

TC ROUTER 3002T-4G GL - Router



1632697

<https://www.phoenixcontact.com/us/products/1632697>

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Industrial 4G LTE router, worldwide use, fallback to 3G (HSPA+) and 2G (EDGE), 2 Ethernet interfaces, firewall, NAT, IPsec and OpenVPN support, 2x SMA-F antenna socket, SMS and email transmission, 2 digital inputs, 1 digital output

Product description

The **TC ROUTER** for cellular communication implements high-performance data links of up to 150 Mbps via mobile 4G LTE networks. This enables you to establish a mobile broadband connection for highly flexible site networking even in places where a wired Internet connection is not available. These connections can be used to transmit sensitive data securely over mobile networks. Furthermore, the **TC ROUTER** offers a high level of security thanks to IPsec or OpenVPN tunnels, as well as an integrated stateful packet inspection firewall. This means that you can reliably protect your application against unauthorized access.

Your advantages

- Industrial cellular router for 4G cellular networks
- Stateful packet inspection firewall for dynamic filtering
- IPsec and OpenVPN
- Alert sent via SMS or email directly via the integrated switching input
- VPN remote start via call or SMS
- Configuration via web-based management or microSD card
- Two switching inputs and one switching output
- Two local Ethernet connections
- Extended temperature range of -40 °C ... +70 °C
- Comprehensive diagnostic functions
- Switchable energy-saving mode
- Integrated logbook
- Connection monitoring

Commercial data

Item number	1632697
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN25
Product key	DNC422
GTIN	4067923152939
Weight per piece (including packing)	349.7 g
Weight per piece (excluding packing)	240 g

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Customs tariff number	85176200
Country of origin	DE

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Technical data

Notes

Note on application

Note on application	Only for industrial use
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Product properties

Product type	Cellular router
Application	Ethernet
MTTF	379 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	182 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	77 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation	VCC // LTE // Ethernet // PE
Maximum power dissipation for nominal condition	4.8 W
Mains type	Cellular communication

Supply

Supply voltage range	10 V DC ... 30 V DC (Via pluggable Push-in terminal block)
Typical current consumption	< 200 mA (24 V DC)
	65 mA (With activated energy-saving mode)
Max. current consumption	1.7 A

Function

Management	Web-based management
	SNMPv1/v2/v3
	SSHv2

Input data

Digital

Description of the input	Digital input
Number of inputs	2
Voltage input signal	10 V DC ... 30 V DC
Switching level "1" signal	10 V DC ... 30 V DC

Output data

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Signal

Output name	Digital output
Number of outputs	1
Voltage output signal	10 V DC ... 30 V DC (depending on the operating voltage)
Current output signal	≤ 50 mA (Not short-circuit proof)

Connection data

Supply

Connection method	Push-in spring connection
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 0.75 mm²
Single conductor/terminal point, rigid	0.14 mm² ... 1.5 mm²
Single-wire/terminal point, flexible	0.14 mm² ... 1.5 mm²
Conductor cross section, flexible [AWG]	26 ... 16
Stripping length	9.00 mm

Interfaces

Web server	yes
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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	2
Transmission length	100 m (shielded twisted pair)
Protocols supported	TCP/IP, UDP/IP, HTTP(S), (S)FTP VPN: IPsec, OpenVPN
Auxiliary protocols	ARP, DHCP, DNS, DynDNS, PING (ICMP), SMTP(S), NTP, SSL/TLS, STARTTLS, SMS

Wireless

Interface description	4G (LTE) / 3G (HSPA+) / 2G (EDGE)
Frequency range	2100 MHz (LTE (FDD), B1)
	1900 MHz (LTE (FDD), B2)
	1800 MHz (LTE (FDD), B3)
	1700 MHz (LTE (FDD), B4)
	2100 MHz (LTE (FDD), B4)
	850 MHz (LTE (FDD), B5)
	2600 MHz (LTE (FDD), B7)
	900 MHz (LTE (FDD), B8)
	700 MHz (LTE (FDD), B12)
	700 MHz (LTE (FDD), B13)
	800 MHz (LTE (FDD), B18)
	800 MHz (LTE (FDD), B19)
	800 MHz (LTE (FDD), B20)

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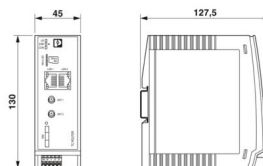
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	1900 MHz (LTE (FDD), B25)
	850 MHz (LTE (FDD), B26)
	700 MHz (LTE (FDD), B28)
	1700 MHz (LTE (FDD), B66)
	2100 MHz (LTE (FDD), B66)
	2000 MHz (LTE (TDD), B34)
	2600 MHz (LTE (TDD), B38)
	1900 MHz (LTE (TDD), B39)
	2300 MHz (LTE (TDD), B40)
	2500 MHz (LTE (TDD), B41)
	2100 MHz (WCDMA, B1)
	1900 MHz (WCDMA, B2)
	1700 MHz (WCDMA, B4)
	2100 MHz (WCDMA, B4)
	850 MHz (WCDMA, B5)
	850 MHz (WCDMA, B6)
	900 MHz (WCDMA, B8)
	800 MHz (WCDMA, B19)
	1900 MHz (TD-SCDMA-GSM/EDGE, PCS)
	1800 MHz (TD-SCDMA-GSM/EDGE, DCS)
	900 MHz (TD-SCDMA-GSM/EDGE, E-GSM)
	850 MHz (TD-SCDMA-GSM/EDGE, GSM)
Data rate	≤ 150 Mbps (LTE, DL) ≤ 50 Mbps (LTE, UL)
Number	2
Connection method	SMA (female)
Impedance	50 Ω
SIM Interface	1.8 V, 3 V, mini SIM (2FF)
LTE	CAT4
Country support	Global

Dimensions

Dimensional drawing	
Width	45 mm
Height	130 mm
Depth	127 mm

Material specifications

Color (Upper housing part)	light gray (RAL 7035)
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Material (Housing)	Polycarbonate
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Mechanical tests

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	: 5g, 10...150 Hz, 2.5 h, in XYZ direction
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	: 15g

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (Maximum transmission power 5 dBm) -40 °C ... 60 °C (Maximum transmission power 23 dBm)
Ambient temperature (storage/transport)	-40 °C ... 85 °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)	10 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
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Wireless approval, Europe

Note	RED 2014/53/EU
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UL, USA

Identification	Class I, Zone 2, AEx ec IIC T4 Gc Class I, Div. 2, Groups A, B, C, D T4
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UL, Canada

Identification	Ex ec IIC T4 Gc X
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Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
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Wireless approval USA, FCC

Certificate	XMR202212EG25GL
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Wireless approval Canada, IC

Certificate	10224A-2022EG25GL
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EMC data

Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Noise immunity	EN 61000-6-2

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	± 6 kV (Test Level 3)
Discharge in air	± 8 kV (Test Level 3)
Comments	Criterion B

Electromagnetic HF field

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

Frequency range	80 MHz ... 3 GHz (Test Level 3)
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 (Test Level 3)
Signal	± 2 kV (Ethernet)
Comments	Criterion B

Surge current load (surge)

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

Input	± 0.5 kV (symmetrical)
	± 1 kV (asymmetrical)
Signal	± 1 kV (Data line, asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 61000-6-4
Radio interference voltage in acc. with EN 55011	Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	Class B, area of application: Industry and residential

Criteria

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

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Mounting

Mounting type	DIN rail mounting
Assembly note	Indoor installation
Mounting position	Vertical (horizontal DIN rail)

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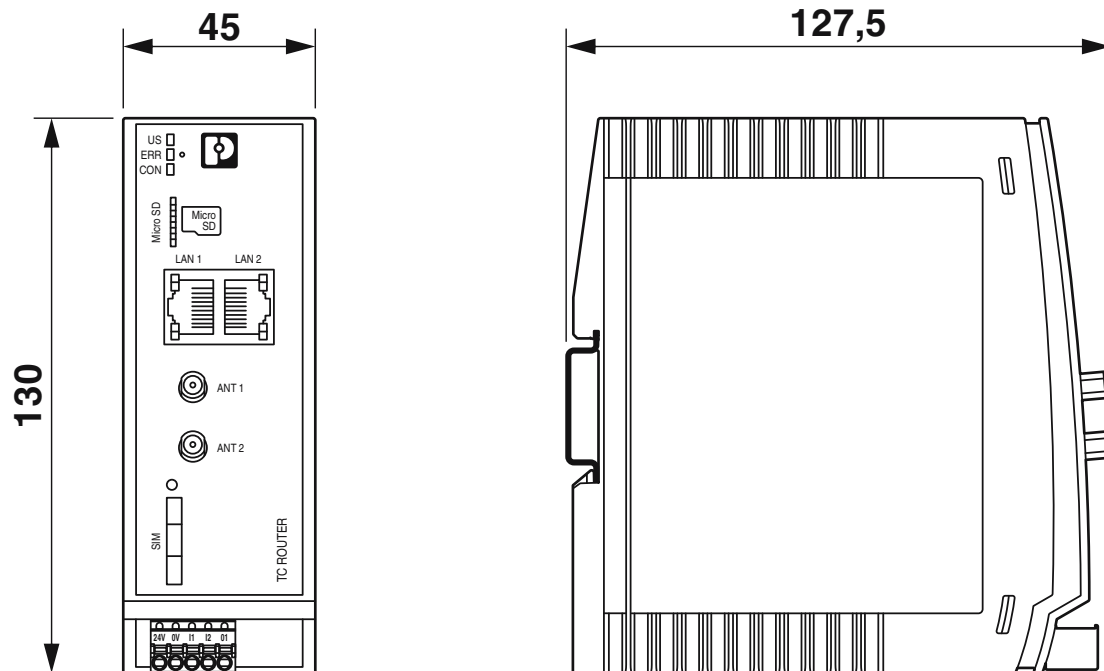
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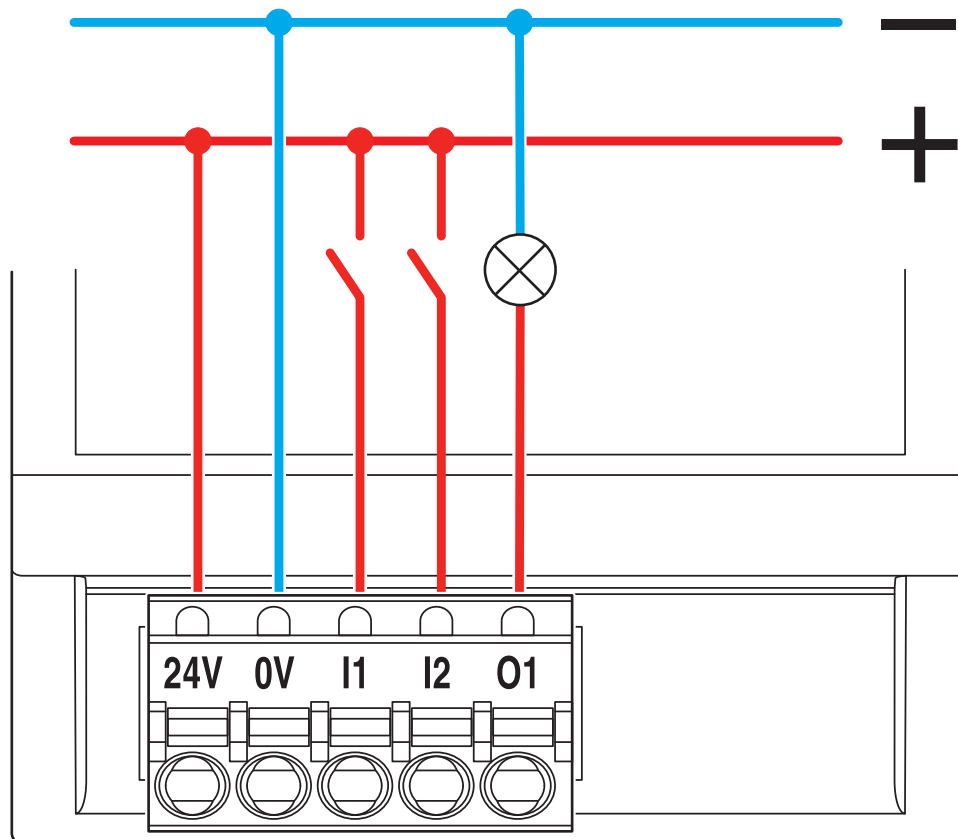


Drawings

Dimensional drawing



Connection diagram



Switching inputs

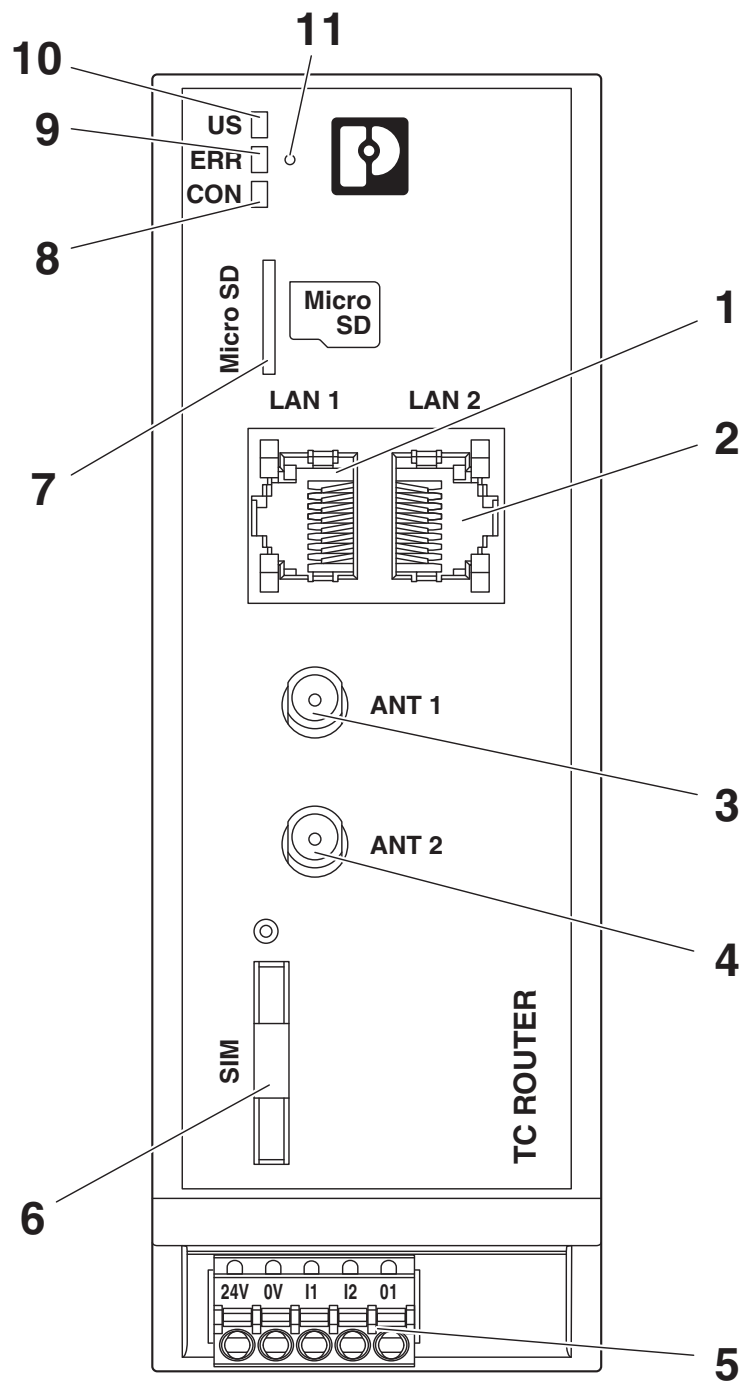
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Schematic diagram



Front view

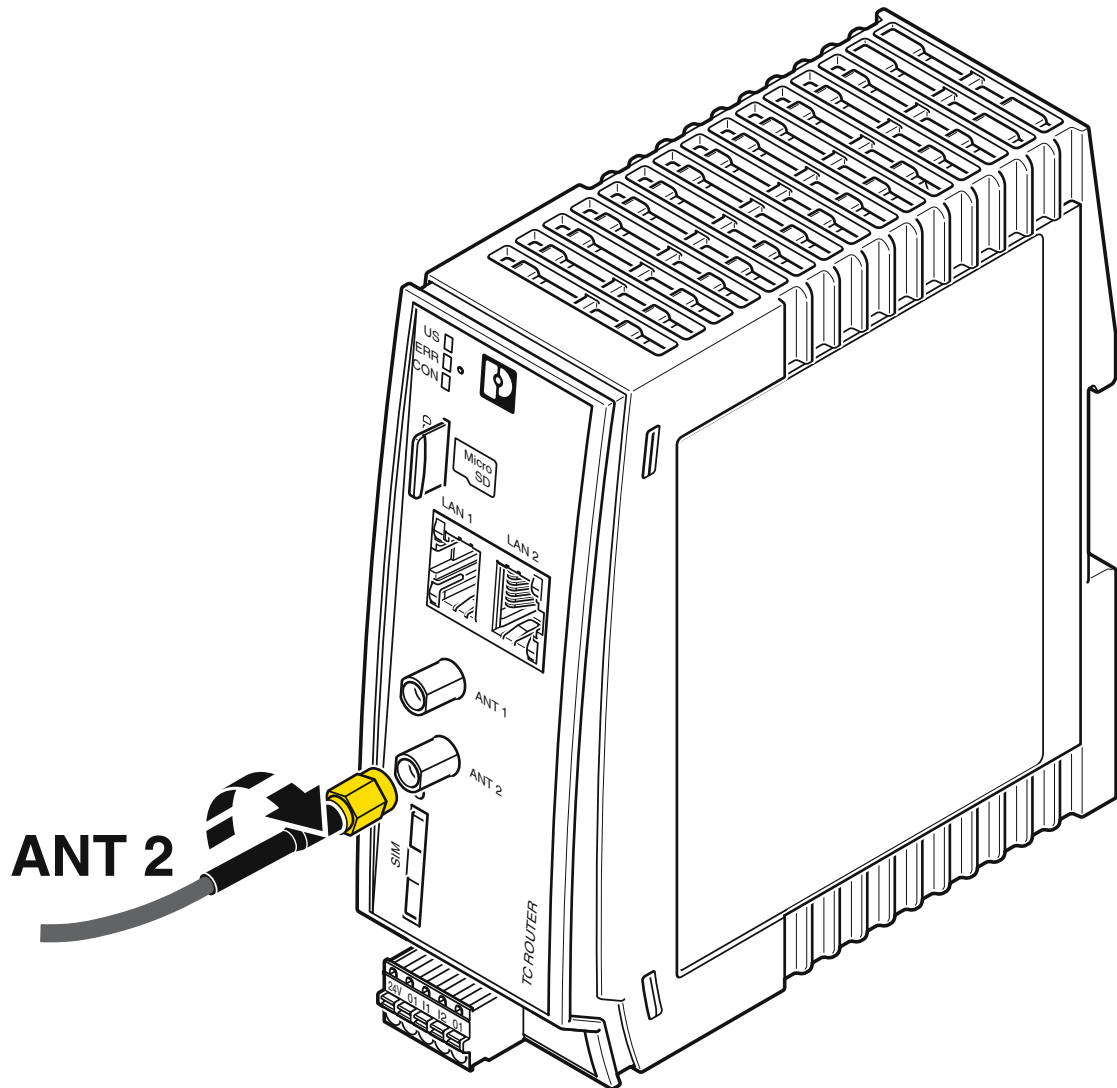
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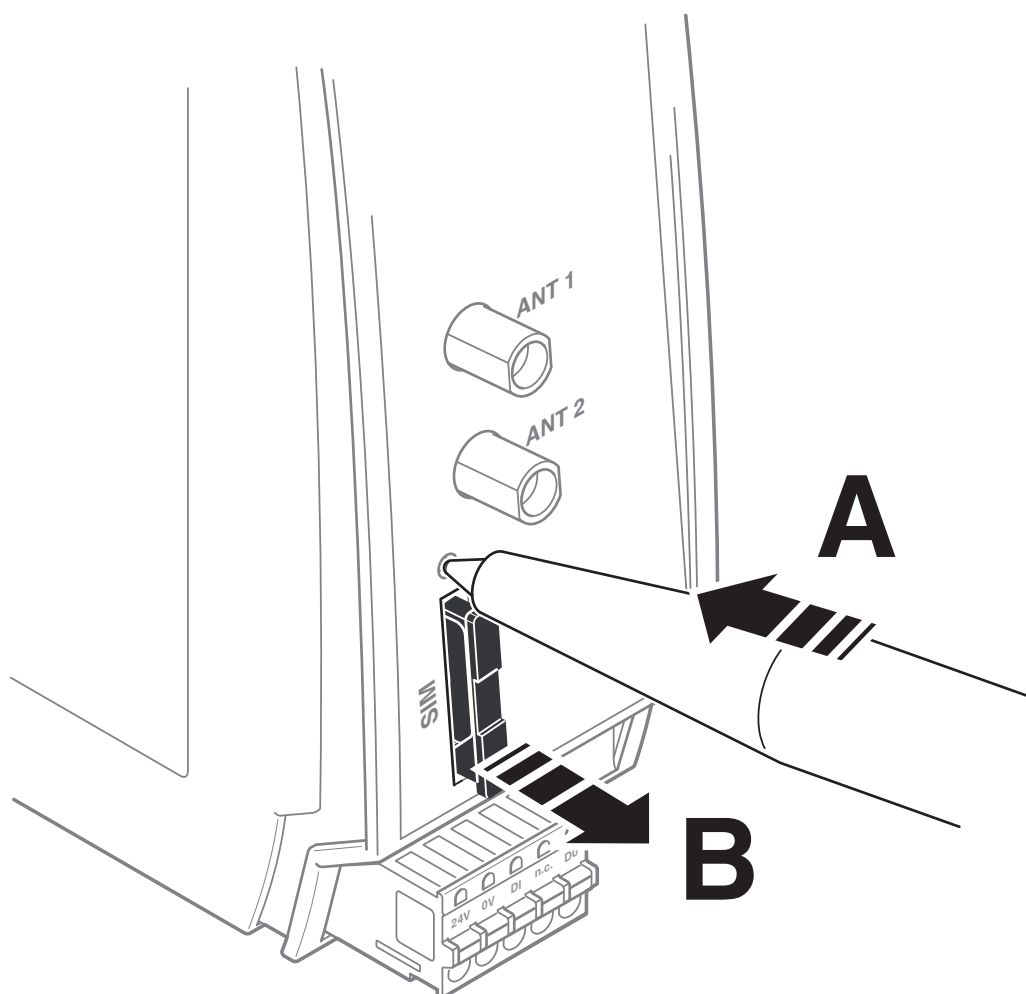


Schematic diagram



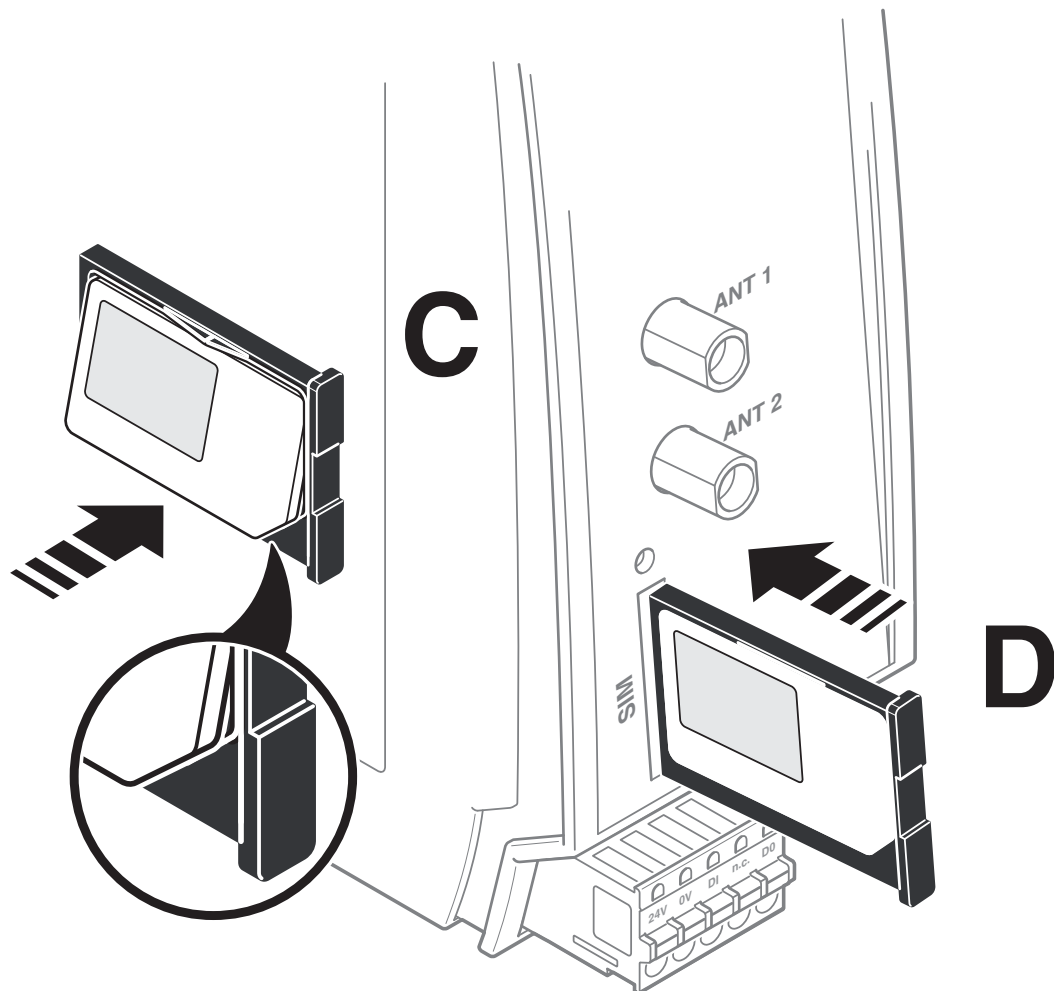
Connect the antenna

Schematic diagram



Remove SIM card holder

Schematic diagram



Insert the SIM card

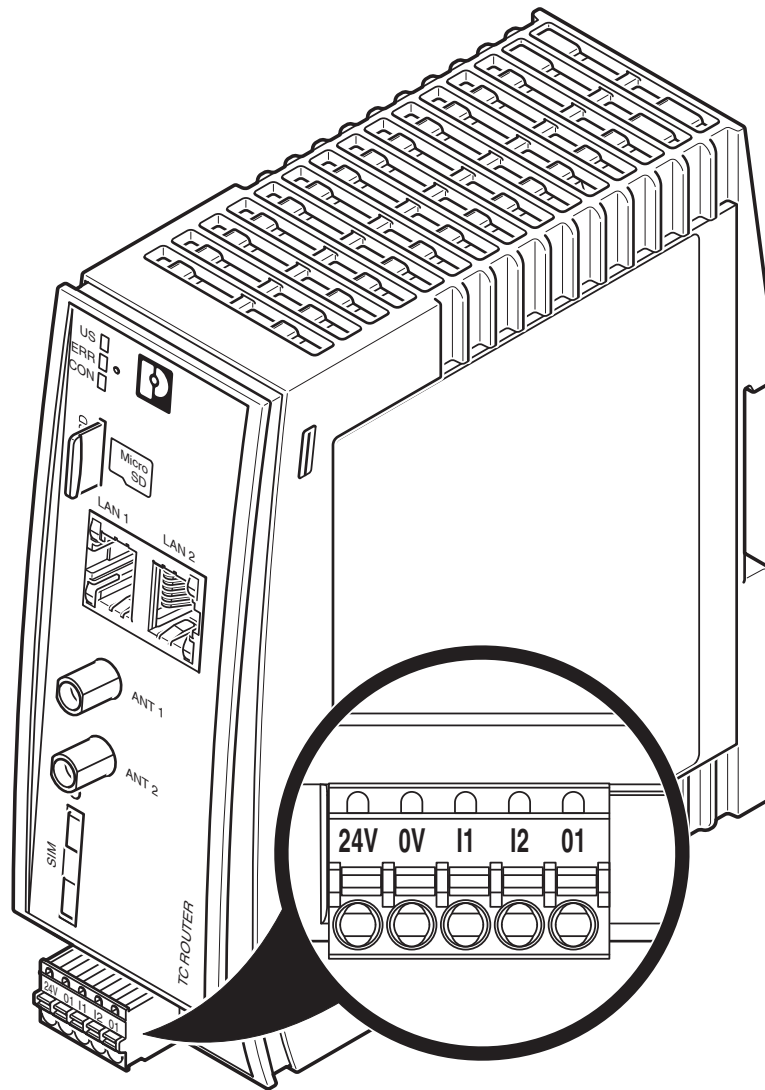
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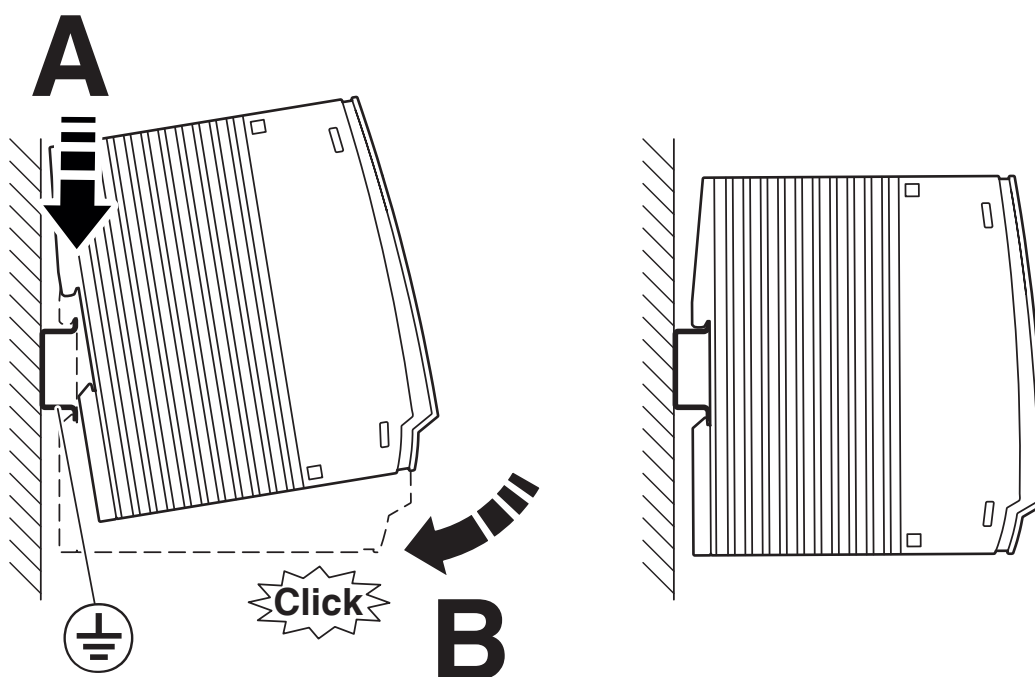


Schematic diagram



Device connections

Schematic diagram



Mounting

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Classifications

ECLASS

ECLASS-13.0	19170502
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ETIM

ETIM 9.0	EC001478
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	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.)	No substance above 0.1 wt%

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Accessories

TRIO-PS-2G/1AC/24DC/3/C2LPS - Power supply

2903147

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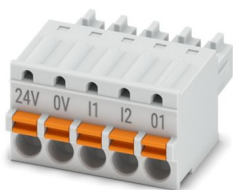


Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 24 V DC/3 A C2LPS

FK-MCP 1,5/ 5-ST-3,81GY35BD-01 - PCB connector

1105115

<https://www.phoenixcontact.com/us/products/1105115>



PCB connector, nominal cross section: 1.5 mm², color: light gray, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of rows: 1, number of positions: 5, product range: FK-MCP 1,5/..-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting method: without, type of packaging: packed in cardboard

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ANT-OMNI-0671-01 - Antenna

1396316

<https://www.phoenixcontact.com/us/products/1396316>



Multiband omnidirectional antenna for wall or mast mounting, 0.6 GHz ... 7.1 GHz, gain: 1 dBi ... 3 dBi, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clamps

ANT-OMNI-0671-02 - Antenna

1396318

<https://www.phoenixcontact.com/us/products/1396318>



Multiband omnidirectional antenna with protection against vandalism for control cabinet mounting, frequency band: 0.6 GHz ... 7.1 GHz, gain: 2 dBi ... 4 dBi, degree of protection: IP67, shockproof: IK10, seawater-resistant, connection: N (female)

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ANT-OMNI-0671-03 - Antenna

1565400

<https://www.phoenixcontact.com/us/products/1565400>



Multiband omnidirectional antenna for installation in plastic control cabinets not visible from the outside, frequency band: 0.6 GHz ... 7.1 GHz, gain: 1 dBi 2 dBi, connection: SMA (male), antenna connector with 90° articulated joint

NBC-COX-CNM/0.5-S/COX-CKM - Coaxial cable

1340139

<https://www.phoenixcontact.com/us/products/1340139>



Coaxial cable, 50 Ω , length: 0.5 m, N(m) - SMA(m), external cable diameter: 2.8 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 0.4 dB, 2.4 GHz 0.7 dB, 5.8 GHz 1.1 dB, 7.25 GHz 1.5 dB

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NBC-COX-CNM/1.0-M/COX-CKM - Coaxial cable

1340143

<https://www.phoenixcontact.com/us/products/1340143>



Coaxial cable, 50 Ω , length: 1 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 0.5 dB, 2.4 GHz 0.8 dB, 5.8 GHz 1.2 dB, 7.25 GHz 1.4 dB

NBC-COX-CNM/3.0-M/COX-CKM - Coaxial cable

1340144

<https://www.phoenixcontact.com/us/products/1340144>



Coaxial cable, 50 Ω , length: 3 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 1.4 dB, 2.4 GHz 2.3 dB, 5.8 GHz 3.6 dB, 7.25 GHz 4.2 dB

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NBC-COX-CNM/5.0-M/COX-CKM - Coaxial cable

1340147

<https://www.phoenixcontact.com/us/products/1340147>



Coaxial cable, 50 Ω , length: 5 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 2.3 dB, 2.4 GHz 3.8 dB, 5.8 GHz 6 dB, 7.25 GHz 7.3 dB

NBC-COX-CNM/3.0-L/COX-CNM - Coaxial cable

1340123

<https://www.phoenixcontact.com/us/products/1340123>



Coaxial cable, 50 Ω , length: 3 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 0.5 dB, 2.4 GHz 0.8 dB, 5.8 GHz 1.3 dB, 7.25 GHz 1.5 dB

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NBC-COX-CNM/5.0-L/COX-CNM - Coaxial cable

1340124

<https://www.phoenixcontact.com/us/products/1340124>



Coaxial cable, 50 Ω , length: 5 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 0.8 dB, 2.4 GHz 1.4 dB, 5.8 GHz 2.2 dB, 7.25 GHz 2.5 dB

NBC-COX-CNM/10.0-L/COX-CNM - Coaxial cable

1340125

<https://www.phoenixcontact.com/us/products/1340125>



Coaxial cable, 50 Ω , length: 10 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 1.6 dB, 2.4 GHz 2.7 dB, 5.8 GHz 4.3 dB, 7.25 GHz 5 dB

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NBC-COX-CNM/15.0-L/COX-CNM - Coaxial cable

1340126

<https://www.phoenixcontact.com/us/products/1340126>



Coaxial cable, 50 Ω , length: 15 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 2.4 dB, 2.4 GHz 4.1 dB, 5.8 GHz 6.5 dB, 7.25 GHz 7.5 dB

NBC-COX-CNM/30.0-L/COX-CNM - Coaxial cable

1340127

<https://www.phoenixcontact.com/us/products/1340127>



Coaxial cable, 50 Ω , length: 30 m, N(m) - N(m), external cable diameter: 10.3 mm, transmission frequency: ≤ 7.25 GHz, typical attenuation: 800 MHz 4.8 dB, 2.4 GHz 8.1 dB, 5.8 GHz 12.9 dB, 7.25 GHz 15 dB

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CN-UB-70DC-6-BB - Surge protection device

2803166

<https://www.phoenixcontact.com/us/products/2803166>



Attachment plug with surge protection for coaxial signal interfaces. Connection: N connector, female/female

RAD-ADP-N/F-N/F - Adapter

2867843

<https://www.phoenixcontact.com/us/products/2867843>



Antenna adapter for control cabinet feed-through, frequency range: 0.3 GHz ... 6 GHz, degree of protection: IP65, connection: 2 x N (female)

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RAD-TAPE-SV-19-3 - Weather protection tape

2903182

<https://www.phoenixcontact.com/us/products/2903182>

Vulcanizing sealing tape for external protection of adapters, cable connections, etc. against the effects of weather, roll length: 3 m



FL DIN-RAIL ADAPTER 45 - Mounting panel

1456045

<https://www.phoenixcontact.com/us/products/1456045>

The FL DIN-RAIL ADAPTER 45 is designed to allow products 45 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.



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FL PANEL ADAPTER 45 - Mounting panel

1456055

<https://www.phoenixcontact.com/us/products/1456055>



The FL PANEL ADAPTER 45 is designed to allow products 45 mm wide to be mounted flush to a panel, in any orientation.

FL DIN RA - DIN rail adapter

2891053

<https://www.phoenixcontact.com/us/products/2891053>



The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

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FL MICRO SD FLASH - Program/configuration memory

1129482

<https://www.phoenixcontact.com/us/products/1129482>



Configuration memory in micro SD format

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