

# Router - TC ROUTER 3002T-4G - 2702528

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Industrial LTE 4G router, European version, fallback to 3G UMTS/HSPA and 2G GPRS/EDGE, 2 Ethernet interfaces, firewall, NAT, IPsec and OpenVPN support, 2x SMA-F antenna socket, SMS and e-mail transmission, 2 digital inputs, 1 digital output

## Product Description


The TC ROUTER for mobile communication implements high-performance, high-speed 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 4G cellular router (LTE)
- ✓ Fallback to 3G (UMTS/HSPA) and 2G (GPRS/EDGE)
- ✓ Virtual dedicated line to connect networks via cellular network
- ✓ IPsec and OpenVPN
- ✓ Up to three VPN tunnels simultaneously
- ✓ VPN remote start via call or SMS
- ✓ Stateful inspection firewall for dynamic filtering
- ✓ NAT table
- ✓ 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, -40 °C ... +70 °C



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 211961
GTIN	4055626211961
Weight per Piece (excluding packing)	240.000 g

## Router - TC ROUTER 3002T-4G - 2702528

Custom tariff number	85176200
Country of origin	Germany

### Technical data

#### Note

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

Width	45 mm
Height	130 mm
Depth	126 mm

#### Ambient conditions

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
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2

#### General

Electrical isolation	VCC // LTE // Ethernet // PE
Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Net weight	240 g
Housing material	Plastic
Color	gray
MTTF	383 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	184 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	78 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
Wireless licences	Europe

#### Power supply

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

#### Interfaces

Interface 1	Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet

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## Technical data

### Interfaces

No. of ports	2
Connection method	RJ45 socket, shielded
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
Serial transmission speed	10/100 Mbps, auto negotiation

### Wireless interface

Interface description	GSM / GPRS / EDGE / UMTS / HSPA / LTE (FDD)
Frequency	850 MHz (2 W (EGSM))
	900 MHz (2 W (EGSM))
	1800 MHz (1 W (EGSM))
	1900 MHz (1 W (EGSM))
	850 MHz (UMTS/HSPA B5)
	900 MHz (UMTS/HSPA B8)
	1900 MHz (UMTS/HSPA B2)
	2100 MHz (UMTS/HSPA B1)
	800 MHz (LTE B20)
	850 MHz (LTE B5)
	900 MHz (LTE B8)
	1700 MHz (LTE B4)
	1800 MHz (LTE B3)
	1900 MHz (LTE B2)
	2100 MHz (LTE B1)
	2600 MHz (LTE B7)
Data rate	≤ 150 Mbps (LTE (DL))
	≤ 50 Mbps (LTE (UL))
Antenna	50 Ω impedance SMA antenna socket
SIM interface 1	1.8 volt, 3 volt
GPRS	Class 12, Class B
	CS1 ... CS4
EDGE	Multislot Class 10
UMTS	HSPA 3GPP R9
LTE	CAT4
Country support	Europe

### Function

Web-based management	yes
Management	Web-based management, SNMP
Security functions	Supported 3DES, AES-128, -192, -256 ESP tunnel X.509v3, PSK MD5, SHA-1 RFC 3706 IP, port, protocol

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## Technical data

### Digital outputs

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)

### Digital inputs

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

### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

### Standards and Regulations

Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g
Noise immunity	EN 61000-6-2
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (Data line, asymmetrical)
Standards/regulations	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz

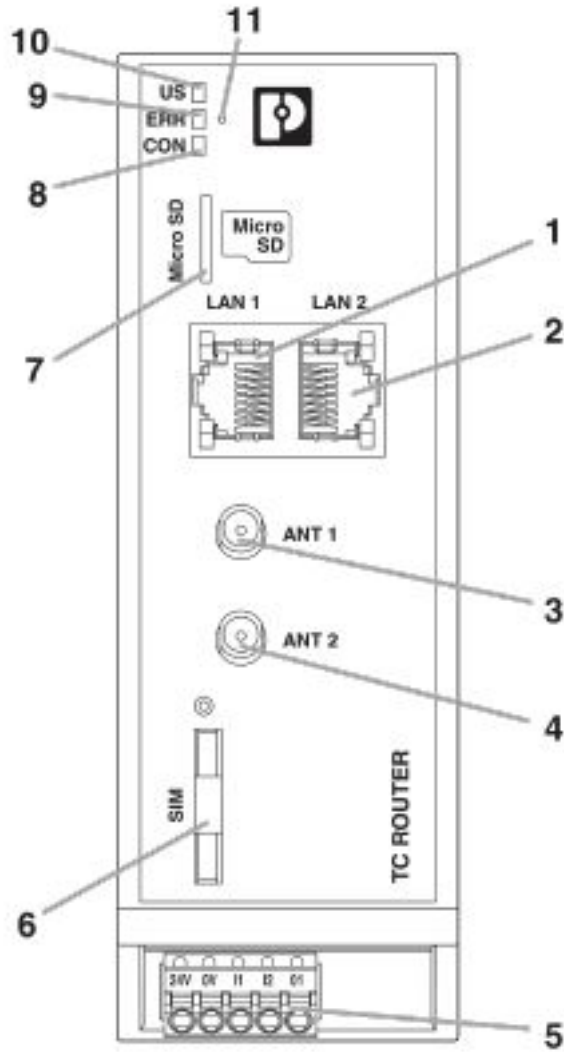
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

# Router - TC ROUTER 3002T-4G - 2702528

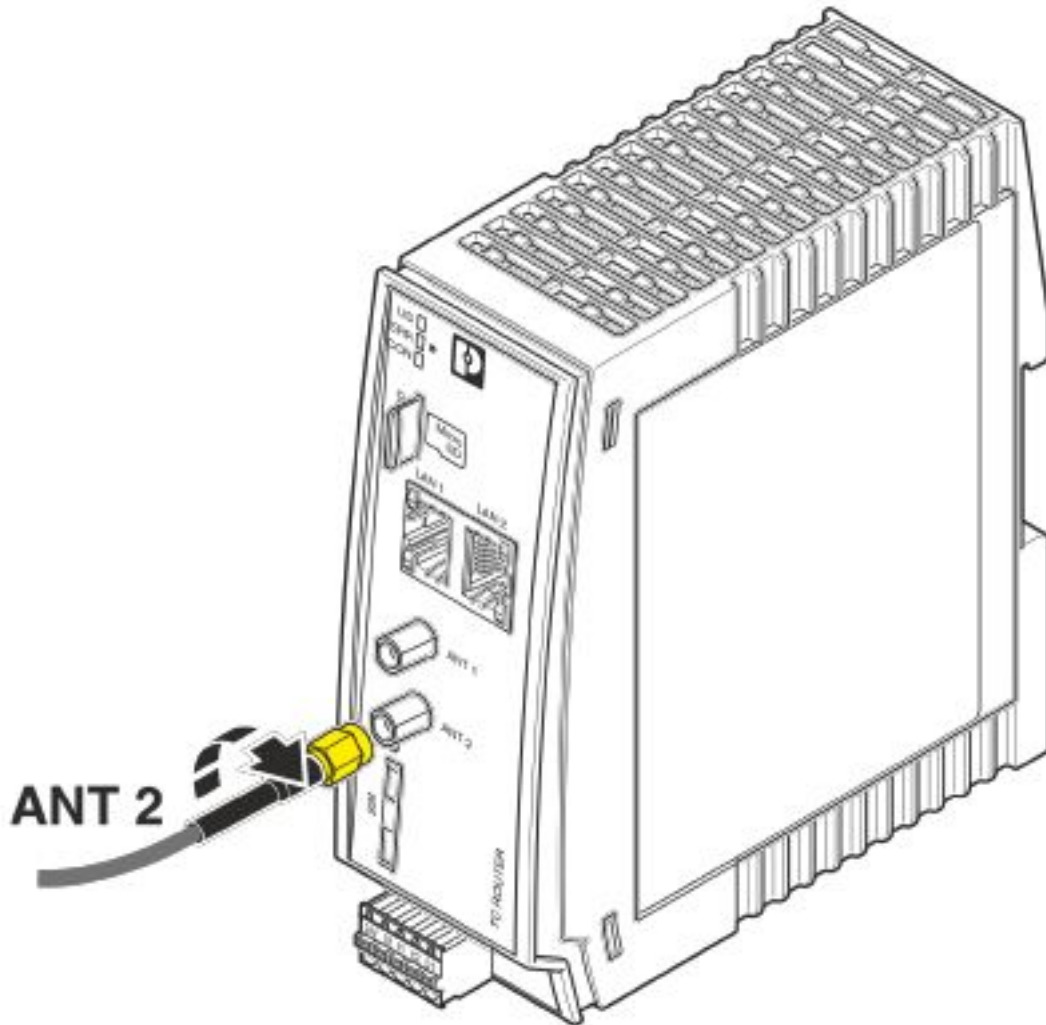
Schematic diagram



Front view

## Router - TC ROUTER 3002T-4G - 2702528

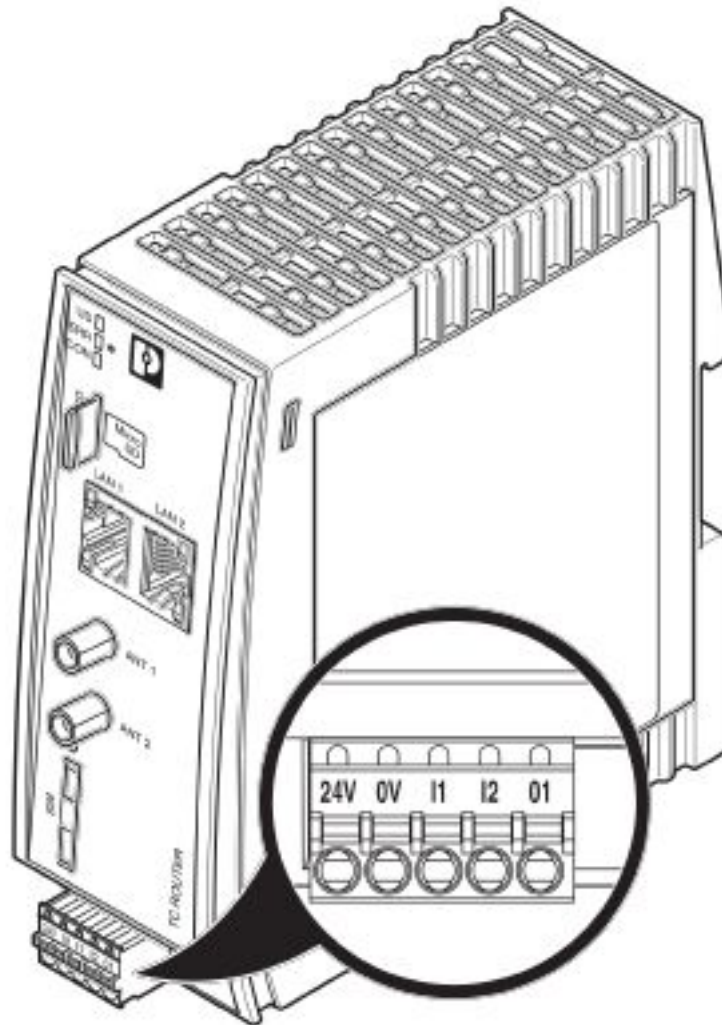
Schematic diagram



Connect the antenna

# Router - TC ROUTER 3002T-4G - 2702528

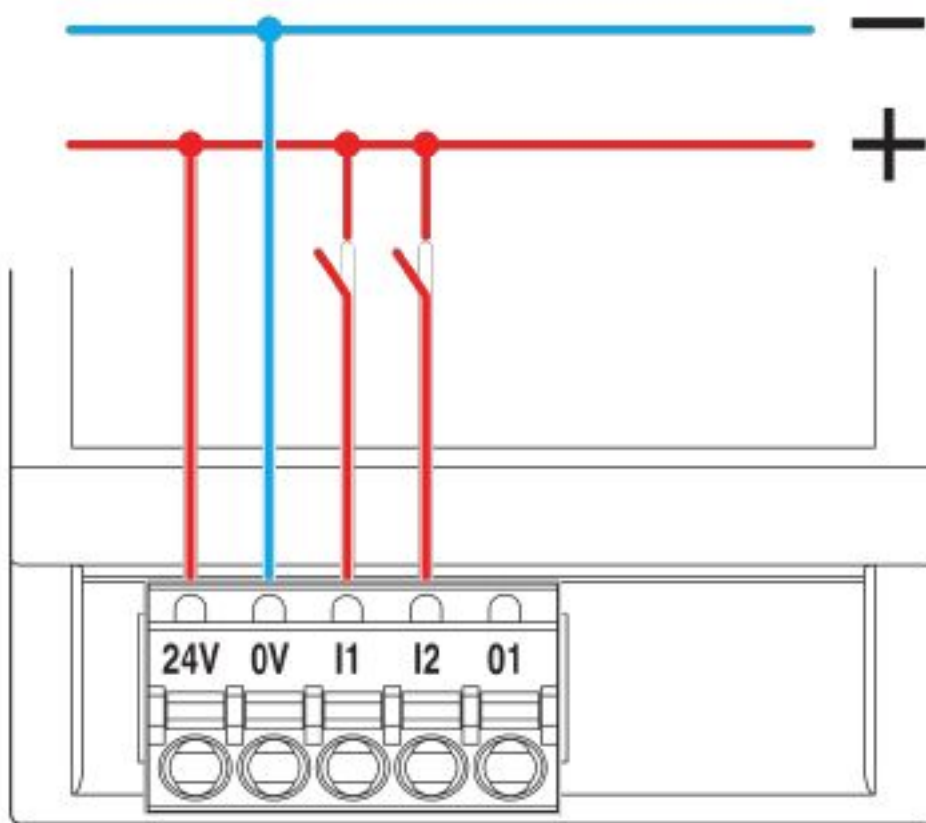
Schematic diagram



Device connections

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Connection diagram

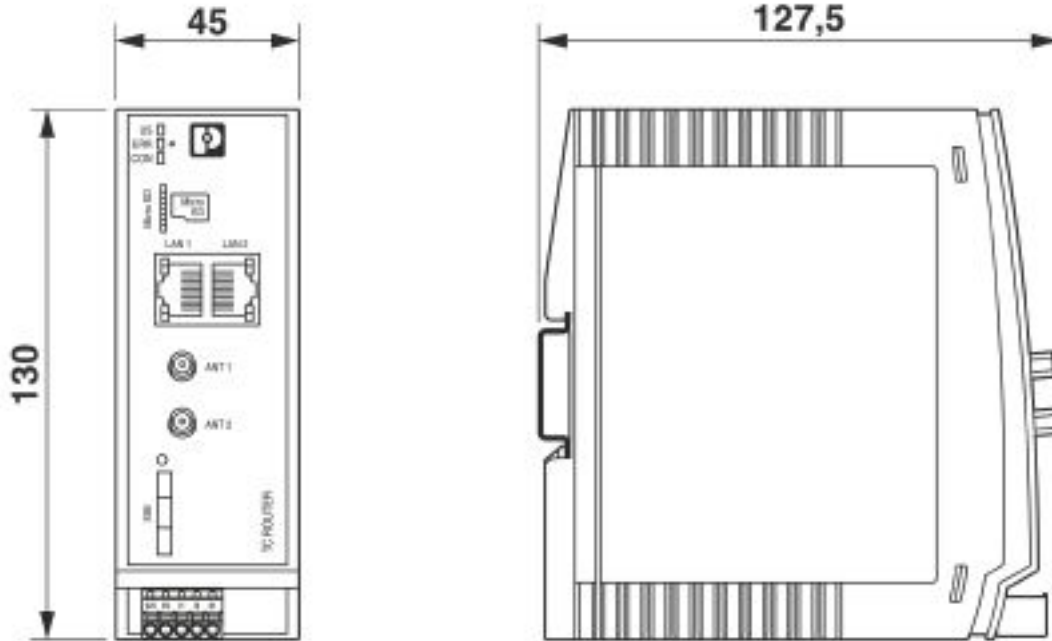


Switching inputs



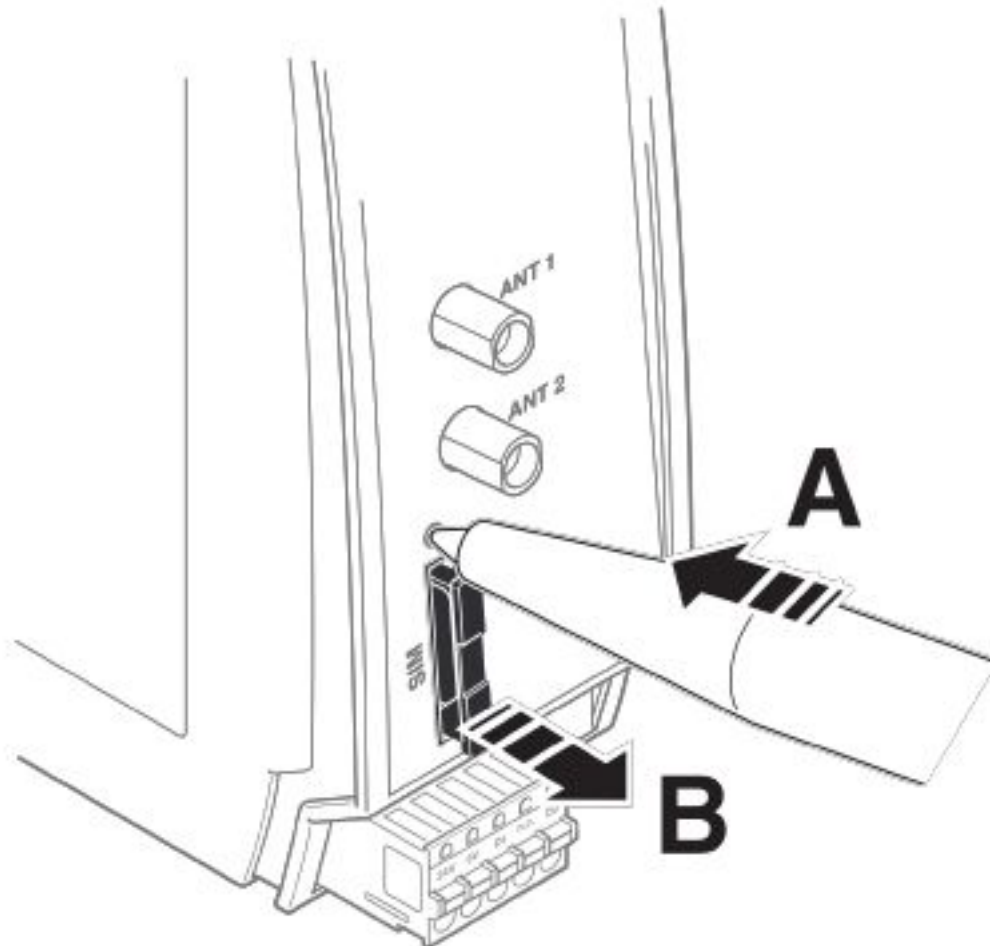
# Router - TC ROUTER 3002T-4G - 2702528

Dimensional drawing



# Router - TC ROUTER 3002T-4G - 2702528

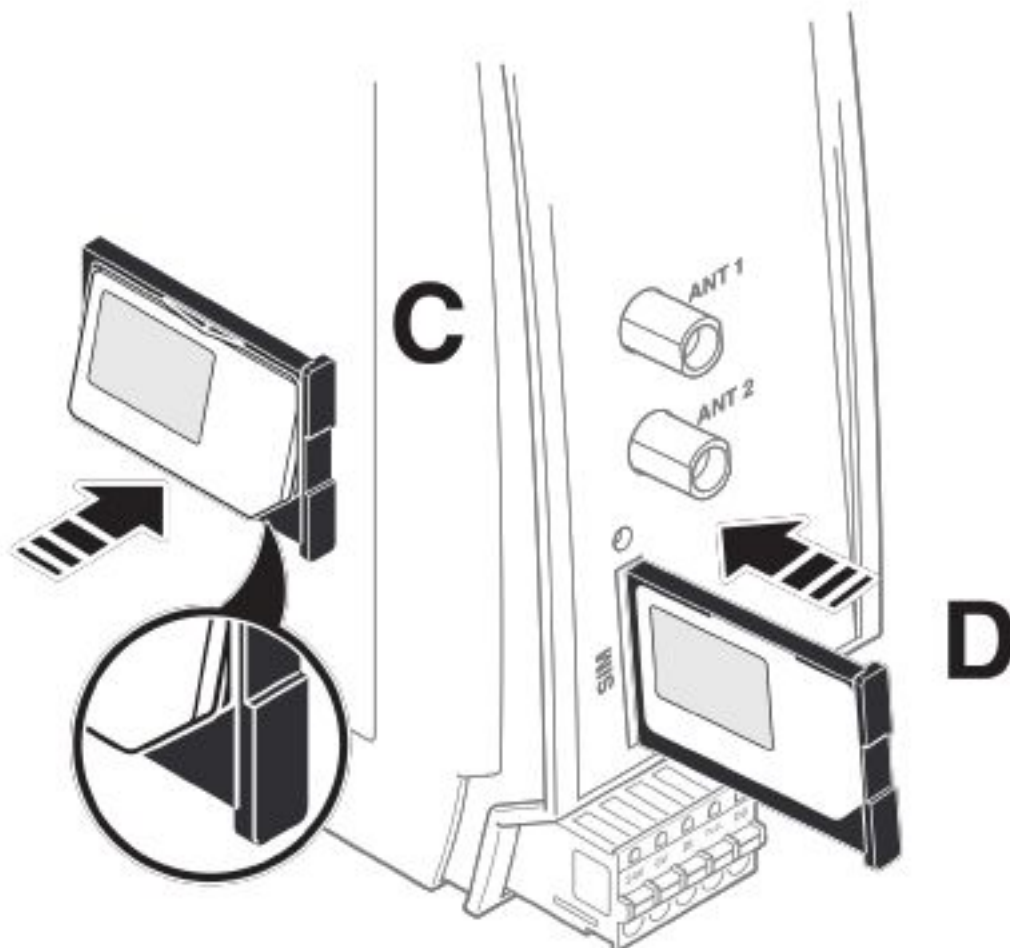
Schematic diagram



Remove SIM card holder

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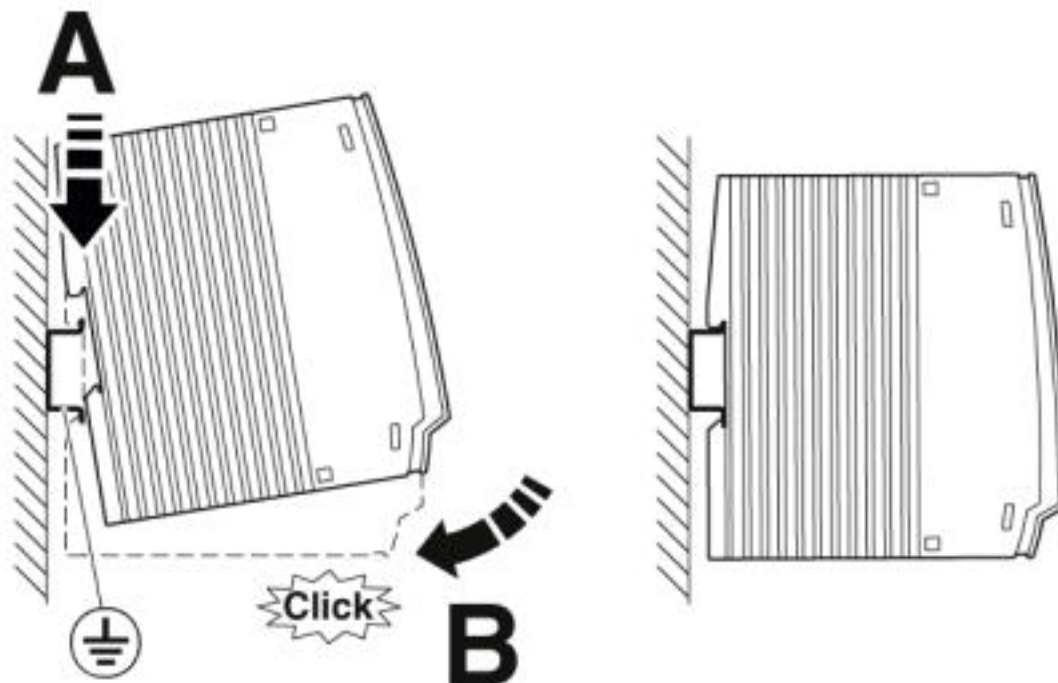
Schematic diagram



Insert the SIM card

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Schematic diagram



Mounting

## Classifications

eCl@ss

eCl@ss 4.0	27230200
eCl@ss 4.1	27230200
eCl@ss 5.0	19030100
eCl@ss 5.1	19030100
eCl@ss 6.0	19170100
eCl@ss 7.0	19170103
eCl@ss 8.0	19170103
eCl@ss 9.0	19170103

ETIM

ETIM 5.0	EC001478
ETIM 6.0	EC001478
ETIM 7.0	EC001478

## Accessories

Accessories

Antenna

## Router - TC ROUTER 3002T-4G - 2702528

### Accessories

Antenna - TC ANT MOBILE WALL 5M - 2702273



Multiband cellular antenna with mounting bracket for outdoor installation, 5 m antenna cable with SMA circular connector, suitable for LTE/4G

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### Coaxial cable

Antenna cable - PSI-CAB-GSM/UMTS- 5M - 2900980



Cellular antenna cable, 5 m in length, SMA (male) -> SMA (female), 50 ohm impedance

Antenna cable - PSI-CAB-GSM/UMTS-10M - 2900981

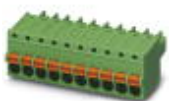


Cellular antenna cable, 10 m in length, SMA (male) -> SMA (female), 50 ohm impedance

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### PCB plug

PCB connector - FK-MCP 1,5/ 5-ST-3,81GY35BD-01 - 1105115



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 5, pitch: 3.81 mm, connection method: Push-in spring connection, color: light gray, contact surface: Tin

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### Power supply

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

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### Remote control software

## Router - TC ROUTER 3002T-4G - 2702528

### Accessories

License - MGuard SECURE VPN CLIENT LIC - 2702579



License for mGuard Secure VPN Client v11.x

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### Surge protection for transceiver systems

Surge protection device - CSMA-LAMBDA/4-2.0-BS-SET - 2800491



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: Male/female SMA connectors.