FL SWITCH IRT TX 3POF - Industrial Ethernet Switch

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Ethernet Switch, one port in RJ45 format and three ports in POF SC-RJ format for PROFINET RT/IRT, DIN rail mountable

Product description

The FL SWITCH IRT are four-port switches for PROFINET applications. The ERTEC 400 switch architecture ensures optimum integration and diagnostics of infrastructure components in PROFINET networks. This enables the switches and all their functions to be configured by a higher-level PROFINET controller. Using the available GSDML or FDCML files, easy and reliable integration into the higher-level engineering system is ensured. The devices offer the following features:
- Diagnostics and parameterization are carried out via the PROFINET protocol from the controller.
- The switches can be parameterized by any controller using the PROFINET functionality and integrated into the engineering system.
- LLDP support for topology detection in the PROFINET environment.
- DCP protocol for IP address assignment directly from the controller.
- MEM PLUG parameterization memory for storing the device configuration.
- POF-SCRJ ports for polymer or PCF fibers for field assembly including monitoring of the path quality via PROFINET and diagnostics LEDS directly on the switch.
- Thanks to the use of ERTEC 400, the switches from the FL SWITCH IRT range support PROFINET IRT including the cut-through method.
- Web-based management for easy monitoring and configuration in a web browser.
- SNMP support for monitoring and configuration with standard IT tools.

Your advantages

• MRP (client and manager)

• PN IO device

• Cut-through switching

• SNMP

• Flat design

Commercial data

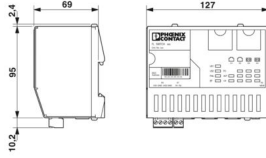|	
Item number	2700692
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DNN124
Catalog page	Page 325 (C-6-2019)
GTIN	4046356658461
Weight per piece (including packing)	627.1 g
Weight per piece (excluding packing)	450 g
Country of origin	DE

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2700692

https://www.phoenixcontact.com/us/products/2700692

Technical data

Dimensions

Dimensional drawing	
Width	127 mm
Height	95 mm
Depth	69 mm

Material specifications

Material base plate	Die-cast aluminum, corrosion-resistant
Housing material	Aluminum, transparently anodized

Mounting

Mounting type	DIN rail mounting

Interfaces

Ethernet

Connection method	RJ45
Transmission speed	10/100 Mbps
Transmission physics	Copper
Transmission length	100 m (per segment)
Signal LEDs	Supply voltage, data transmission, error, link, activity
No. of channels	1 (RJ45 port)

POF/PCF

Connection method	POF SC-RJ
Transmission speed	100 Mbps (full duplex)
Transmission physics	POF-SCRJ
Transmission length	up to 100 m (depending on the fiber used)
Wavelength	650 nm
No. of channels	3 (SC-RJ)

Product properties

Product type	Switch
Product family	Managed Switch IRT
Type	Stand-Alone

Switch functions

Basic functions	Cut-through/store-and-forward switch complies with IEEE 802.3 2 priority classes in accordance with IEEE802.1 P, TCP/IP

	protocol, DCP capable, integrated web server function, PROFINET device.
Signal contact control voltage	24 V (typical)
Signal contact control current	typical
PROFINET conformance class	Conformance-Class C
PROFINET device function	PROFINET device
PROFINET specification	PROFINET-IO RT/IRT, Spec. 2.x
Redundancy	MRP (Media Redundancy Protocol)
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 3 LEDs per Ethernet port (Link, Activity, and FO status), and BF (Bus Fail)
Supported browsers	Internet Explorer 5.5 or higher

Security functions

Basic functions	Cut-through/store-and-forward switch complies with IEEE 802.3 2 priority classes in accordance with IEEE802.1 P, TCP/IP protocol, DCP capable, integrated web server function, PROFINET device.

Electrical properties

Local diagnostics	US1/2 Supply voltage US1, US2 Green LED
	FAIL Div. LED red
	LINK Link status Green LED
	ACT Receiving/sending telegrams Green LED
	BF Bus errors LED red
	FO Orange LED
Maximum power dissipation for nominal condition	6.48 W
Test section	Between the Ethernet ports 1500 V AC 1 min.
	24 V supply (US) / FE 500 V DC 1 min.
Transmission medium	Copper

Supply

Supply voltage (DC)	24 V DC (redundant)
Supply voltage range	18.5 V DC ... 30.2 V DC
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm²
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Max. current consumption	270 mA
Typical current consumption	270 mA (at U_S = 24 V DC)
Current consumption	270 mA (at 24 V DC)

Function

Signal contact control voltage	24 V (typical)
Signal contact control current	typical

Supply: Module electronics

Supply voltage	24 V DC
Supply voltage range	18 V DC ... 32 V DC (including ripple)

Connection data

Connection method	Screw connection
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12
Stripping length	7 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz
Air pressure (operation)	86 kPa ... 108 kPa (2000 m above mean sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (3500 m above sea level)

EMC data

Conformance with EMC directives	EN 55022 (emitted interference) Class A
	EN 61000-4-2 (ESD) Criterion A
	EN 61000-4-3 (electromagnetic fields) Criterion A, 10 V/m
	EN 61000-4-5 (surge) Criterion B
	EN 61000-4-4 (EFT burst) Criterion A, 2.2 kV
	EN 61000-4-6 EN 61000-4-6 (line noise immunity) Criterion A, Field intensity: 10 V/m
	EN 61000-4-3 (electromagnetic fields) EN 61000-4-3 (electromagnetic fields) Criterion A, 10 V/m
	60950-1
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

System properties

Functionality

Basic functions	Cut-through/store-and-forward switch complies with IEEE 802.3 2 priority classes in accordance with IEEE802.1 P, TCP/IP protocol, DCP capable, integrated web server function, PROFINET device.

System requirements

Supported browsers	Internet Explorer 5.5 or higher

Signaling

Status display	LEDs: US1, US2 (power supply), Fail (alarm contact), 3 LEDs per Ethernet port (Link, Activity, and FO status), and BF (Bus Fail)

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Drawings

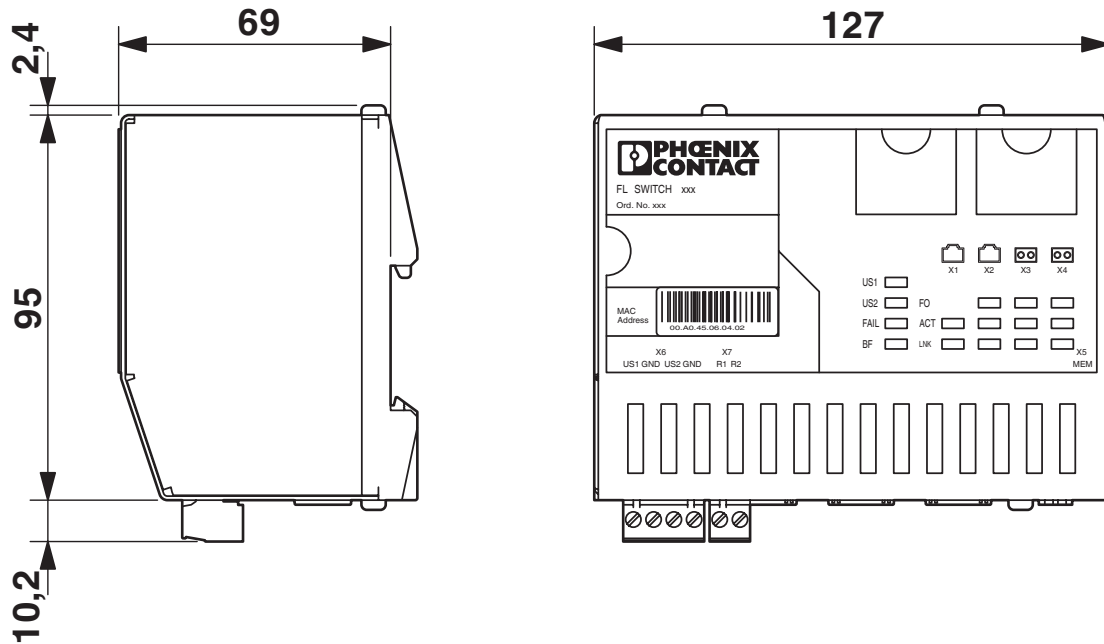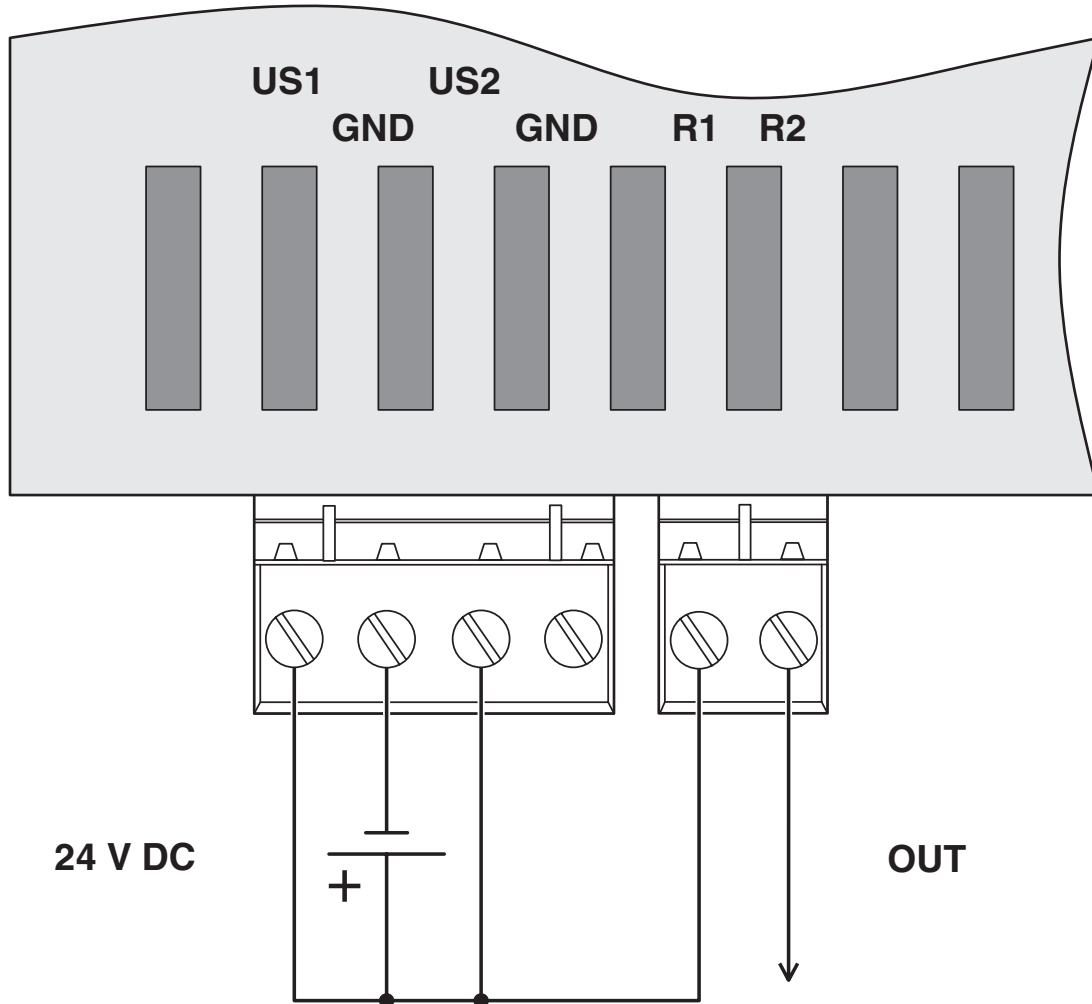Dimensional drawing

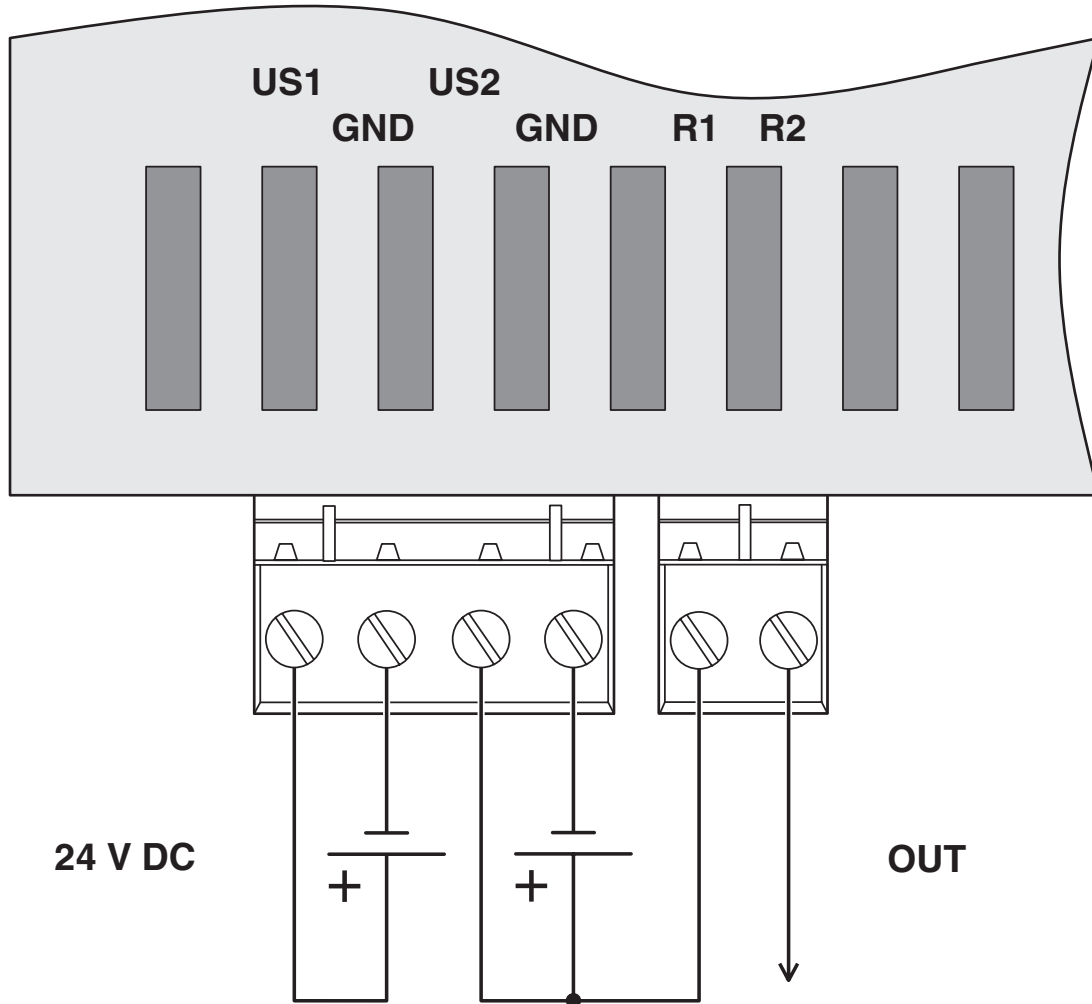# FL SWITCH IRT TX 3POF - Industrial Ethernet Switch

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Connection diagram

US1 US2
GND GND R1 R2

24 V DC

+

OUT

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Connection diagram

US1   **US2**

GND   **GND**   **R1**   **R2**

24 V DC   **+**   **+**   **OUT**

Classifications

ECLASS

ECLASS-11.0	19170401
ECLASS-12.0	19170401
ECLASS-13.0	19170401

ETIM

ETIM 9.0	EC000734

UNSPSC

UNSPSC 21.0	43222600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ded7eedc-13bc-424f-ad9b-c2a11d12fa6b

Accessories

FL MEM PLUG - Configuration memory

2891259

https://www.phoenixcontact.com/us/products/2891259

Exchangeable configuration memory of the device settings for simple device exchange and set-up

QUINT-PS/1AC/24DC/ 5 - Power supply unit

2866750

https://www.phoenixcontact.com/us/products/2866750

Primary-switched power supply unit QUINT POWER, Pluggable screw connection, DIN rail mounting, SFB Technology (Selective Fuse Breaking), input: 1-phase, output: 24 V DC / 5 A

FL DIN RA - DIN rail adapter

2891053

https://www.phoenixcontact.com/us/products/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.

FL MEM PLUG/MRM - Configuration memory

2891275

https://www.phoenixcontact.com/us/products/2891275

Exchangeable configuration memory of the device settings for simple device exchange and set-up In addition, the Media Redundancy Manager (MRM) license for use is stored within the Media Redundancy protocol (MRP).

FL CAT5 PATCH 0,5 - Patch cable

2832263

https://www.phoenixcontact.com/us/products/2832263

Patch cable, CAT5, assembled, 0.5 m

FL CAT5 PATCH 1,0 - Patch cable

2832276

https://www.phoenixcontact.com/us/products/2832276

Patch cable, CAT5, assembled, 1 m

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FL CAT5 PATCH 2,0 - Patch cable

2832289

https://www.phoenixcontact.com/us/products/2832289

Patch cable, CAT5, assembled, 2 m

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

1411854

https://www.phoenixcontact.com/us/products/1411854

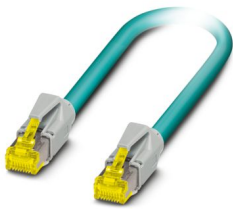Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet
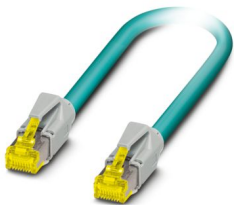
NBC-R4AC/10G-R4AC/10G-94F/2,0 - Patch cable

1408360

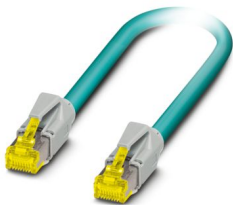https://www.phoenixcontact.com/us/products/1408360

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

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

1408365

https://www.phoenixcontact.com/us/products/1408365

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

NBC-R4AC/1,0-93B/R4AC - Patch cable

1408968

https://www.phoenixcontact.com/us/products/1408968

Patch cable, degree of protection: IP20, cable length: 1 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

NBC-R4AC/2,0-93B/R4AC - Patch cable

1408969

https://www.phoenixcontact.com/us/products/1408969

Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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NBC-R4AC/5,0-93B/R4AC - Patch cable

Patch cable, degree of protection: IP20, cable length: 5 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET