according to IEC 61140/EN 61140.

5.1 Mounting

Position the device on the upper edge of the DIN rail and snap it into place with a downward motion.

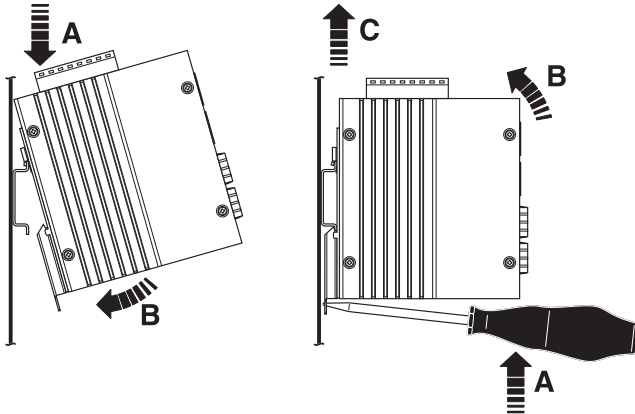


Figure 2 Assembly/removal

5.2 Removal

Pull the release lever open using a screwdriver. Rotate the device upward and remove from DIN rail.

5.3 Power supply

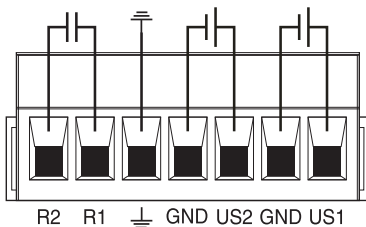


Figure 3 Redundant power supply connection

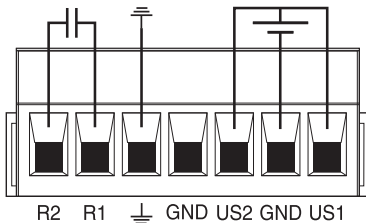


Figure 4 Single power supply connection

Use power conductors 0.2 to 2.5 mm² (24 to 12 AWG).
Torque wire clamp screws 0.5 to 0.6 Nm (5 to 7 lb-in.).

5.4 Alarm contacts

Connect the alarm contacts (R1 and R2) to an appropriate monitoring device. If either power supply fails (≤ 8 V) or a port fails (LNK), the internal dry contacts close.

6 Switching characteristics

Store and forward

All data telegrams received by the switch are saved and their validity checked. Invalid or faulty data packets (>10240 bytes or CRC errors) and fragments (<64 bytes) are rejected. Valid data telegrams are forwarded by the switch. The switch always forwards the data using the data transmission speed that is used in the destination network segment.

Multi-address function

The MAC address table size is 8192.

The switch independently learns the addresses for termination devices, which are connected via a port, by evaluating the source addresses in the data telegrams. Only packets with unknown addresses, with a source address of this port or with a multicast/broadcast address in the destination address field, are forwarded via the corresponding port. The switch can store addresses in its address table with an aging time of five minutes. This is important when more than one termination device is connected to one or more ports. In this way, several independent subnetworks can be connected to one switch.



A restart deletes the entire address table.