

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 cellular 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 cellular 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




Ethernet



Key Commercial Data

Packing unit	1 pc
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GTIN	 4 055626 211961
GTIN	4055626211961
Weight per Piece (excluding packing)	340.000 g
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
Mounting type	DIN rail mounting
Net weight	240 g
Housing material	Plastic
Color	gray
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%)
Wireless licences	Europe

Power supply

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Technical data

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)
Connection method	Push-in spring connection
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.75 mm ²
Conductor cross section flexible max.	1.50 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section solid max.	1.50 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section AWG max.	16
Conductor cross section AWG min.	26
Stripping length	9 mm

Interfaces

Interface 1	Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3
Interface	Ethernet
No. of ports	2
Connection method	RJ45 jack, 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 range	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)
	850 MHz (UMTS/HSPA B5)
	900 MHz (UMTS/HSPA B8)
	1900 MHz (UMTS/HSPA B2)

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Wireless interface

	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	≤ 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
Number of VPN tunnels	3
Security functions	Supported 3DES, AES-128, -192, -256 ESP tunnel X.509v3, PSK MD5, SHA-1 RFC 3706 IP, port, protocol

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

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Technical data

Standards and Regulations

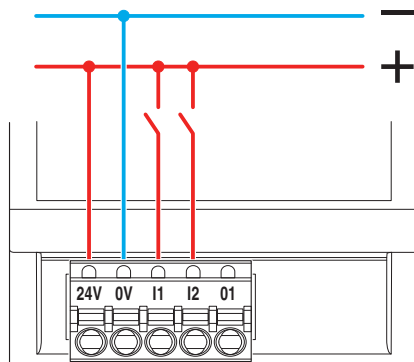
Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g
Noise immunity	EN 61000-6-2
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

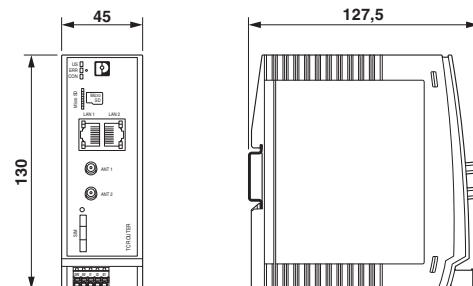
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Connection diagram



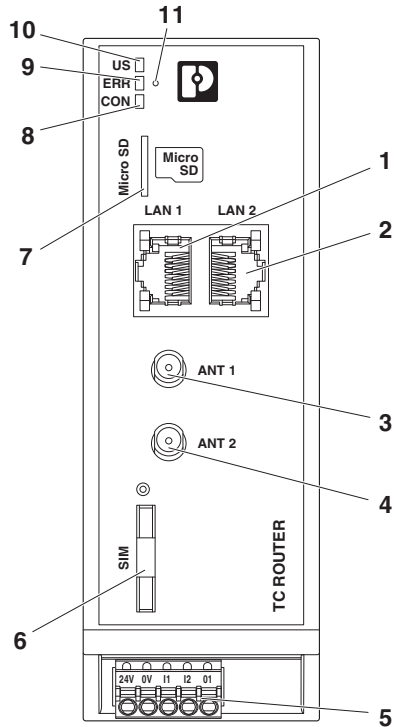
Dimensional drawing



Switching inputs

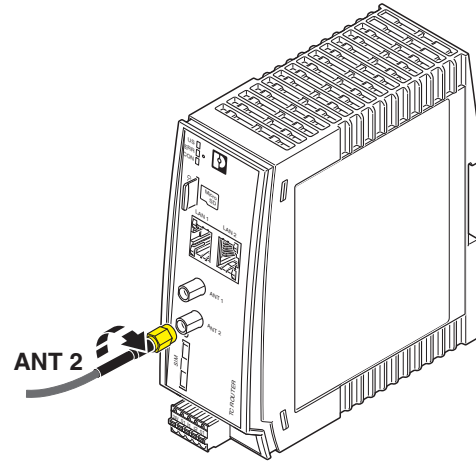
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Schematic diagram



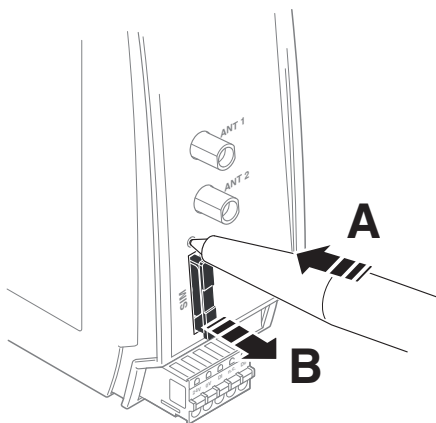
Front view

Schematic diagram



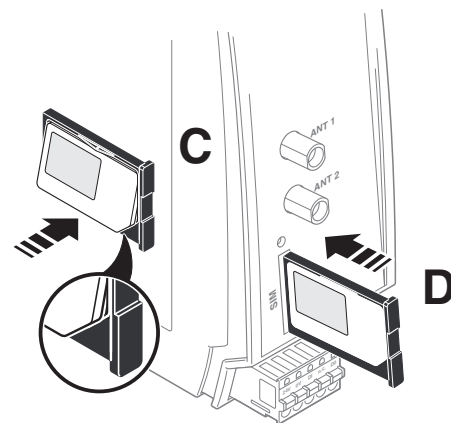
Connect the antenna

Schematic diagram



Remove SIM card holder

Schematic diagram



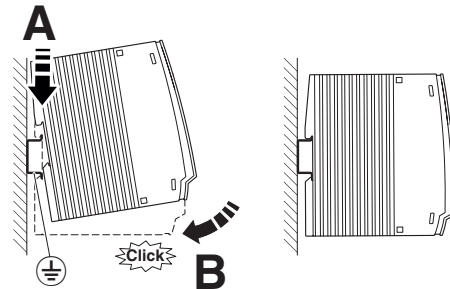
Insert the SIM card

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Schematic diagram



Schematic diagram



Mounting

Device connections

Classifications

eCl@ss

eCl@ss 10.0.1	19170502
eCl@ss 11.0	19170502
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 9.0	19170103

ETIM

ETIM 6.0	EC001478
ETIM 7.0	EC001478

Accessories

Accessories

Antenna

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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 and 5G

Coaxial adapter

Adapter - RAD-ADP-SMA/F-SMA/M-90 - 2917324



Antenna adapter, frequency range: 0.3 GHz ... 6 GHz, connection: SMA (female) -> SMA (male), angled 90°

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

PCB plug

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Accessories

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



PCB connector, nominal cross section: 1.5 mm², color: light gray, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, Number of rows: 1, Number of positions per row: 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: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

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

Remote control software

License - MGuard SECURE VPN CLIENT LIC - 2702579



License for mGuard Secure VPN Client v11.x

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.