

Industrial Ethernet Switch - FL SWITCH IRT 4TX - 2700689

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Ethernet switch, four ports in RJ45 format for PROFINET RT, DIN rail mountable

Product Description

The FL SWITCH IRT are four port switches for PROFINET applications. The ERTEC 400 switch architecture ensures maximum integration and diagnostics of infrastructure components within PROFINET networks. This enables the switches and all their functions to be configured from a higher-level PROFINET controller. The higher-level engineering system can be integrated easily and reliably using the available GSDML or FDCML files. The devices offer the following features:

- Diagnostics and parameterization are carried out via the PROFINET protocol from the controller.
- The switches can be parameterized in any controller using the PROFINET functionality and integrated into the engineering system.
- LLDP support for topology detection in the PROFINET environment.
- DCP protocol assigns IP addresses straight from the controller.
- MEM plug - parameterization memory to save device configuration.
- POF-SCRJ ports for polymers that can be assembled in the field or PCF fibers including monitoring of path quality via PROFINET and diagnostic LEDs located directly on the switch.
- The switches from the FL SWITCH IRT family are prepared by using ERTERC 400 for PROFINET IRT including the cut-through procedures.
- Web-based management for easy monitoring and configuration in web browsers.
- SNMP support for monitoring and configuration using standard IT tools.

Product Features

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



Ethernet



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	540.0 g
Custom tariff number	85176200
Country of origin	Germany

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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 1	Ethernet
No. of ports	4 (RJ45 ports)
Connection method	RJ45
Transmission physics	Copper
Transmission speed	10/100 MBit/s
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.
Supported browsers	Internet Explorer 5.5 or higher
Redundancy	MRP (Media Redundancy Protocol)
PROFINET IO device function	PROFINET device
PROFINET IO specification	PROFINET-IO RT, Spec. 2.x, conformance class B
PROFINET IO 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

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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)
Residual ripple	3.6 V _{PP} (within the permitted voltage range)
Supply voltage range	18.5 V DC ... 30.2 V DC
Typical current consumption	165 mA (at U _S = 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 ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm

Mechanical tests

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

Conformity with EMC directives

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Conformity with EMC directives

Test standard	EN 55022 (emitted interference)
Test result	Class A
Test standard	EN 61000-4-2 (ESD)
Test result	Criterion A
Test standard	EN 61000-4-3 (electromagnetic fields)
Test result	Criterion A, 10 V/m
Test standard	EN 61000-4-5 (surge)
Test result	Criterion B
Test standard	EN 61000-4-4 (EFT burst)
Test result	Criterion A, 2.2 kV
Test standard	EN 61000-4-6 (line noise immunity)
Test result	Criterion A; Field intensity: 10 V/m
Test standard	EN 61000-4-3 (electromagnetic fields)
Test result	Criterion A, 10 V/m
Test standard	60950-1

Classifications

eCl@ss

eCl@ss 4.0	27250501
eCl@ss 4.1	27250501
eCl@ss 5.0	27250501
eCl@ss 5.1	27250501
eCl@ss 6.0	19170106
eCl@ss 7.0	19170106
eCl@ss 8.0	19170106

ETIM

ETIM 3.0	EC000734
ETIM 4.0	EC000734
ETIM 5.0	EC000734

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201410
UNSPSC 13.2	43201410

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Approvals

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UL Listed / cUL Listed / PROFINET / cULus Listed

Ex Approvals


Approvals submitted

Approval details

UL Listed 

cUL Listed 

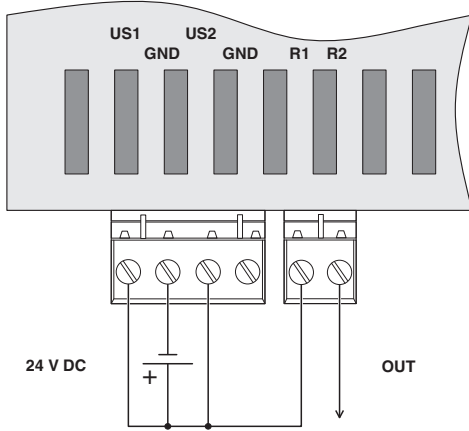
PROFINET

cULus Listed 

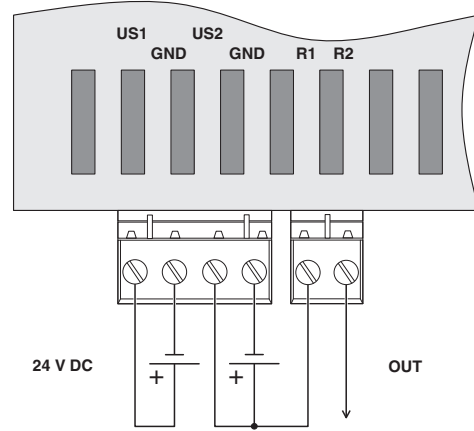
Drawings

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Connection diagram



Connection diagram



Dimensional drawing

