FL SWITCH 1605 M12 - Industrial Ethernet Switch

2700200

https://www.phoenixcontact.com/au/products/2700200

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Unmanaged Switch 1600 series, 5 M12 ports 10/100 Mbps, degree of protection: IP65/IP66/IP67 , PROFINET Conformance-Class A

Product description

Ethernet interface: The FL SWITCH 1605 M12 has five Ethernet ports on the front in M12 format, to which only CAT5/CAT6 Ethernet cables with D-coded M12 connectors can be connected. The data transmission speed is 10 Mbps or 100 Mbps. In addition, each port has an autocrossing function at 100 Mbps. It is not necessary to distinguish between 1:1 and crossover Ethernet cables. Switching properties of the FL SWITCH 1605 M12 - Store and Forward: The switch independently learns the addresses for terminal 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 up to 4096 addresses in its address table with an aging time of 40 seconds. This is important if more than one terminal device is connected to one or more ports. In this way, several independent subnets can be connected to one switch. - Multi-address function: The switch independently learns the addresses for terminal 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 up to 4096 addresses in its address table with an aging time of 40 seconds. This is important if more than one terminal device is connected to one or more ports. In this way, several independent subnets can be connected to one switch. - Quality of Service (QoS) With the aid of the Quality of Service function, the switch can process PROFINET traffic preferentially. To do this, the switch detects the QoS priority from the Ethernet packets and forwards the Ethernet packets with higher priority first.

Your advantages

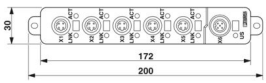
- Robust IP67 housing
- Easy panel mounting

Commercial data

Item number	2700200
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNN114
Product key	DNN114
Catalog page	Page 300 (C-6-2019)
GTIN	4046356499781
Weight per piece (including packing)	266.2 g
Weight per piece (excluding packing)	220 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	30 mm
Height	200 mm
Depth	41 mm
Drill hole spacing	186 mm

Notes

General	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.

Note on application

Note on application	Only for industrial use

Material specifications

Color	anthracite
Material base plate	High-grade steel (1.4301/1.4016)
Housing material	PBT

Mounting

Mounting type	Panel mounting

Interfaces

Ethernet

Connection method	M12, shielded
Note on the connection method	D-coded
Transmission speed	10/100 Mbps
Transmission physics	Twisted pair connection
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status
No. of channels	5 (M12 ports)

Product properties

Product type	Switch
Product family	Unmanaged Switch 1600
Type	Stand-Alone

MTTF	302.5 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	156.52 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	40.43 Years (SN 29500 standard, temperature 55°C, operating cycle 100%)

Insulation characteristics

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
Overvoltage category	II
Degree of pollution	2

Switch functions

Basic functions	Unmanaged switch/auto negotiation, complies with standard IEEE 802.3, store-and-forward switching mode, 2 priority classes according to IEEE802.1p, PTCP filter
PROFINET conformance class	Conformance-Class A
Status and diagnostic indicators	LEDs: US (power supply), 2 LEDs per Ethernet port (Link and Activity)
Additional functions	Autonegotiation

Security functions

Basic functions	Unmanaged switch/auto negotiation, complies with standard IEEE 802.3, store-and-forward switching mode, 2 priority classes according to IEEE802.1p, PTCP filter

Electrical properties

Current consumption	40 mA ... 80 mA (at 24 V DC)
Local diagnostics	US Supply voltage US Green LED
	X1...X5 Link status Green LED
	X1...X5 Receiving/sending telegrams Green LED
Maximum power dissipation for nominal condition	0.96 W
Test section	24 V supply / functional ground 500 V DC 1 min
	Ethernet interface/all other potentials 2.25 kV DC 1 min
Transmission medium	Copper

Supply

Supply voltage (DC)	24 V DC (M12 connector)
Supply voltage range	9 V DC ... 32 V DC
Power supply connection	via M12 connector
Residual ripple	3.6 V_{PP}
Max. current consumption	40 mA (+10 mA per port)
Typical current consumption	40 mA (at U_S = 24 V DC)
Current consumption	40 mA ... 80 mA (at 24 V DC)

Connection data

Connection method	M12, shielded

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP66
	IP67
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Altitude	max. 2000 m (above mean sea level (operation))
Permissible humidity (operation)	10 % ... 95 %
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
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

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conformance with EMC directives	Noise emission test in accordance with EN 61000-6-3/IEC 61000-6-3 EN 61000-6-3 (noise emission) Class B
	EN 55011 (emitted interference) Class B
	EN 55022 (emitted interference) Class B
	EN 61000-4-2 (ESD) Criterion B
	EN 61000-4-3 (electromagnetic fields) Criterion A, 20 V/m
	EN 61000-4-3 (electromagnetic fields) Criterion A, 10 V/m
	EN 61000-4-4 Criterion A, 2.2 kV
	EN 61000-4-5 (surge) Criterion A, interfaces 1 kV
	EN 61000-4-6 (line noise immunity) Criterion A, Field intensity: 10 V/m
	EN 60950-1
Noise immunity	EN 61000-6-2

Noise emission

Standards/regulations	EN 61000-6-4

System properties

Functionality

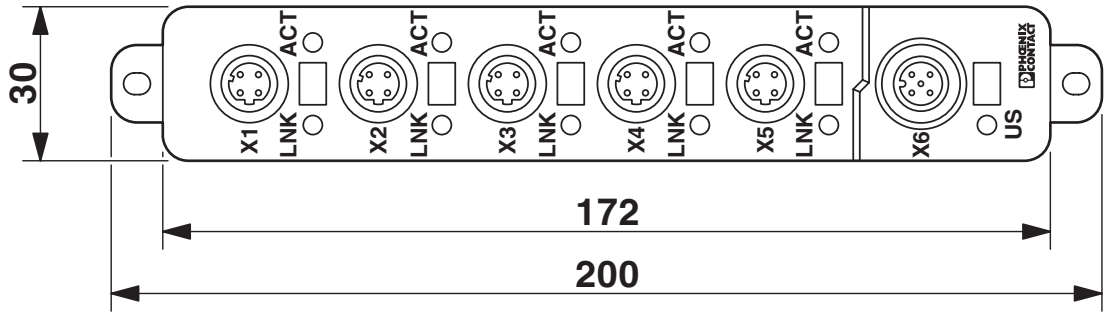
Basic functions	Unmanaged switch/auto negotiation, complies with standard IEEE 802.3, store-and-forward switching mode, 2 priority classes according to IEEE802.1p, PTCP filter

Signaling

Status display	LEDs: US (power supply), 2 LEDs per Ethernet port (Link and Activity)

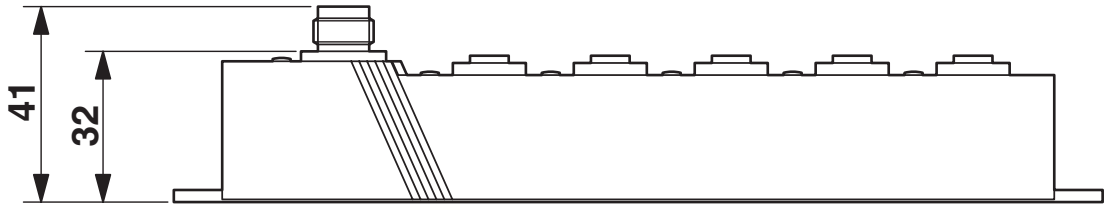
Drawings

Dimensional drawing



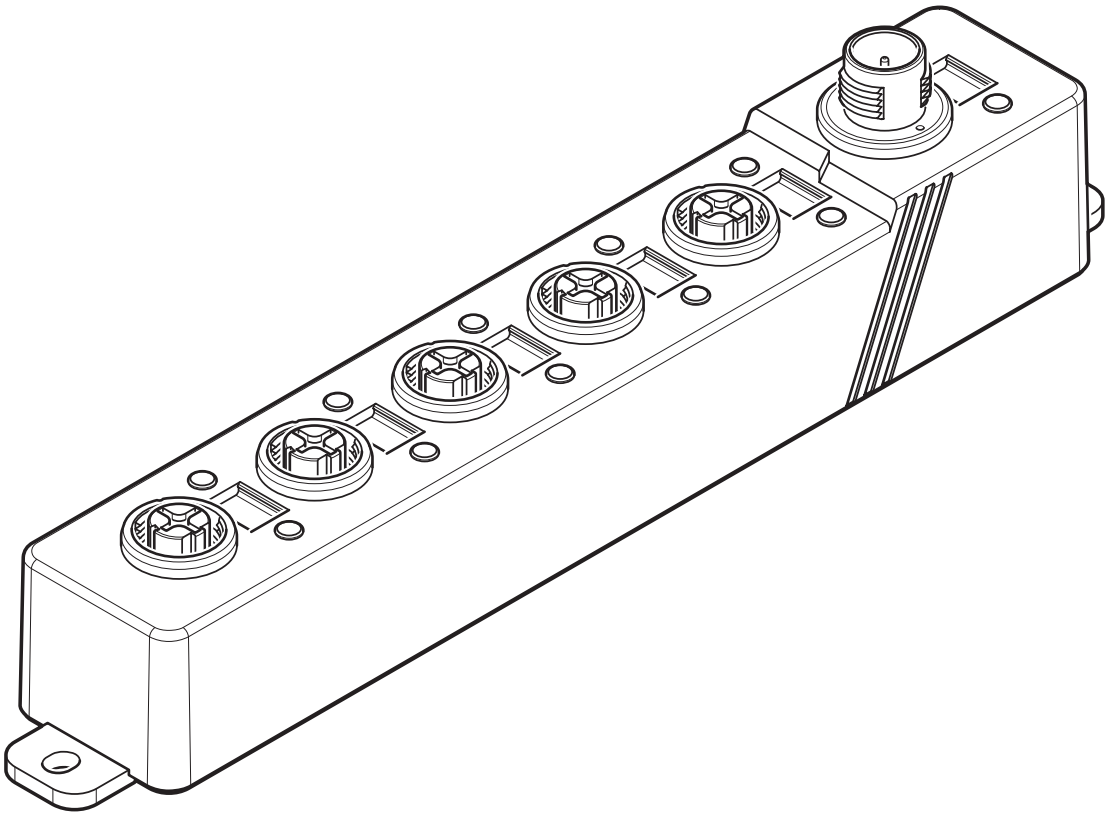
Top view (dimensions in mm)

Dimensional drawing

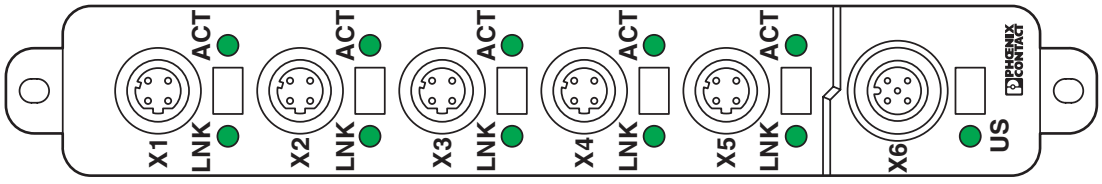


Side view (dimensions in mm)

Product drawing

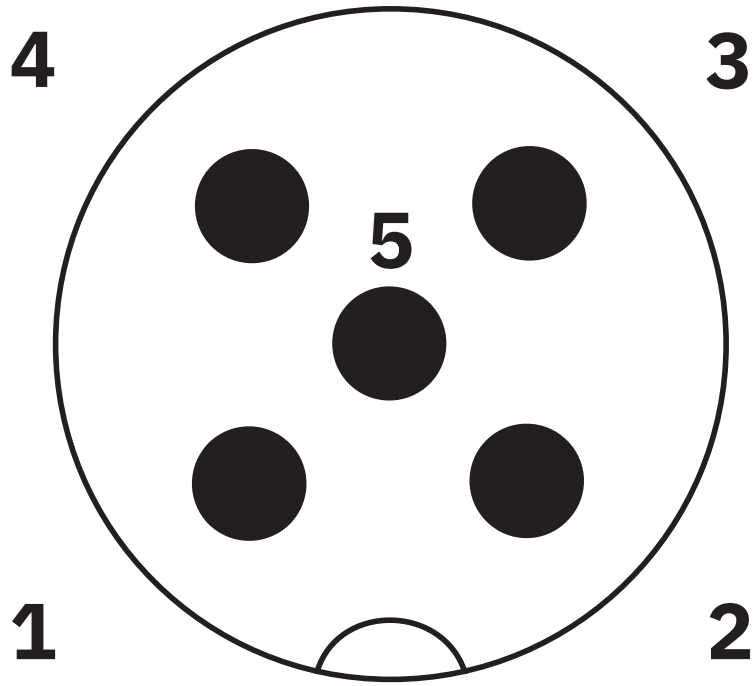


Product drawing



X1 - X5: Ethernet connection
X6: Supply voltage
ACT: ACT LEDs
LNK: Link LED
US: U_{S1} LED

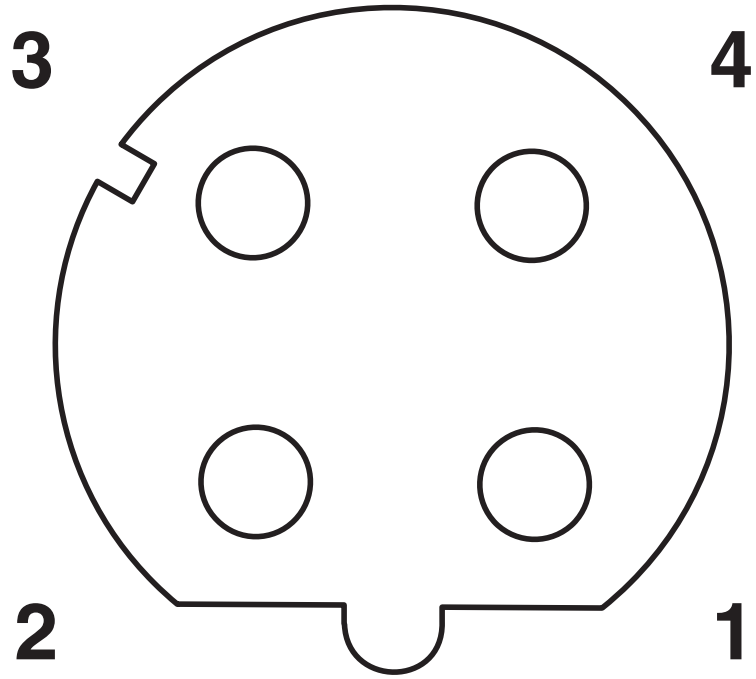
Schematic diagram



Connecting the supply voltage

PIN 1 Us
PIN 2 n.c.
Pin 3 GND
Pin 4 n.c.
Pin 5 functional ground

Schematic diagram



Assignment of the LAN socket

Pin 1 Transmit +
Pin 2 Receive +
Pin 3 Transmit -
Pin 4 Receive -

Approvals

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cUL Recognized
Approval ID: E140324

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cUL Recognized
Approval ID: E140324

cULus Listed
Approval ID: E238705

Classifications

ECLASS

ECLASS-13.0	19170402

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	47848e5f-3738-4420-8dd5-3bdd7beddecf

EF3.0 Climate Change

CO2e kg	20.37 kg CO2e

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