

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Unmanaged Switch 1700 series, 5 M12 ports 10/100/1000 Mbps, degree of protection: IP65/IP66/IP67, Ambient temperature (operation): -40 °C ... 70 °C, Supply voltage range: 9 V DC ... 32 V DC, PROFINET Conformance Class A, Extended temperature range

Product description

Ethernet interface: The FL SWITCH 1705 M12 has five front Ethernet ports in M12 format. Only CAT5/CAT6 Ethernet cables with X-coded M12 connectors can be connected to these. The data transmission rate is 10 Mbps, 100 Mbps, or 1000 Mbps. Switching properties of FL SWITCH 1705 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	1386090
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN19
Product key	DNN114
GTIN	4063151761813
Weight per piece (including packing)	261.3 g
Weight per piece (excluding packing)	220 g

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

Customs tariff number	85176200
Country of origin	TW

FL SWITCH 1705 M12 - Industrial Ethernet Switch

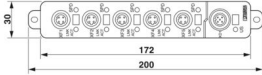


1386090

<https://www.phoenixcontact.com/us/products/1386090>

Technical data

Dimensions

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

Notes

Note on application	Only for industrial use
---------------------	-------------------------

Material specifications

Color (Housing)	black (RAL 9005)
Material base plate	High-grade steel (1.4301/1.4016)
Housing material	PBT

Mounting

Mounting type	Panel mounting
---------------	----------------

Interfaces

Ethernet

Connection method	M12 connector, X-coded
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100/1000 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 1700
Type	Stand-alone
MTTF	1068.7 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) 457.1 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) 64.1 Years (SN 29500 standard, temperature 55°C, operating cycle 100%)
Special properties	Extended temperature range

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

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, 4 priority classes according to IEEE 802.1p, PTCP filter
PROFINET conformance class	Conformance Class A
Status and diagnostic indicators	LEDs: US (power supply), 2 LEDs per Ethernet port (Link and Activity)

Security functions

Basic functions	Unmanaged switch/auto negotiation, complies with standard IEEE 802.3, store-and-forward switching mode, 4 priority classes according to IEEE 802.1p, PTCP filter
-----------------	--

Electrical properties

Current consumption	103 mA ... 332 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 1.5 kV AC 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	332 mA
Typical current consumption	103 mA (at U _S = 24 V DC)
Current consumption	103 mA ... 332 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

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

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)
Shock (operation)	30g (EN 60068-2-27)
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 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

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conformance with EMC directives	EN 61000-6-4 (interference) Class A
	EN 61000-4-2 (ESD) Criterion A
	EN 61000-4-3 (electromagnetic fields) Criterion A
	EN 61000-4-4 (EFT burst) Criterion A
	EN 61000-4-5 (surge) Criterion A, interfaces 1 kV
	EN 61000-4-6 (line noise immunity) Criterion A, Test voltage 10 V
Noise immunity	EN 60950-1
	EN 61000-6-2:2019

Noise emission

Standards/regulations	EN_61000-6-4:2019
-----------------------	-------------------

System properties

Functionality

Basic functions	Unmanaged switch/auto negotiation, complies with standard IEEE 802.3, store-and-forward switching mode, 4 priority classes according to IEEE 802.1p, PTCP filter
-----------------	--

Signaling

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

FL SWITCH 1705 M12 - Industrial Ethernet Switch

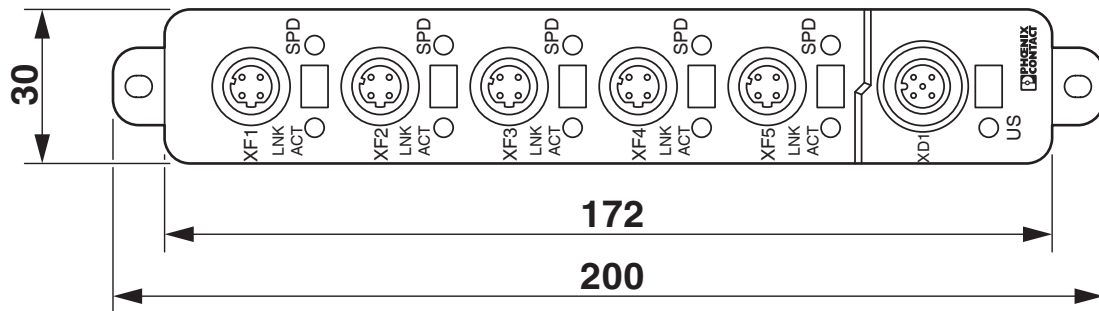


1386090

<https://www.phoenixcontact.com/us/products/1386090>

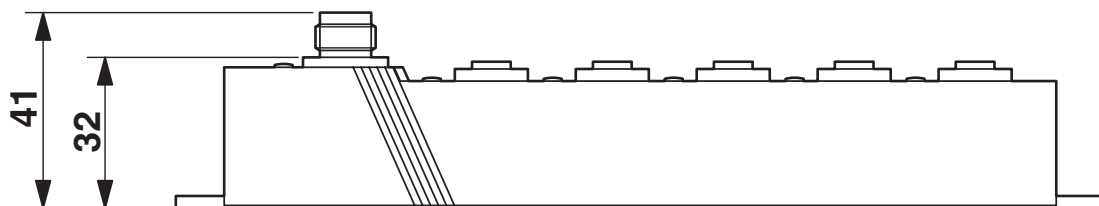
Drawings

Dimensional drawing



Top view (dimensions in mm)

Dimensional drawing



Side view (dimensions in mm)

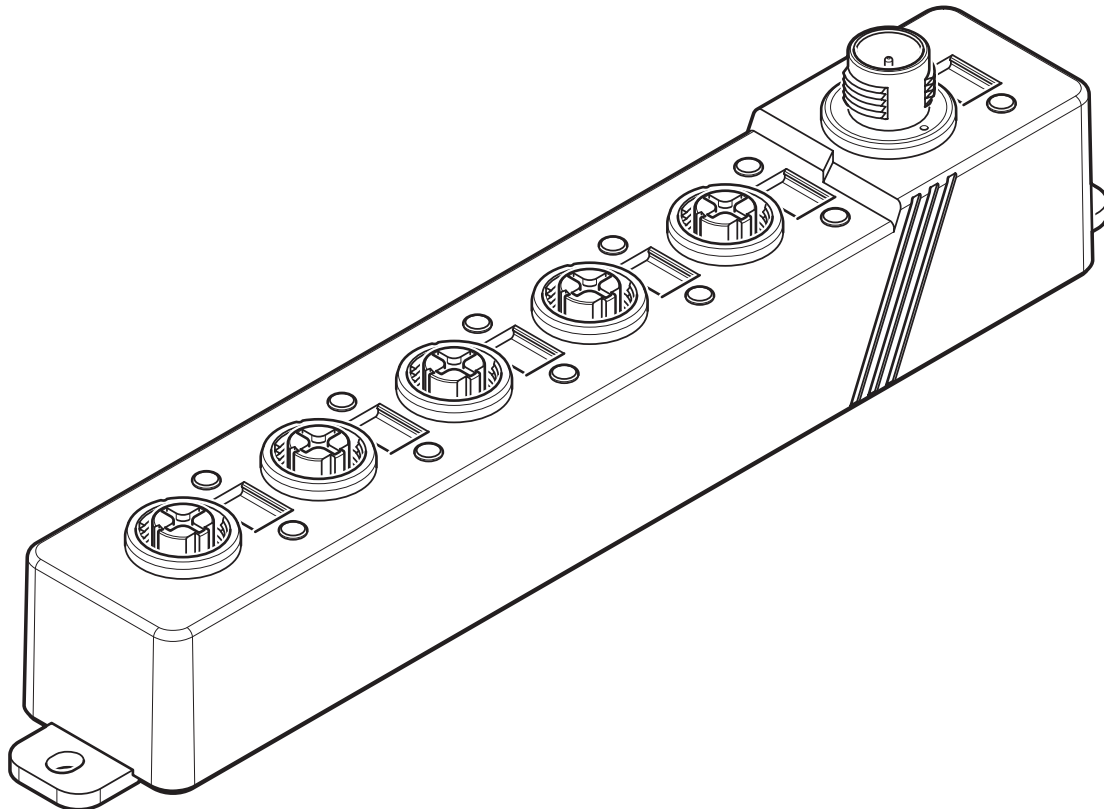
FL SWITCH 1705 M12 - Industrial Ethernet Switch



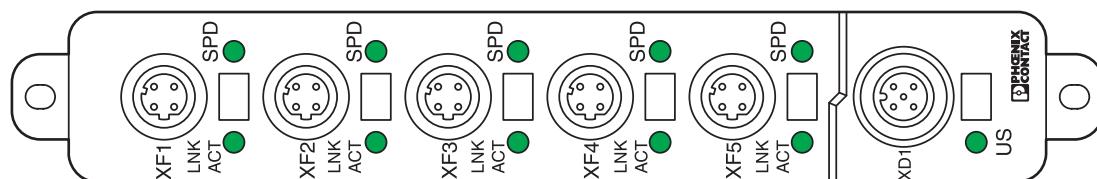
1386090

<https://www.phoenixcontact.com/us/products/1386090>

Product drawing



Product drawing



XF1-XF5: Ethernet connection

XD1: Supply voltage

LNK: Link LEDs

ACT: ACT LEDs

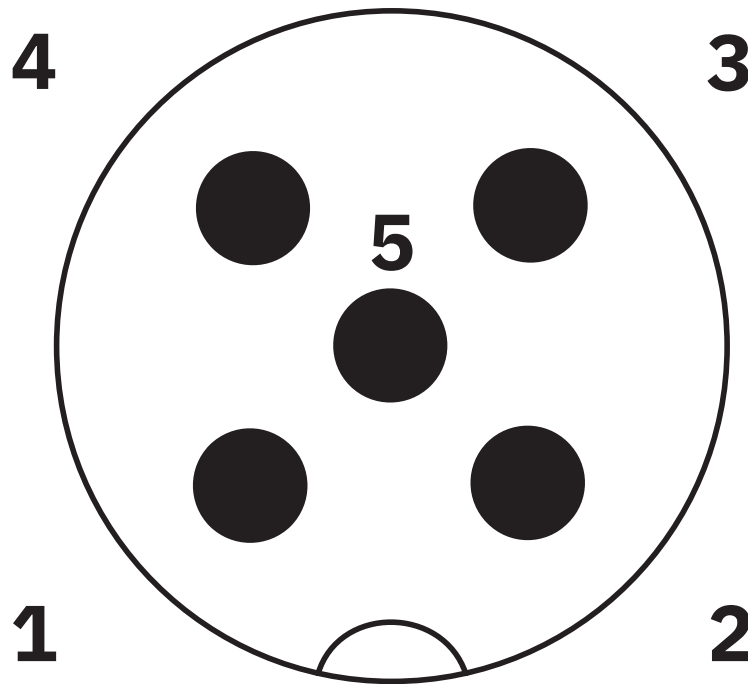
SPD: SPD LEDs

US: Supply voltage LED

1386090

<https://www.phoenixcontact.com/us/products/1386090>

Schematic diagram



Connecting the supply voltage

PIN 1 Us

PIN 2 n.c.

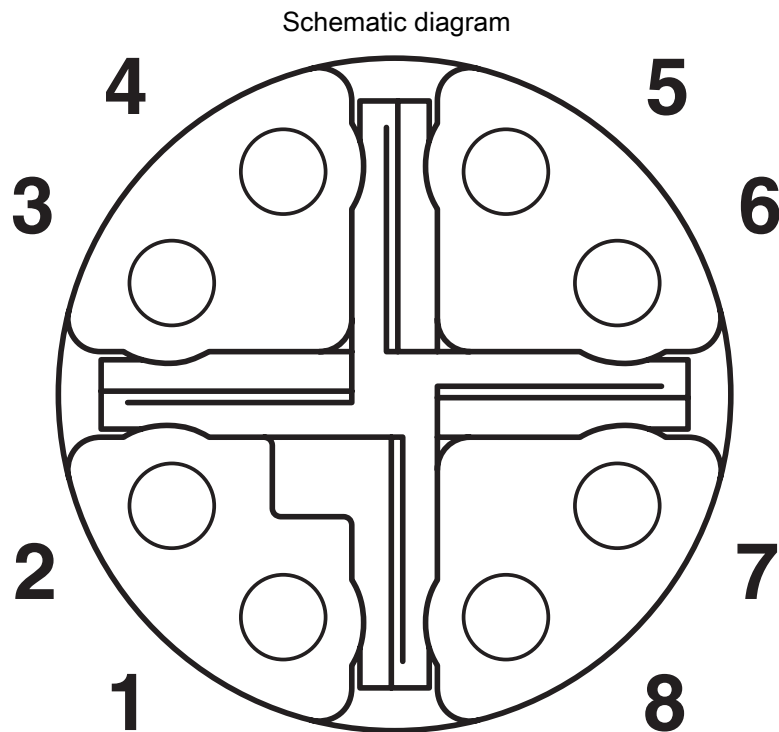
Pin 3 GND

Pin 4 n.c.

Pin 5 functional ground

1386090

<https://www.phoenixcontact.com/us/products/1386090>



Assignment of the LAN socket

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

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1386090>



cULus Listed

Approval ID: E238705

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

Classifications

ECLASS

ECLASS-13.0	19170402
ECLASS-15.0	19170402

ETIM

ETIM 10.0	EC000734
-----------	----------

FL SWITCH 1705 M12 - Industrial Ethernet Switch



1386090

<https://www.phoenixcontact.com/us/products/1386090>

Environmental product compliance

EU RoHS

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

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com