

# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

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.



Gigabit Ethernet extender, network extension via twisted pair cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link (PoL) function for the power supply of additional devices via the twisted pair cable, Power over Ethernet (PoE) function

## Commercial data

Item number	1319322
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN24
Product key	DNC361
GTIN	4063151604905
Weight per piece (including packing)	195.5 g
Weight per piece (excluding packing)	147 g
Customs tariff number	85176200
Country of origin	DE

## Technical data

### Product properties

Product type	Ethernet extenders
MTTF	268 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	128 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	54 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

### Insulation characteristics

Pollution degree	2
------------------	---

### System properties

#### Functionality

Basic functions	Gigabit Ethernet extender in accordance with ITU G.9960
-----------------	---

### Electrical properties

Electrical isolation	VCC (US+GND) // Ethernet (PoE) // G.hn (without PoL) // FE
Mains type	Permanent line
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)

### Supply

Supply voltage range	18 V DC ... 57 V DC
Nominal supply voltage	24 V DC (Without PoL, without PoE)
	48 V DC (With PoL or with PoE)
Power consumption	≤ 7.5 W (Without PoL, without PoE)
	≤ 37.5 W (Without PoL, with PoE)
	≤ 37.5 W (With PoL, without PoE)
	≤ 82.5 W (With PoL, with PoE)
Protective circuit	Overload protection, protection against polarity reversal; Internal device protection: 2x 5 AF, internal series diode
Connection method	Push-in spring connection

### Connection data

#### Supply

Connection method	Push-in spring connection
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	24 ... 16
Stripping length	10 mm

## Interfaces

Signal	Ethernet
Basic functions	Gigabit Ethernet extender in accordance with ITU G.9960

Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Serial transmission speed	10/100/1000 Mbps
Connection method	RJ45 jack, shielded
No. of channels	1
Transmission length	< 100 m (shielded twisted pair)
Protocols supported	Protocol-transparent for TCP/IP, IPv4, and IPv6
Maximum output power	15 W (at ≤55°C) 30 W (at ≤50°C)

Data: G.hn interface in accordance with ITU G.9960

Transmission speed	≤ 1000 Mbps (Depending on the quality of the data line)
Connection method	Push-in spring connection
Transmission length	≤ 1000 m (Depending on the quality of the data line)
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Max. AWG conductor cross section, flexible	16
Min. AWG conductor cross section, flexible	24
Stripping length	10 mm
Transmission method	QAM (quadrature amplitude modulation) carrier frequency method
Output power	≤ 74 W (With PoL)

## Dimensions

Width	23 mm
Height	101 mm
Depth	115 mm

## Material specifications

Material	PA 6.6-FR
Flammability rating according to UL 94	V0

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 60 °C (Free standing, without PoE) -40 °C ... 55 °C (Free standing, PoE up to 15 W) -40 °C ... 50 °C (Free standing, PoE up to 30 W)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
-------------	--------------

### Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
----------------	----------------------------------

## EMC data

Noise immunity	EN 55035
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	Class B, domain of use: residential and small commercial
Noise emission	EN 61000-6-4, Class A, industrial area of application

### Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

### Electrostatic discharge

Contact discharge	± 6 kV
Discharge in air	± 8 kV
Indirect discharge	± 6 kV
Comments	Criterion B

### Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

### Electromagnetic HF field

Frequency range	80 MHz ... 3 GHz (80% amplitude modulation with 1 kHz)
Field intensity	10 V/m
Frequency range	3 GHz ... 6 GHz (80% amplitude modulation with 1 kHz)
Field intensity	3 V/m
Comments	Criterion A

### Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

### Fast transients (burst)

Input	± 2.2 kV
Signal	± 2.2 kV (Ethernet, G.hn)

### Surge current load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

### Surge current load (surge)

Input	± 0.5 kV (Symmetrical, unshielded supply line)
	± 1 kV (Asymmetrical, unshielded supply line)

1319322

<https://www.phoenixcontact.com/us/products/1319322>

Signal	± 1 kV (Ethernet signal / asymmetrical: shielded Ethernet cable)
	± 4 kV (Ethernet signal / asymmetrical: cable to ground, unshielded G.hn cable)
	± 2 kV (Ethernet signal / symmetrical: cable to cable, unshielded G.hn cable)
	± 4 kV (Telecommunication lines, symmetrical, unshielded, with primary protection)
	± 1 kV (Telecommunication lines, symmetrical, unshielded, without primary protection)
Comments	Criterion B

## Conducted interference

Standards/regulations	EN 61000-4-6
-----------------------	--------------

## Conducted interference

Frequency range	0.15 MHz ... 80 MHz (80% amplitude modulation with 1 kHz)
Comments	Criterion A
Voltage	10 V

## Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

## Mounting

Mounting type	DIN rail mounting
Assembly instructions	To allow for air circulation, mount the device freestanding, with a clearance of at least one centimeter on all sides to other devices.
Mounting position	Vertical (horizontal DIN rail)

# EXTENDER 2010 ETH TP-G - Ethernet extenders

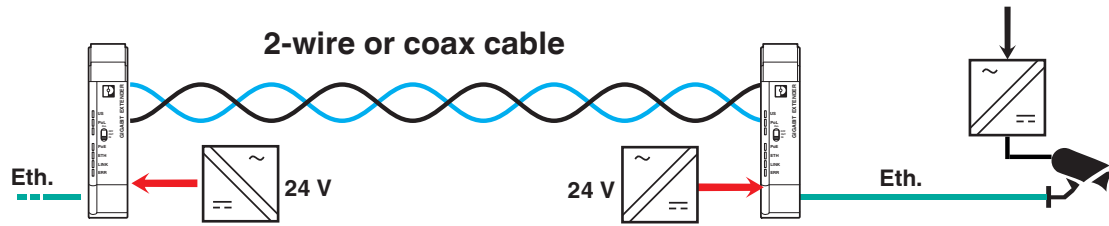


1319322

<https://www.phoenixcontact.com/us/products/1319322>

## Drawings

Application drawing



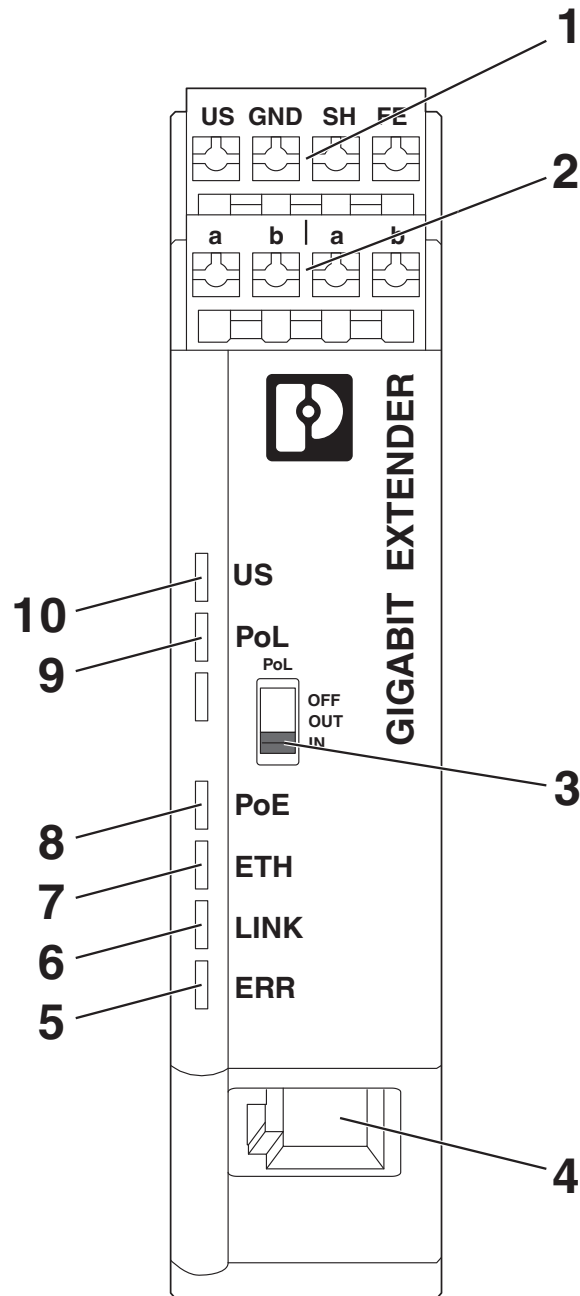
# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

Schematic diagram



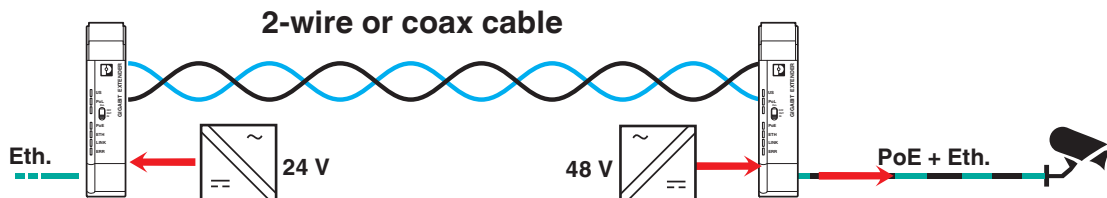
Front view

# EXTENDER 2010 ETH TP-G - Ethernet extenders

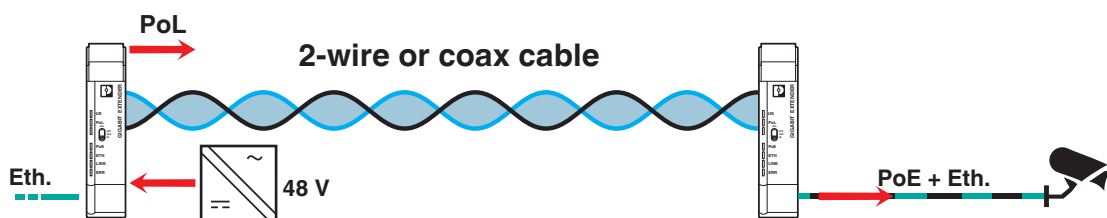
1319322

<https://www.phoenixcontact.com/us/products/1319322>

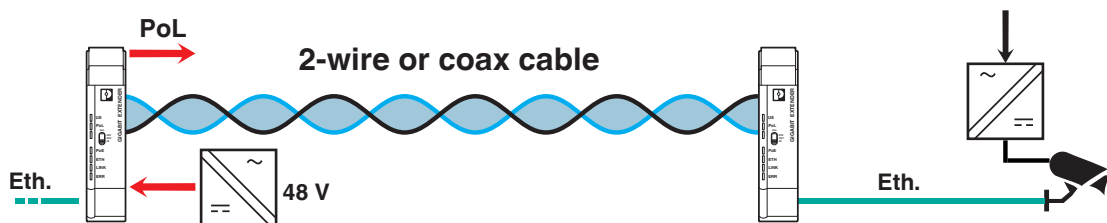
Application drawing



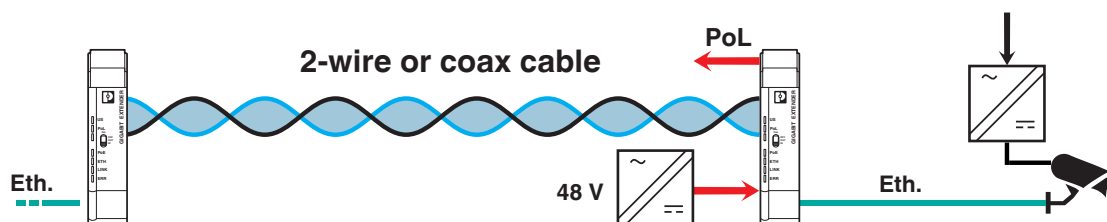
Application drawing



Application drawing



Application drawing





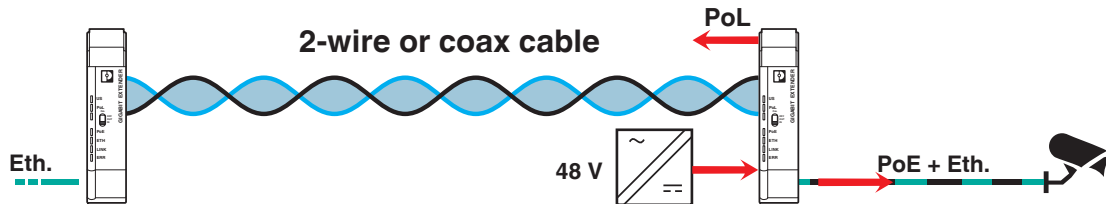
# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

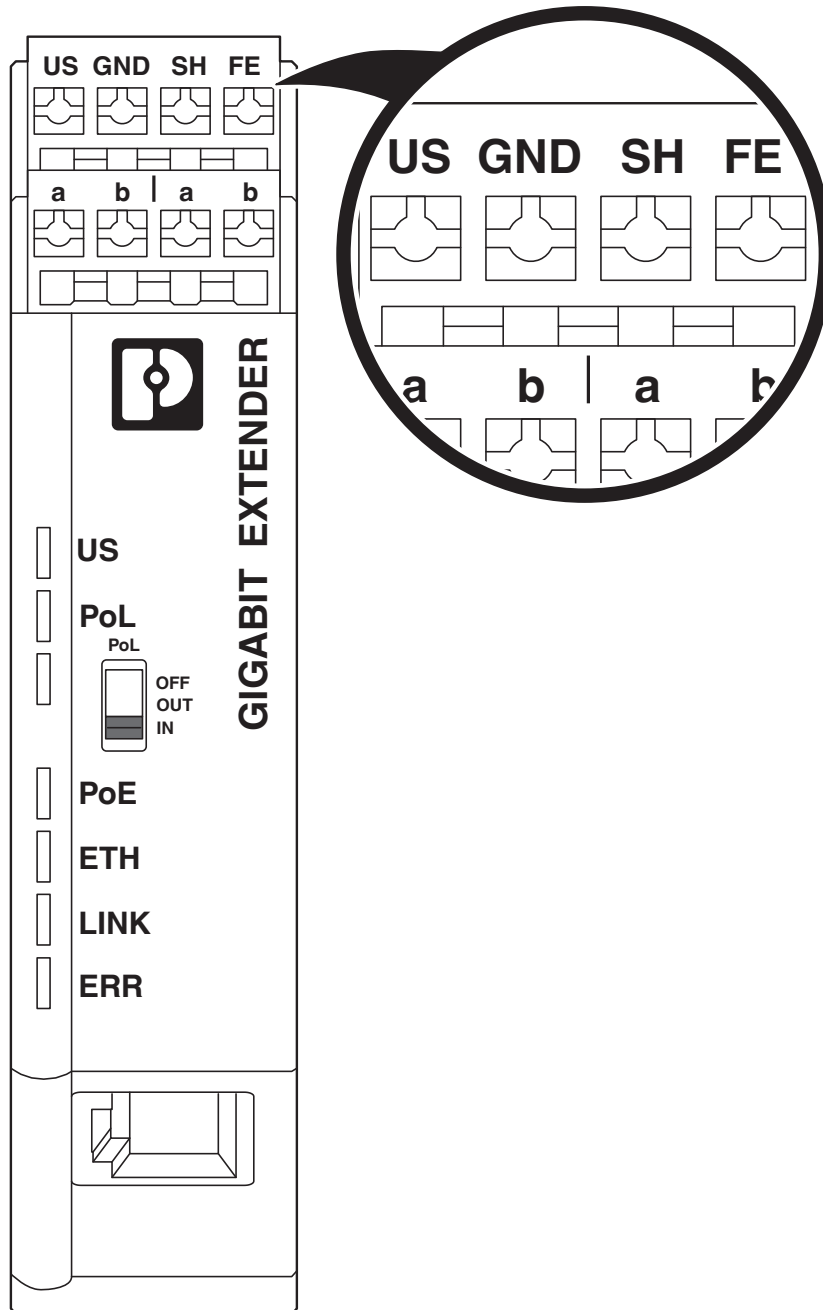
Application drawing



1319322

<https://www.phoenixcontact.com/us/products/1319322>

Schematic diagram



Connecting the supply voltage

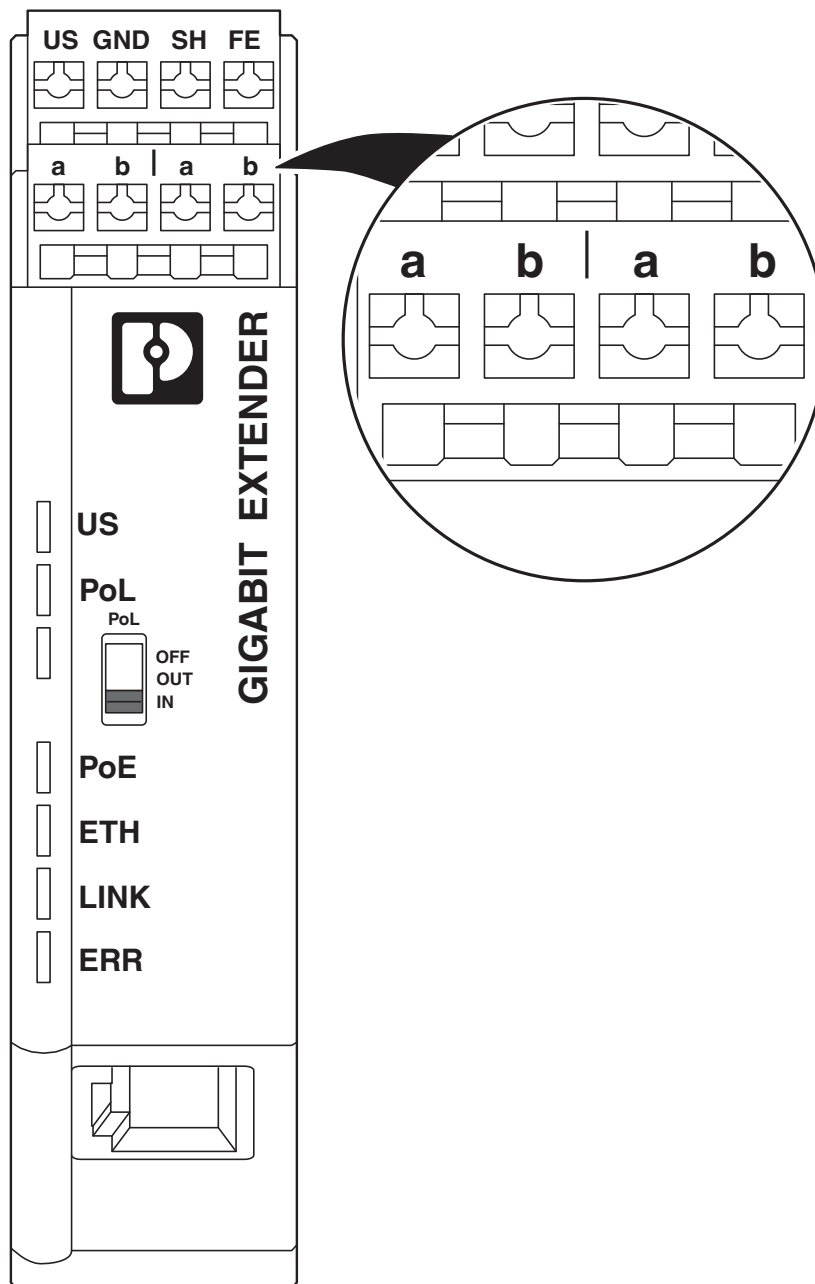
# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

Schematic diagram



Connection of the twisted pair cable

# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## Classifications

### ECLASS

ECLASS-11.0	19170407
ECLASS-12.0	19170407
ECLASS-13.0	19170407

### ETIM

ETIM 8.0	EC000309
----------	----------

### UNSPSC

UNSPSC 21.0	43223100
-------------	----------

1319322

<https://www.phoenixcontact.com/us/products/1319322>

## Accessories

### PT 4-F-ST - Surge protection plug

2858441

<https://www.phoenixcontact.com/us/products/2858441>



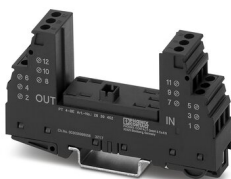
Surge protection plug for the base element, coarse protection for four signal lines grounded on one side.

---

### PT 4-BE - Surge protection base-element

2839402

<https://www.phoenixcontact.com/us/products/2839402>



Base element for protective plug PT with protective circuit for a 4-wire floating signal circuit, bridge between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## 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



# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## FL CAT5 PATCH 2,0 - Patch cable

2832289

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

Patch cable, CAT5, assembled, 2 m



---

## FL CAT5 PATCH 3,0 - Patch cable

2832292

<https://www.phoenixcontact.com/us/products/2832292>

Patch cable, CAT5, assembled, 3 m



# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## FL CAT5 PATCH 5,0 - Patch cable

2832580

<https://www.phoenixcontact.com/us/products/2832580>

Patch cable, CAT5, assembled, 5 m



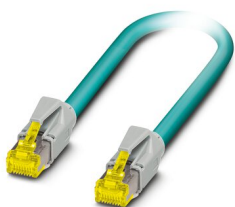
---

## 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<sub>A</sub>, cable outlet: straight, Ethernet





# EXTENDER 2010 ETH TP-G - Ethernet extenders



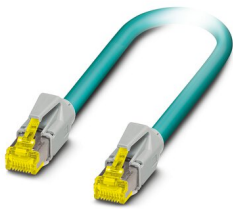
1319322

<https://www.phoenixcontact.com/us/products/1319322>

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

1408360

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



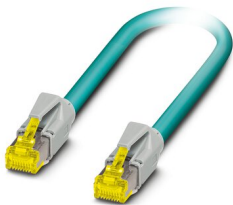
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

---

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

1408365

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

# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## FL CAT5 HEAVY CONF/ - Network cable

2744827

<https://www.phoenixcontact.com/us/products/2744827>



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm<sup>2</sup>, solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter, preassembled on both sides with RJ45 plug, crossover or line

---

## VS-08-RJ45-5-Q/IP20 - RJ45 connector

1656725

<https://www.phoenixcontact.com/us/products/1656725>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## FL CRIMPTOOL - Assembly tool

2744869

<https://www.phoenixcontact.com/us/products/2744869>

Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site



---

## FBS 2-5 GY - Plug-in bridge

3038969

<https://www.phoenixcontact.com/us/products/3038969>

Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: gray



# EXTENDER 2010 ETH TP-G - Ethernet extenders



1319322

<https://www.phoenixcontact.com/us/products/1319322>

## ME-SAS - Shield connection clamp

2853899

<https://www.phoenixcontact.com/us/products/2853899>

Shield connection clamp for terminal points starting from 2.5 mm<sup>2</sup>



---

## ME-SAS MINI - Shield connection clamp

2200456

<https://www.phoenixcontact.com/us/products/2200456>

Shield connection clamp for terminal points starting from 1.5 mm<sup>2</sup>



---

Phoenix Contact 2023 © - 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](mailto:info@phoenixcon.com)