

FL COMSERVER UNI 232/422/485 - Interface converters



2313452

<https://www.phoenixcontact.com/us/products/2313452>

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Second generation FL COMSERVER UNI..., serial device server for converting a serial 232/422/485 interface to Ethernet, supports TCP, UDP, Modbus gateway, and PPP applications, incl. COM port redirector software and user documentation

Product description

The **FL COMSERVER...232/422/485** products are used to integrate serial V.24 (RS-232)/RS-422/RS-485 interfaces into existing Ethernet networks. This provides an easy way of implementing functions such as cable replacement, network integration or a Modbus gateway.

Your advantages

- Modbus gateway between Modbus/RTU / ASCII and Modbus/TCP
- All connections can be plugged in using a COMBICON screw terminal block
- Configuration via web-based management
- Software for virtual COM ports supplied as standard

Commercial data

Item number	2313452
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC321
Catalog page	Page 357 (C-6-2019)
GTIN	4046356451321
Weight per piece (including packing)	176.4 g
Weight per piece (excluding packing)	176.4 g
Customs tariff number	85176200
Country of origin	DE

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Technical data

Notes

Utilization restriction

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

CCCex note	Use in potentially explosive areas is not permitted in China.
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Product properties

Product type	Interface converter
Application	TCP, UDP, Modbus gateway, PPP
MTTF	2013 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	879 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	359 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
MTBF	666 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	179 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

System properties

System requirements

Supported browsers	Netscape Communicator versions 4.5 and up or Internet Explorer versions 5.5 and up
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Electrical properties

Electrical isolation	VCC // Ethernet // Serial
Maximum power dissipation for nominal condition	2.4 W
Test voltage data interface/data interface	1.5 kV _{rms} (50 Hz, 1 min.)
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)

Supply

Supply voltage range	19.2 V AC/DC ... 28.8 V AC/DC (via pluggable COMBICON screw terminal block)
	22.8 V DC ... 25.2 V DC (as an alternative or redundant, via backplane bus contact and system current supply)
Typical current consumption	100 mA (24 V DC)

Function

Management	Web-based management, SNMP, emergency exit with Telnet and serial
Status and diagnostic indicators	LEDs: UL (logic voltage), TD + RD (data activity serial), FD (full duplex), 100 (100 Mbps mode), Link (Ethernet), Activity

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(Ethernet), ERR (error)

Connection data

Cross section AWG

(converted acc. to IEC)

Supply

Tightening torque

0.56 Nm ... 0.79 Nm

Interfaces

Signal

Ethernet

Modbus

Web server

yes

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

Serial transmission speed

10/100 Mbps, auto negotiation

Connection method

RJ45 jack, shielded

No. of channels

1

Transmission length

≤ 100 m (shielded twisted pair)

Protocols supported

TCP/IP, UDP, Modbus (TCP, RTU/ASCII), PPP

Auxiliary protocols

ARP, DHCP, BOOTP, SNMP, RIP, RARP, HTTP, TFTP, ICMP

Data flow control/protocols

Modbus/TCP

Data: V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1

Serial transmission speed

0.3; 0.6; 1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 38.4; 57.6; 115.2; 187.5; 230.4 kbps

Connection method

D-SUB 9 plug

Pin assignment

DTE/DCE switchover via web-based management

Transmission length

15 m

File format/coding

UART/NRZ: 7/8 Bit Data, 1/2 Bit Stopp, None/Even/Odd Parity

Data flow control/protocols

Software handshake, Xon/Xoff, or hardware handshake
RTS/CTS // 3964 R compatible, Modbus RTU/ASCII

Data: RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1

Serial transmission speed

0.3; 0.6; 1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 38.4; 57.6; 115.2; 187.5; 230.4; 500; 1000 kbps

Connection method

Plug-in/screw connection via COMBICON

Transmission length

≤ 1200 m

Termination resistor

390 Ω (configurable)

180 Ω

390 Ω

File format/coding

UART/NRZ: 7/8 Bit Data, 1/2 Bit Stopp, None/Even/Odd Parity

Data flow control/protocols

Automatic control

Data: RS-485 interface, in acc. with EIA/TIA-485, DIN 66259-4/RS-485 2-wire

Serial transmission speed

0.3; 0.6; 1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 38.4; 57.6; 115.2; 187.5; 230.4; 500; 1000 kbps

Connection method

Plug-in/screw connection via COMBICON

390 Ω

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Termination resistor	180 Ω
	390 Ω (configurable)
File format/coding	UART/NRZ: 7/8 Bit Data, 1/2 Bit Stopp, None/Even/Odd Parity
Data flow control/protocols	Automatic control

Dimensions

Width	22.5 mm
Height	99 mm
Depth	116 mm

Material specifications

Material	PA 6.6-FR
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
	-20 °C ... 60 °C (in acc. with UL)
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
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EAC

Identification	EAC
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ATEX

Identification	Ⓔ II 3G Ex nA IIC T4 Gc X
Note	Please follow the special installation instructions in the documentation!

UL, USA/Canada

Identification	508 Listed
	Class I, Div. 2, Groups A, B, C, D

UL, USA

Identification	Class I, Zone 2, AEx nA IIC T5
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UL, Canada

Identification	Class I, Zone 2, Ex nA IIC T5 Gc X
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KC approval for South Korea

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Certificate	MSIP-REI-PCK-2313452
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Corrosive gas test

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

Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

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

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	2 kV (5 kHz)
Signal	1 kV (5 kHz)
Comments	Criterion A

Surge current load (surge)

Standards/regulations	EN 61000-4-5
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Surge current load (surge)

Input	2 kV
Signal	1 kV
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 55032
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Criteria

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

Standards and regulations

Free from substances that could impair the application of coating	in accordance with VW-AUDI-Seat central standard P-VW 3.10.7 57 65 0
Standards/regulations	EN 50121-4

Mounting

Mounting type	DIN rail mounting
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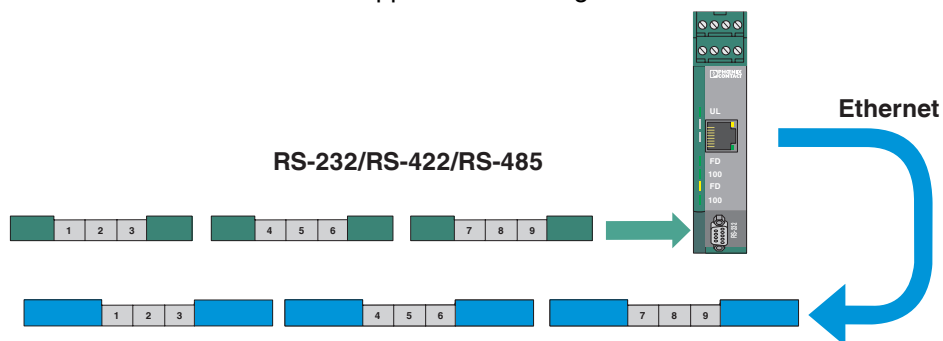
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<https://www.phoenixcontact.com/us/products/2313452>

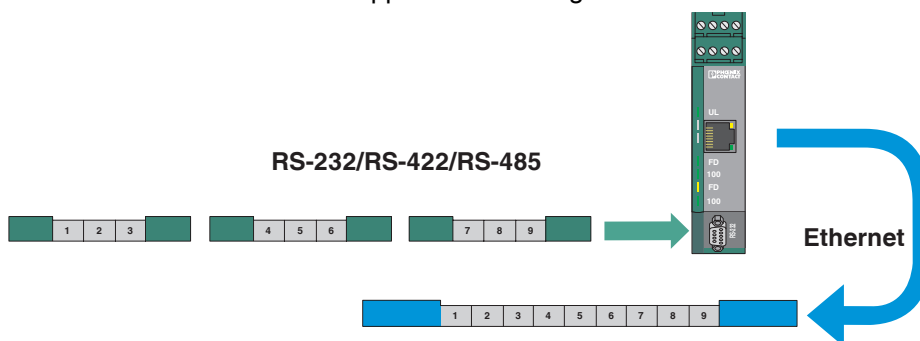
Drawings

Application drawing



Small value: "Idle Force Timeout Characters"

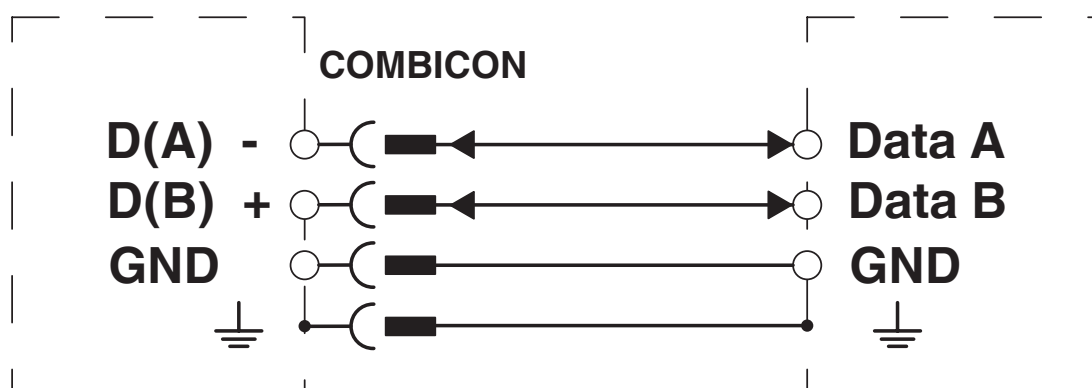
Application drawing



Large value: "Idle Force Timeout Characters"

Connection diagram

FL COMSERVER RS-485



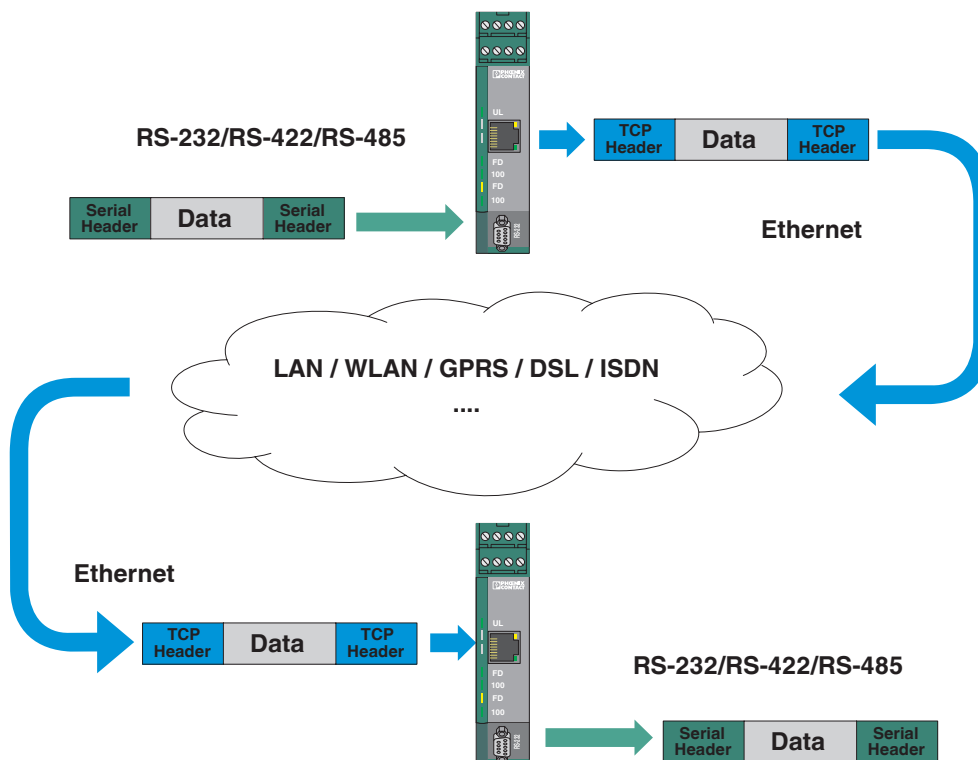
RS-485 connection

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Application drawing



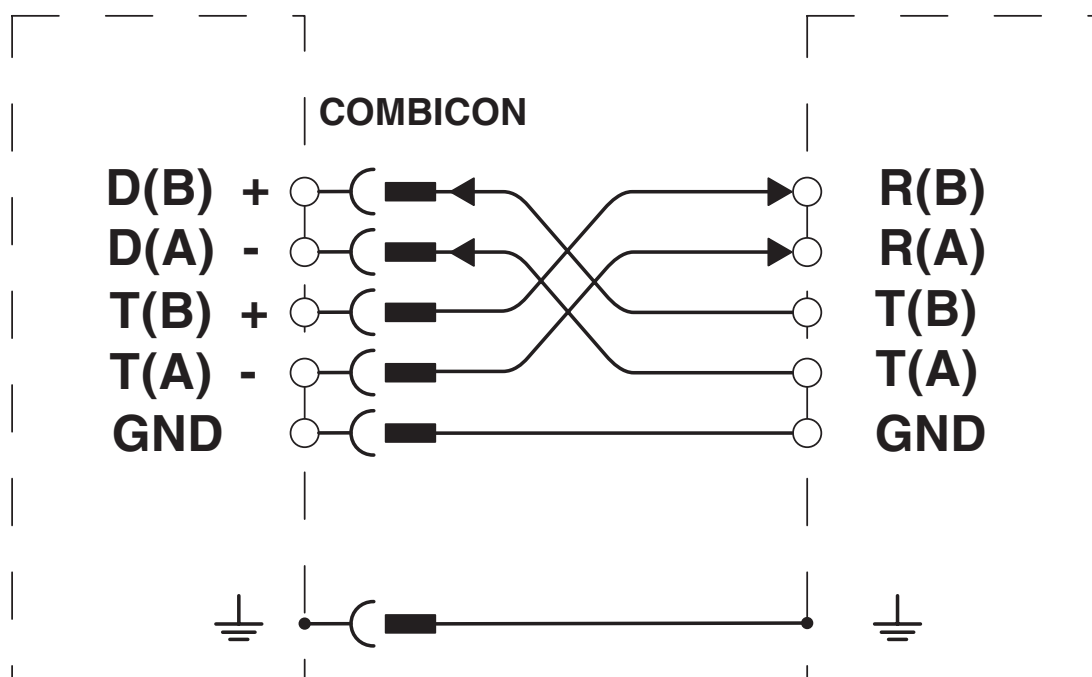
Serial data transmission via Ethernet

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Connection diagram

FL COMSERVER RS-422



RS-422 connection

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2313452>

	EAC Approval ID: RU D-DE.GB09.B.00312
	UL Listed Approval ID: FILE E 238705
	cUL Listed Approval ID: FILE E 238705
	KC Approval ID: MSIP-REI-PCK-2313452
	ATEX Approval ID: PxCIF11ATEX2313478X
	cUL Listed Approval ID: FILE E 199827
	UL Listed Approval ID: FILE E 199827
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Classifications

ECLASS

ECLASS-11.0	27242208
ECLASS-12.0	27242208
ECLASS-13.0	27242208

ETIM

ETIM 9.0	EC001423
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UNSPSC

UNSPSC 21.0	43222600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

PSM-KA9SUB9/BB/2METER - Data cable

2799474

<https://www.phoenixcontact.com/us/products/2799474>

RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1



QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply unit

2904614

<https://www.phoenixcontact.com/us/products/2904614>



Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

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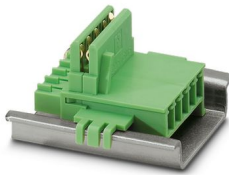
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ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - DIN rail bus connectors

2707437

<https://www.phoenixcontact.com/us/products/2707437>



DIN rail connector, color: green, nominal current: 8 A (parallel contacts), rated voltage (III/2): 125 V, number of positions: 5, pitch: 3.81 mm, mounting: DIN rail mounting, locking: without, mounting: without, type of packaging: packed in cardboard, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 5 parallel contacts

FL CAT5 HEAVY - Data cable

2744814

<https://www.phoenixcontact.com/us/products/2744814>



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 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

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FL CAT5 FLEX - Installation cable

2744830

<https://www.phoenixcontact.com/us/products/2744830>



By the meter, Installation cable, Ethernet CAT5 (100 Mbps), shielded, PUR halogen-free, water blue RAL 5021, 4-wire (2x2xAWG26/7, SF/UTP), color single wire: white/orange-orange, white/green-green, cable length: Free entry (1.0 ... 1000.0 m)

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

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FL SWITCH 1005N - Industrial Ethernet Switch

1085039

<https://www.phoenixcontact.com/us/products/1085039>



Narrow Ethernet switch, five RJ45 ports with 10/100 Mbps on all ports, automatic data transmission speed detection, autocrossing function, and QoS

FL MC EF 1300 MM SC - FO converters

2902853

<https://www.phoenixcontact.com/us/products/2902853>



FO converter with SC duplex fiber optic connection (1300 nm), for converting 10/100Base-T(X) to multi-mode fiberglass (50/125 µm). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18 ... 30 V DC supply.

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FL ISOLATOR 100-RJ/RJ - Network isolator

2313931

<https://www.phoenixcontact.com/us/products/2313931>



Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Possible to connect two RJ45 plugs.

PP-RJ-SCC - Patch panel

2703018

<https://www.phoenixcontact.com/us/products/2703018>



Patch panel, RJ45 jack on Push-in terminal blocks, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

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TC EXTENDER 2001 ETH-2S - Ethernet extenders

2702409

<https://www.phoenixcontact.com/us/products/2702409>



Second generation: Unmanaged Ethernet extender for point-to-point connections, line and ring structures, data rates up to 30 Mbps, distances of up to 20 km on in-house copper cables, diagnostics via USB and LEDs, 2 SHDSL ports, 1 LAN port

PSI-MODEM-SHDSL/SERIAL - Modem

2313669

<https://www.phoenixcontact.com/us/products/2313669>



Industrial SHDSL extender for serial RS-232/422/485 interfaces, point-to-point and line structures, serial data transmission up to 2000 kbps on in-house cables, diagnostics via USB and LEDs, two configurable alarm outputs

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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 5,0 - Patch cable

2832580

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

Patch cable, CAT5, assembled, 5 m



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SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/us/products/1204517>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

FL PATCH SAFE CLIP - Port Guard Security Element

2891246

<https://www.phoenixcontact.com/us/products/2891246>



Security element for FL patch cable

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SUBCON 9/F-SH - D-SUB bus connector

2761499

<https://www.phoenixcontact.com/us/products/2761499>



D-SUB plug, 9-pos. female connector, one 35° cable entry, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

CM-KBL-RS232/USB - Cable

2881078

<https://www.phoenixcontact.com/us/products/2881078>



Connecting cable D-9-SUB to USB, with adapter D-9-SUB to D-25-SUB.

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ME-SAS - Shield connection clamp

2853899

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

Shield connection clamp for terminal points starting from 2.5 mm²



DT-LAN-CAT.6+ - Surge protection device

2881007

<https://www.phoenixcontact.com/us/products/2881007>



Surge protection in accordance with Class E_A (CAT6_A), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE++ / 4PPoE) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

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