

# Industrial Ethernet Switch - FL SWITCH IRT 4TX - 2700689

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Ethernet switch, four ports in RJ45 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

- Flat design
- Cut-through switching
- PN IO device
- MRP (client and master)
- SNMP



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356651479

## Technical data

### Note

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## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

Width	127 mm
Height	95 mm
Depth	69 mm

### 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)
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
No. of ports	4 (RJ45 ports)
Transmission physics	Copper
Transmission speed	10/100 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Supply voltage, data transmission, error, link, activity

### Function

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.
Redundancy	MRP (Media Redundancy Protocol)
Supported browsers	Internet Explorer 5.5 or higher
PROFINET device function	PROFINET device
PROFINET specification	PROFINET-IO RT/IRT, Spec. 2.x
PROFINET conformance class	Conformance-Class C
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)
Signal contact control voltage	24 V (typical)
Signal contact control current	typical

### Network expansion parameters

Cascading depth	Line and star structure: As desired
Maximum conductor length (twisted pair)	100 m

### Supply voltage

Supply voltage	24 V DC (redundant)
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## Technical data

### Supply voltage

Residual ripple	3.6 V <sub>pp</sub> (within the permitted voltage range)
Supply voltage range	18.5 V DC ... 30.2 V DC
Typical current consumption	165 mA (at U <sub>S</sub> = 24 V DC)
Max. current consumption	165 mA
Current consumption	165 mA (at 24 V DC)

### General

Mounting type	DIN rail
Type AX	Stand-alone
Net weight	450 g
Housing material	Aluminum, transparently anodized
Material base plate	Die-cast aluminum, corrosion-resistant

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm

### 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	Operation: 30g, 3 x in each space direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	Operation/Storage/Transport: 5g, 150 Hz, Criterion 3
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	0.5 m
Type of test	Vibration resistance according to IEC 61373, EN 61373
Test result	Category 1, Class B
Vibration (storage/transport)	5g, 10 Hz ... 150 Hz, in accordance with IEC 60068-2-6
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz ... 150 Hz

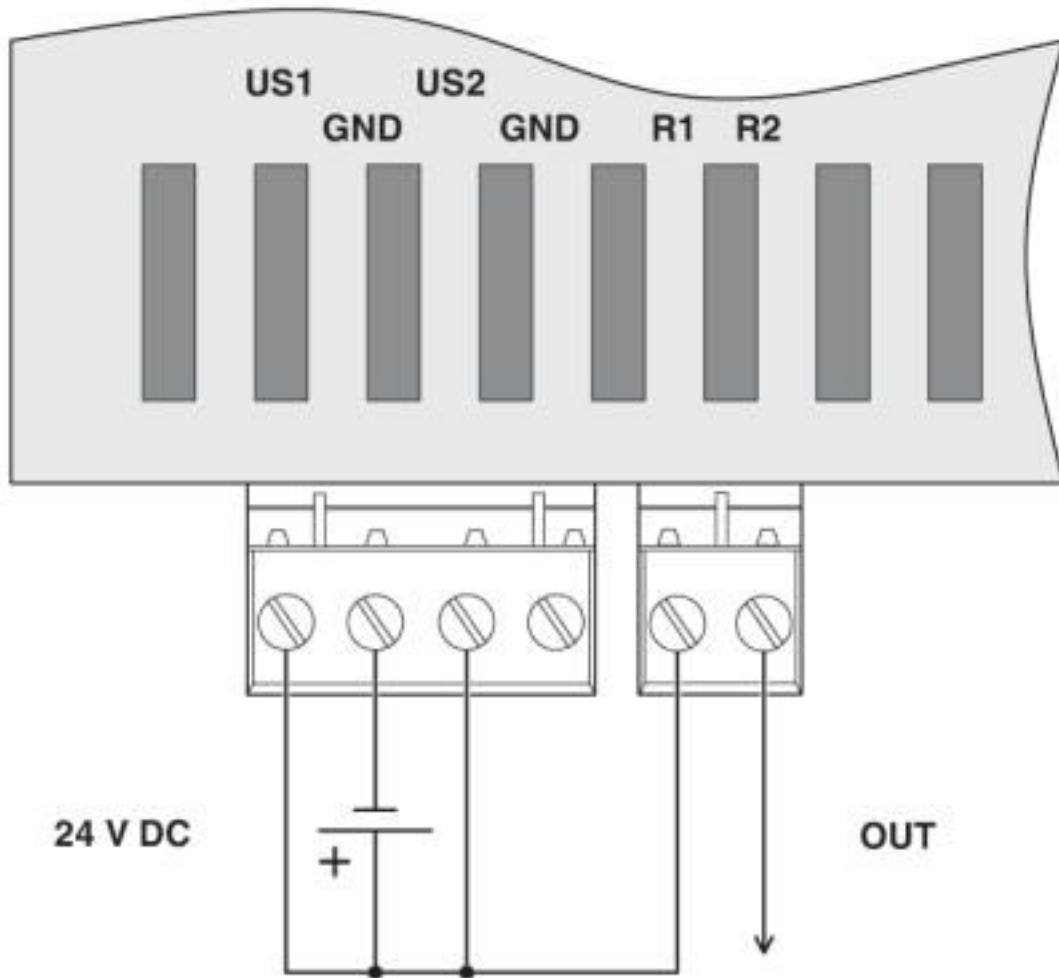
### Environmental Product Compliance

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 IRT 4TX - 2700689

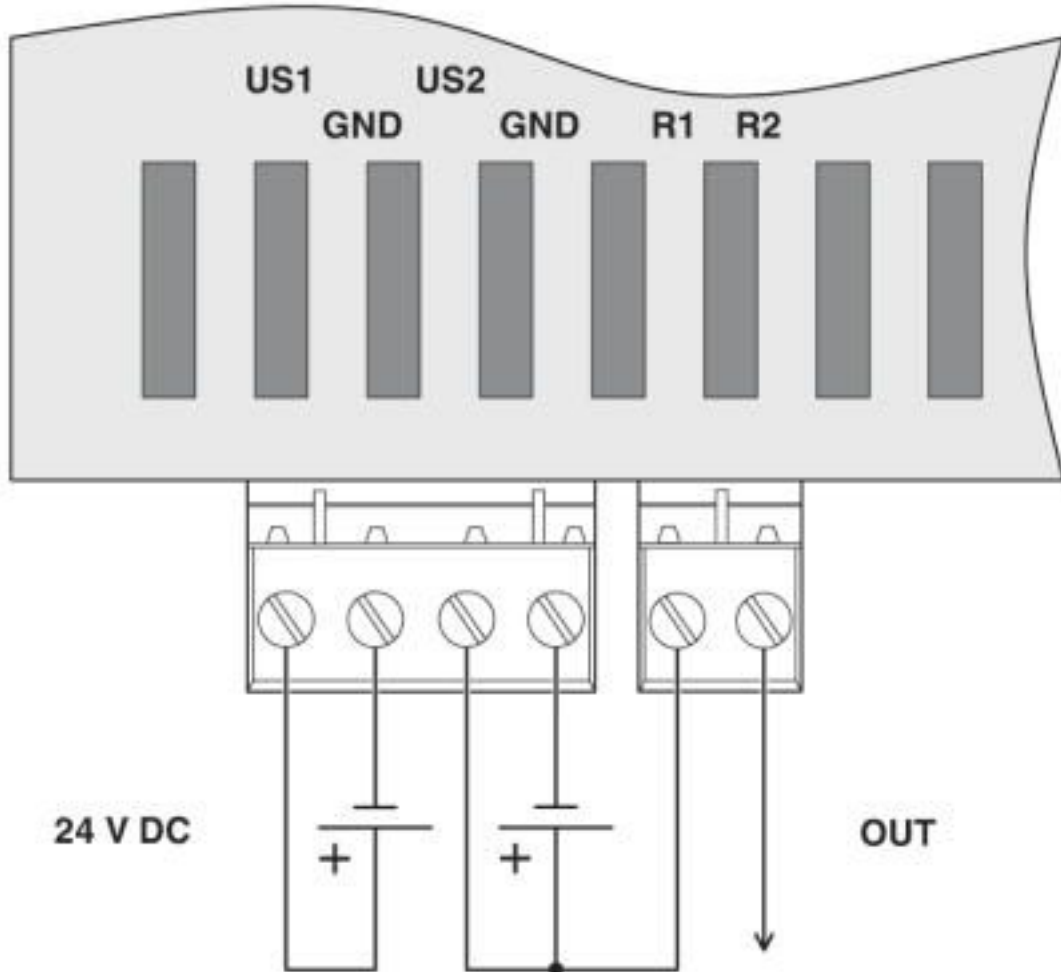
## Drawings

Connection diagram



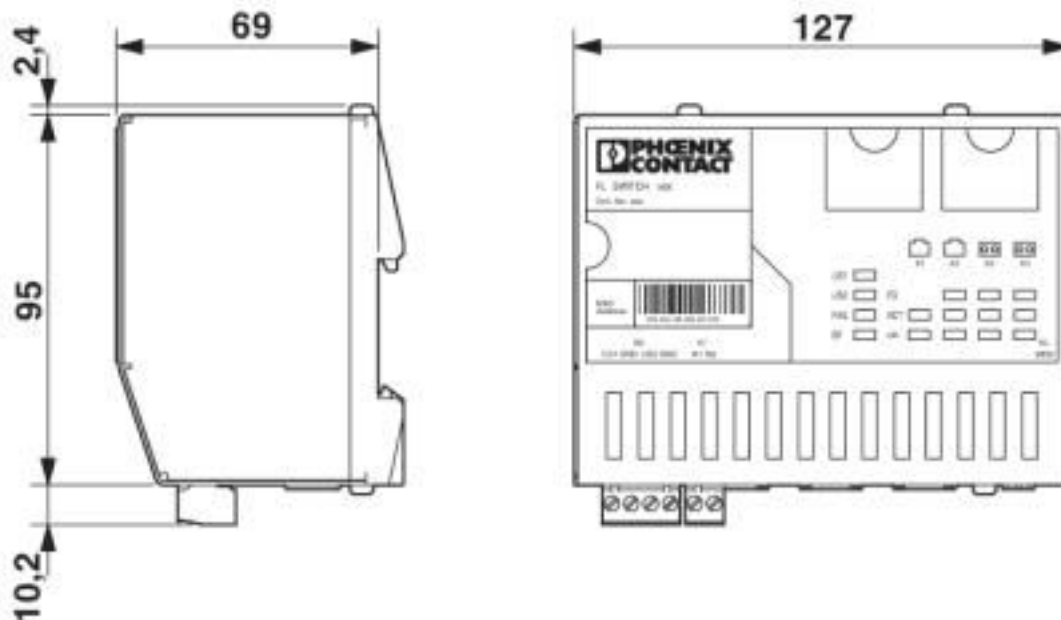
# Industrial Ethernet Switch - FL SWITCH IRT 4TX - 2700689

Connection diagram



# Industrial Ethernet Switch - FL SWITCH IRT 4TX - 2700689

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	19170401
eCl@ss 4.0	27250500
eCl@ss 4.1	27250500
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 3.0	EC000734
ETIM 4.0	EC000734
ETIM 5.0	EC000734
ETIM 6.0	EC000734
ETIM 7.0	EC000734

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201410

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## Classifications

### UNSPSC

UNSPSC 13.2	43222612
UNSPSC 18.0	43222612
UNSPSC 19.0	43222612
UNSPSC 20.0	43222612
UNSPSC 21.0	43222612

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / PROFINET / cULus Listed

#### Ex Approvals

### Approval details

UL 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 140324
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cUL 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 140324
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PROFINET	Z11869
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cULus Listed	
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## Accessories

### Accessories

#### Configuration memory

Configuration memory - FL MEM PLUG - 2891259



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

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### Accessories

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Configuration memory - FL MEM PLUG/MRM - 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).

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### Data cable preassembled

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



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

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



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m

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### Accessories

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

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Patch cable - NBC-R4AC/5,0-93B/R4AC - 1408970



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20 to straight RJ45 plug/IP20, length: 5 m

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### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

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Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

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Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m

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### Power supply

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### Accessories

Power supply unit - QUINT-PS/1AC/24DC/ 5 - 2866750



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

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