TC ROUTER 2002T-3G - Router

2702531

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Industrial 3G router, European version, fallback to 2G GPRS/EDGE, 2 Ethernet interfaces, firewall, NAT, SMA-F antenna socket, SMS and e-mail 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.

Your advantages

- Industrial 3G mobile router (UMTS/HSPA)
- Fallback to 2G (GPRS/EDGE)
- Networking of Ethernet end devices via the cellular network
- Ethernet SMS gateway for easy alerting
- Stateful inspection firewall for dynamic filtering
- NAT table and port forwarding for direct remote access to an end device
- Two switching inputs and one switching output
- Configuration via web-based management or microSD card
- Two local Ethernet connections
- Switchable energy-saving mode
- Integrated logbook
- Connection monitoring
- Extended temperature range of -40 °C … +70 °C

Commercial data

Item number	2702531
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DNC422
Catalog page	Page 413 (C-6-2019)
GTIN	4055626212838
Weight per piece (including packing)	352.1 g
Weight per piece (excluding packing)	232.8 g
Country of origin	DE

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https://www.phoenixcontact.com/us/products/2702531

Technical data

Product properties

Product type	Cellular router
MTTF	383 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	184 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	78 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Electrical properties

Electrical isolation	VCC // UMTS // Ethernet // PE
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, SNMP

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

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 AWG	26 ... 16
Stripping length	9.00 mm

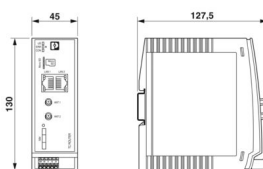## Interfaces

Signal	Ethernet
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	2
Transmission length	100 m (shielded twisted pair)
Protocols supported	TCP/IP, UDP/IP, FTP, HTTP(S)
Auxiliary protocols	ARP, DHCP, PING (ICMP), SNMP V1/V2, SMTP(S), NTP, SSL/TLS, STARTTLS

Wireless

Interface description	GSM / GPRS / EDGE / UMTS / HSPA
Frequency range	900 MHz (UMTS/HSPA B8)
	2100 MHz (UMTS/HSPA B1)
	850 MHz (2 W (EGSM))
	900 MHz (2 W (EGSM))
	1800 MHz (1 W (EGSM))
	1900 MHz (1 W (EGSM))
Data rate	≤ 21.6 Mbps (HSPA (DL))
	≤ 5.76 Mbps (HSPA (UL))
Antenna	50 Ω impedance SMA antenna socket
Antenna connection method	SMA (female)
SIM Interface	1.8 volt, 3 volt
GPRS	Class 12, Class B
	CS1 ... CS4
EDGE	Multislot Class 10
UMTS	HSPA 3GPP R7

Dimensions

Dimensional drawing	
Width	45 mm
Height	130 mm
Depth	127 mm

Material specifications

Color (Upper housing part)	light grey (RAL 7035)
Material (Housing)	Plastic

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (Maximum transmission power 10 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

Corrosive gas test

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

EMC data

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

Electrostatic discharge

Standards/regulations	EN 61000-4-2

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

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

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

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

Conducted interference

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

Emitted interference

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.

Mounting

Mounting type	DIN rail mounting

Drawings

Schematic diagram

Mounting

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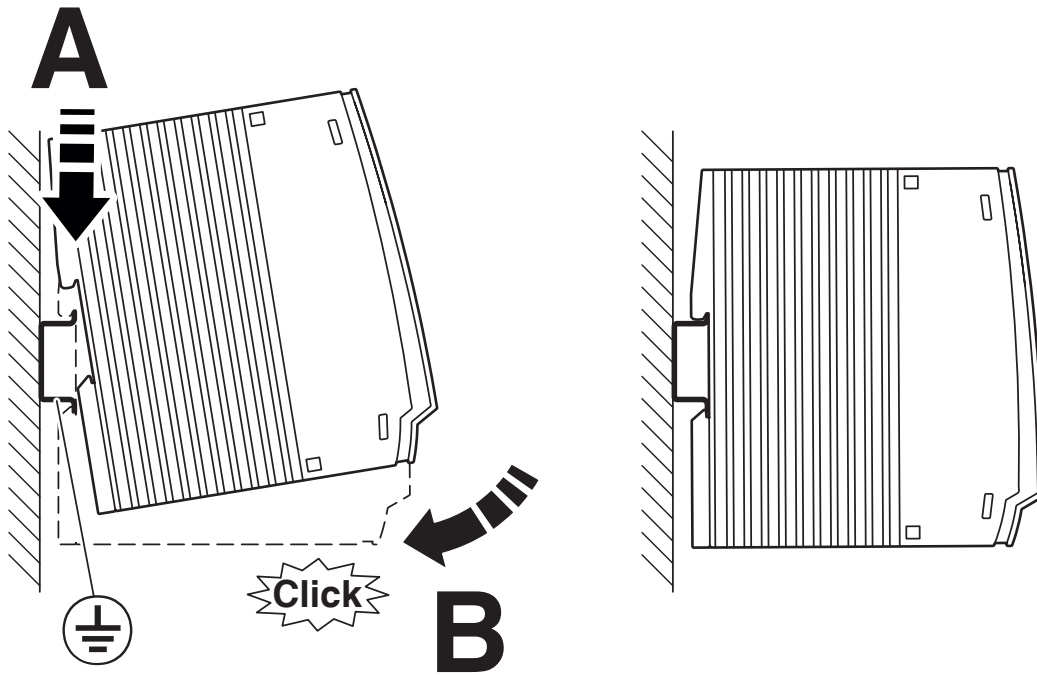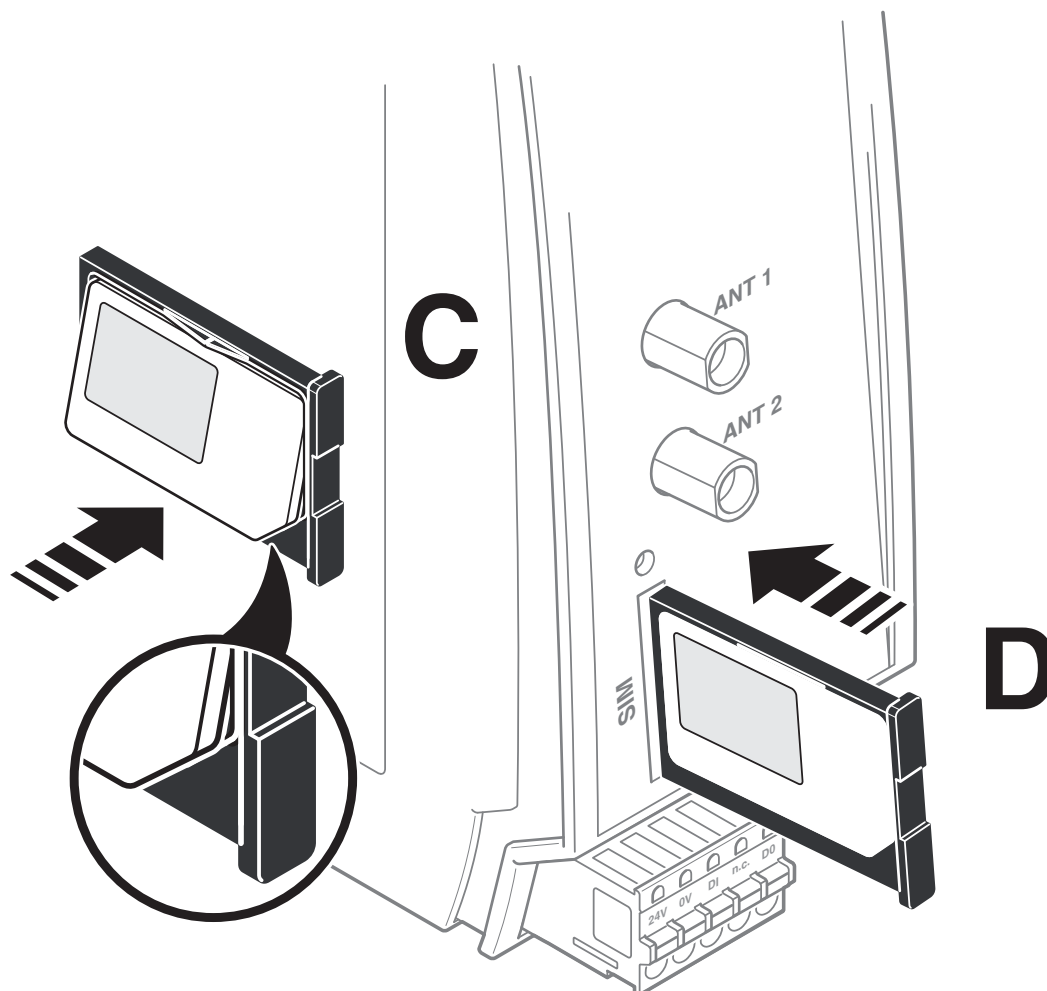
Schematic diagram

Insert the SIM card

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Connection diagram
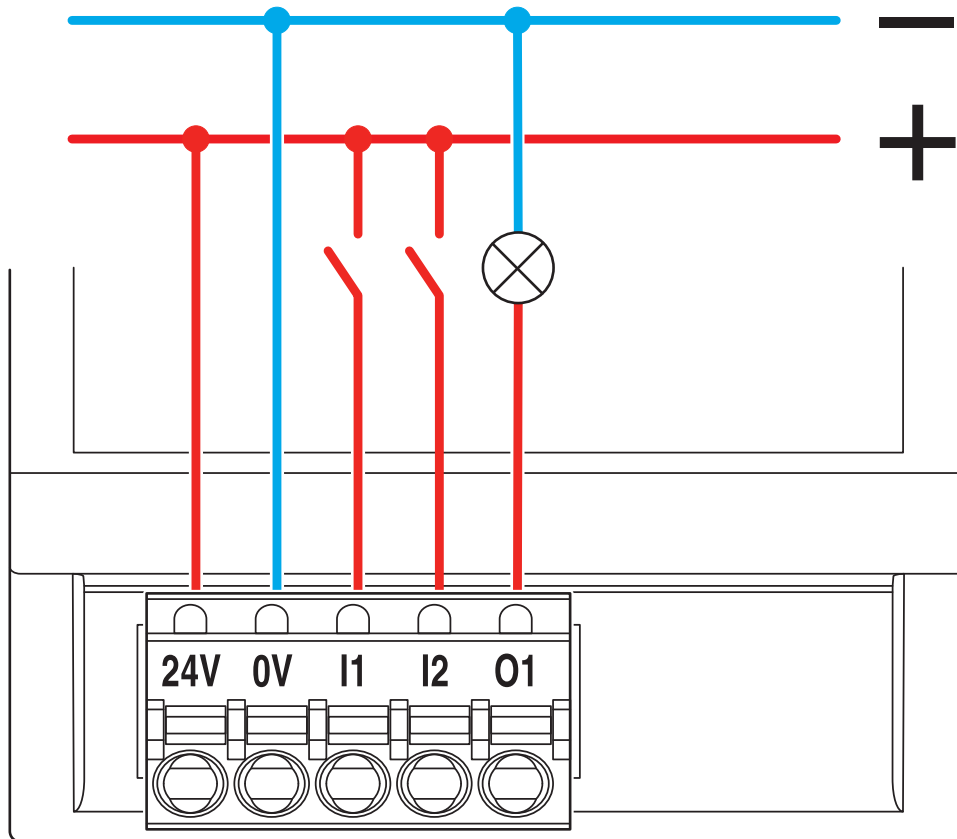
Switching inputs

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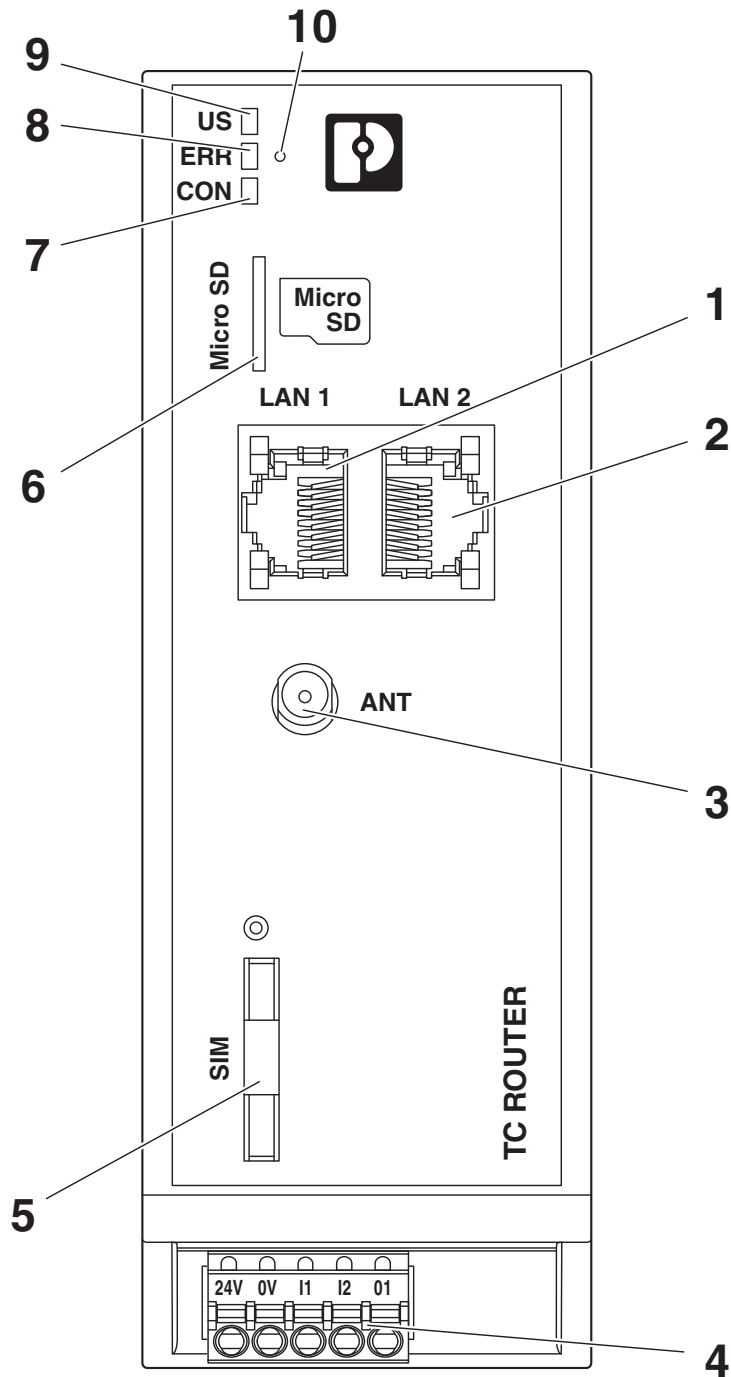
Schematic diagram

Front view

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Dimensional drawing
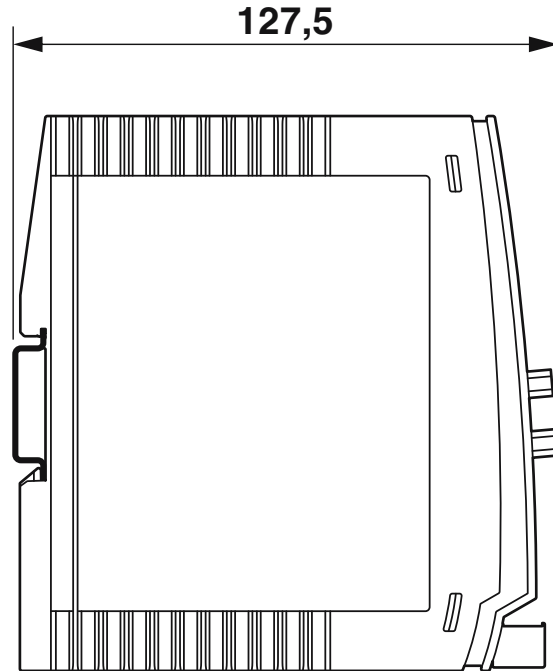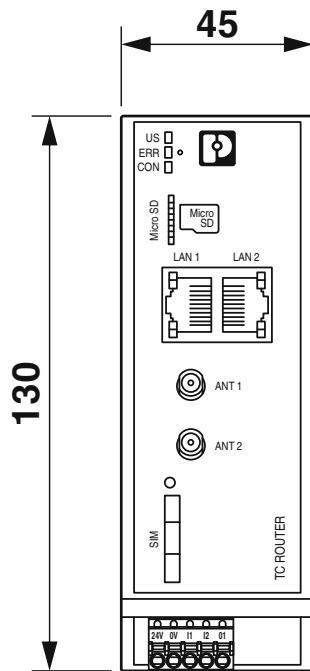
Schematic diagram

Connect the antenna

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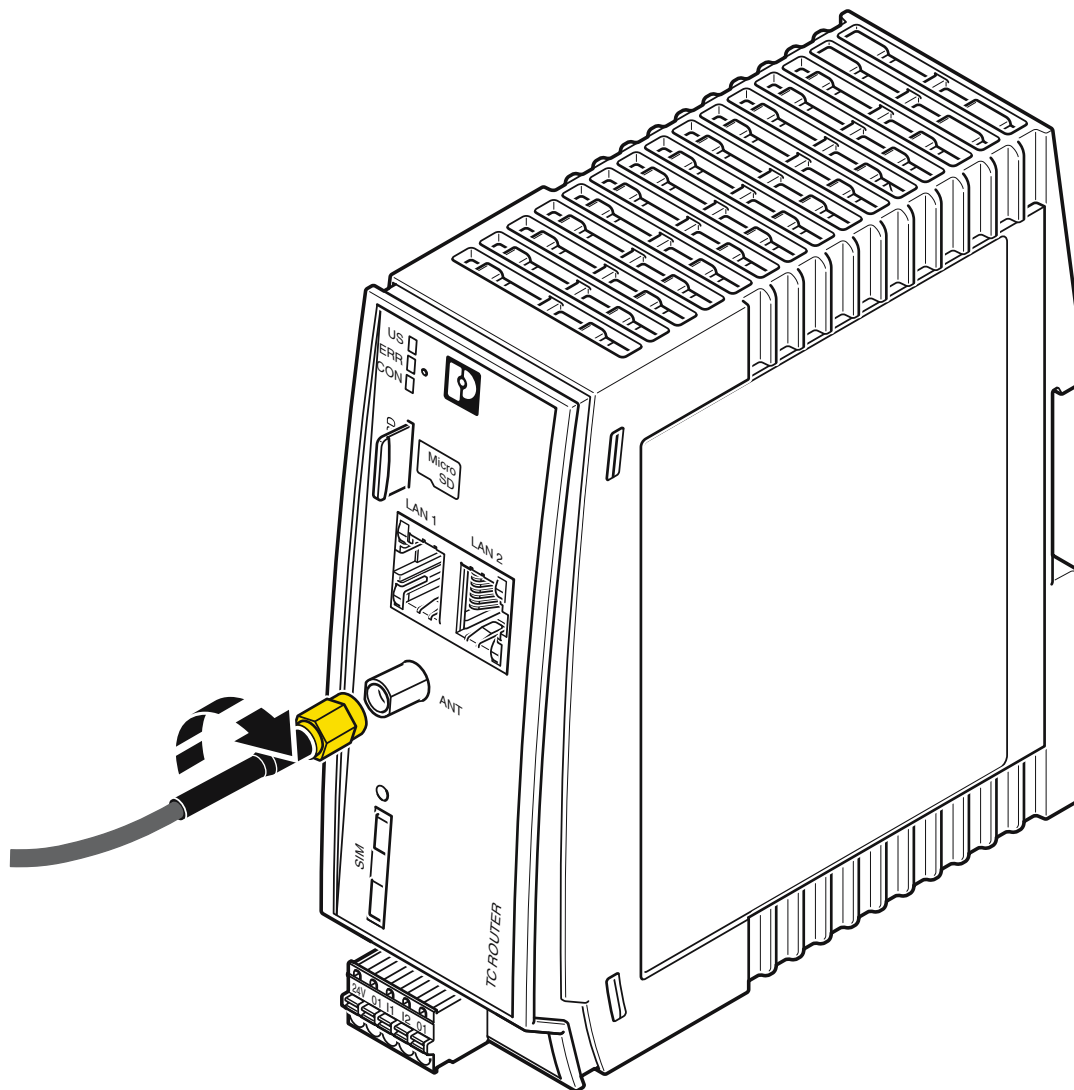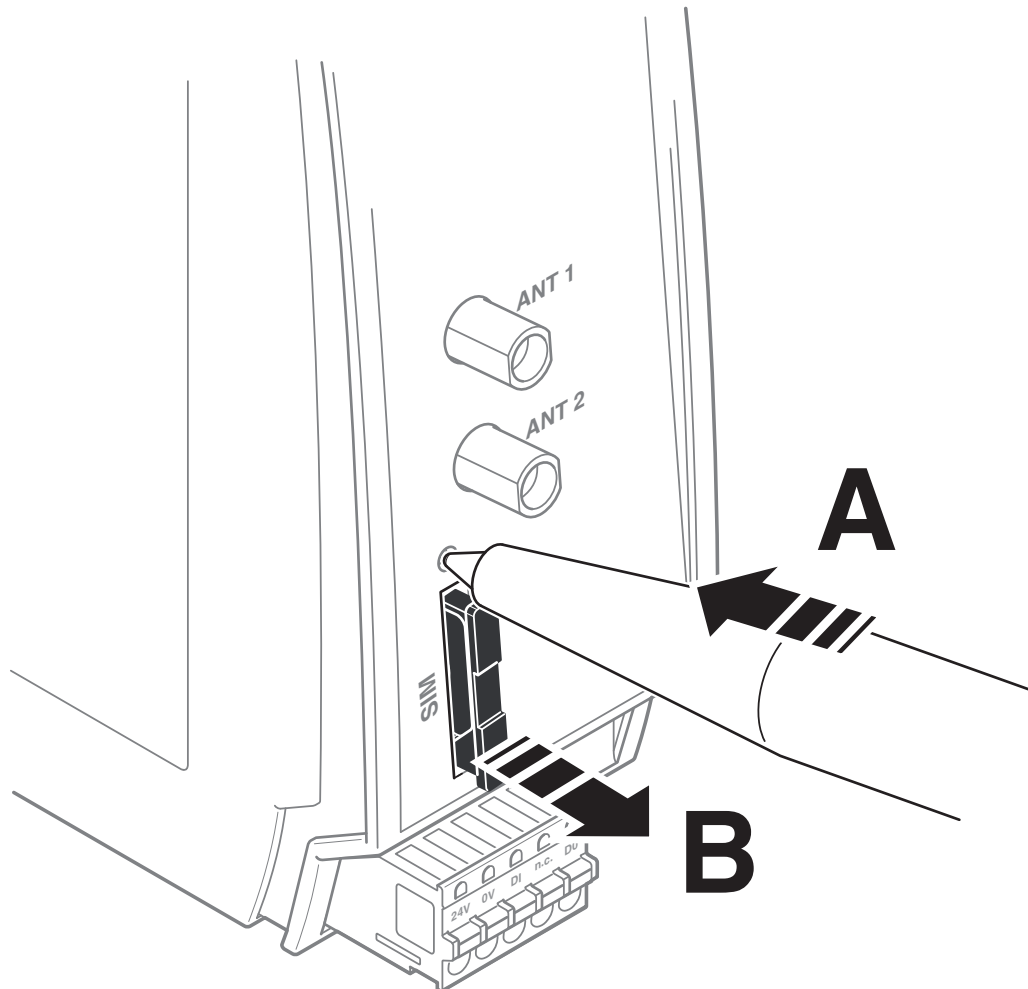
Schematic diagram

Remove SIM card holder

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Schematic diagram
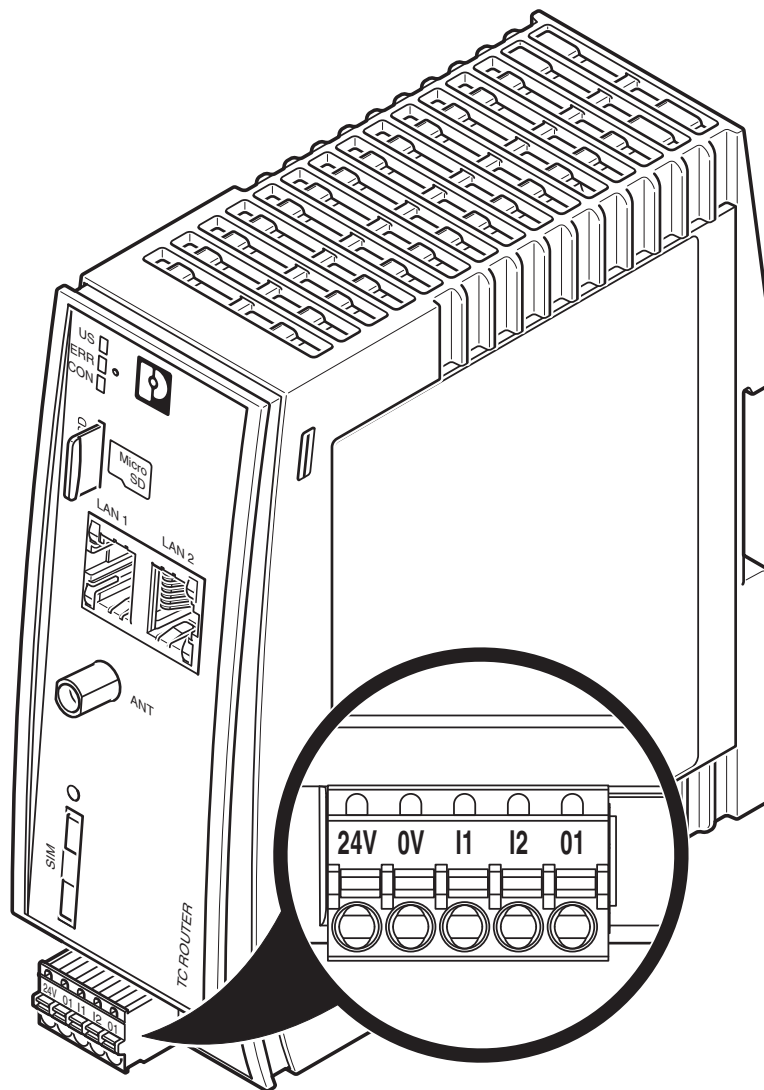
Device connections

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Classifications

ECLASS

ECLASS-11.0	19170502
ECLASS-12.0	19170502
ECLASS-13.0	19170502

ETIM

ETIM 9.0	EC001478

UNSPSC

UNSPSC 21.0	43222600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

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)

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Accessories

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

2903147

https://www.phoenixcontact.com/us/products/2903147

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

TC ANT MOBILE WALL 5M - Antenna

2702273

https://www.phoenixcontact.com/us/products/2702273

Multiband omnidirectional antenna for wall or mast mounting, 0.6 GHz ... 6 GHz, gain: 3 dBi ... 7 dBi, degree of protection: IP66, connection: SMA (male), incl. 5 m connecting cable, mounting bracket, and mast clamps

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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

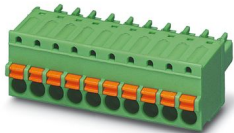1340147

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

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 mm^2, color: light grey, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, 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: without, type of packaging: packed in cardboard

MGUARD SECURE VPN CLIENT LIC - License

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