

# TC ROUTER 4202T-4G EU WLAN - Router



1234354

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Industrial 4G LTE router, EU device, 3G (UMTS/HSPA) and 2G (GPRS/EDGE) fallback, WLAN access point 802.11a/b/g/n, 150 Mbps, 2.4 GHz + 5 GHz, 2-port switch, firewall, NAT, IPsec and OpenVPN support, 2 DI, 1 DO, RS-232/RS-485

## Product description

The **TC ROUTER 4000...** cellular routers are the successor to: TC ROUTER 3000... (TC ROUTER 3002T-4G, 2702528 and TC ROUTER 3002T-3G, 2702529), TC ROUTER 2000... (TC ROUTER 2002T-4G, 2702530 and TC ROUTER 2002T-3G, 2702531) In addition to the proven 4G-LTE cellular connection, the routers also feature an integrated WLAN interface or a serial RS-232/485 interface, depending on the version. Connection to the internet can be established via the cellular interface, via a wired WAN port, or via an existing WLAN network.

## 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
- Configuration via web-based management or microSD card
- 2 local Ethernet connections
- Switchable energy-saving mode
- Integrated logbook
- Extended temperature range of -40 °C ... +70 °C
- Integrated WLAN access point
- Micro SIM and eSIM for maximum network availability

## Commercial data

Item number	1234354
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNC422
Product key	DNC422
GTIN	4063151338534
Weight per piece (including packing)	343.2 g
Weight per piece (excluding packing)	343.2 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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### Product properties

Product type	Cellular router
Application	Ethernet
	RS-232
	RS-485
MTTF	384 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	180 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	64 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

### Electrical properties

Electrical isolation	VCC // LTE // Ethernet // PE
Maximum power dissipation for nominal condition	4.32 W
Mains type	Cellular communication

### Supply

Supply voltage range	10 V DC ... 30 V DC (Via pluggable Push-in terminal block)
Typical current consumption	< 180 mA (24 V DC)
	< 500 mA (10 V DC)
	≤ 3 mA (With activated energy-saving mode)
Max. current consumption	1.5 A
Connection method	Push-in spring connection

### Function

Management	Web-based management
	SNMPv1/v2/v3
	SSHv2
	Telnet
	TOM (TC ROUTER Online Manager, management software from Phoenix Contact)
Data storage system	Micro SDHC card

### Input data

#### Digital

Description of the input	Digital input
Number of inputs	2

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Voltage input signal	10 V DC ... 30 V DC
Switching level "0" signal	< 8 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 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> ... 1.50 mm <sup>2</sup>
Conductor cross section, rigid	0.14 mm <sup>2</sup> ... 1.50 mm <sup>2</sup>
Conductor cross section AWG	26 ... 16
Stripping length	9 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, TFTP, SCEP, RADIUS VPN: IPsec, OpenVPN, GRE, L2TP, PPTP Network Discovery: LLDP, CDP, FDP, SONMP, EDP, IRDP
Auxiliary protocols	ARP, DHCP, DNS, DynDNS, PING (ICMP), SMTP(S), NTP, SSL/TLS, STARTTLS, SMS

### Data: RS-232 interface in accordance with EIA-232

Serial transmission speed	≤ 1000 kbps
Connection method	Push-in spring connection
Transmission length	15 m

### Data: RS-485 interface in accordance with EIA-485

Serial transmission speed	≤ 1000 kbps
Connection method	Push-in spring connection
Termination resistor	120 Ω (can be set via software)

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## Wireless

Interface description	GSM / GPRS / EDGE / UMTS / HSPA / LTE (FDD)
Frequency range	800 MHz (LTE B20)
	850 MHz (LTE B5)
	900 MHz (LTE B8)
	1800 MHz (LTE B3)
	2100 MHz (LTE B1)
	2600 MHz (LTE B7)
	850 MHz (UMTS/HSPA B5)
	900 MHz (UMTS/HSPA B8)
	1900 MHz (UMTS/HSPA B2)
	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
Antenna connection method	SMA (female)
SIM Interface	Micro SIM (3FF)
	eSIM (several profiles)
GPRS	Class 12, Class B
	CS1 ... CS4
EDGE	Multislot Class 12
UMTS	HSPA 3GPP R8
LTE	CAT4
Country support	Europe

## Wireless

Interface description	WLAN in accordance with IEEE 802.11 a/b/g/n
Operating mode	Access point (maximum of 10 clients)
	Client
	Dual mode
	Mesh
Frequency	5 GHz
	2.4 GHz
Data rate	11 Mbps (2.4 GHz, 20 MHz, /b)
	54 Mbps (2.4 GHz, 20 MHz, /g)
	144 Mbps (2.4 GHz, 20 MHz, /n)
	54 Mbps (5 GHz, 20 MHz, /a)
	150 Mbps (5 GHz, 40 MHz, /n)
Antenna connection method	RSMA (female)
Security	WPA, WPA2 (TKIP, CCMP, PSK, RADIUS)

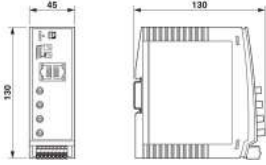
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## Dimensions

Dimensional drawing	
Width	45 mm
Height	130 mm
Depth	130 mm

## Material specifications

Material	Polycarbonate
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
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 USA, FCC

Certificate	Z64-WL18DBMOD
Note	FCC directive, part 15

## 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
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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

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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

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
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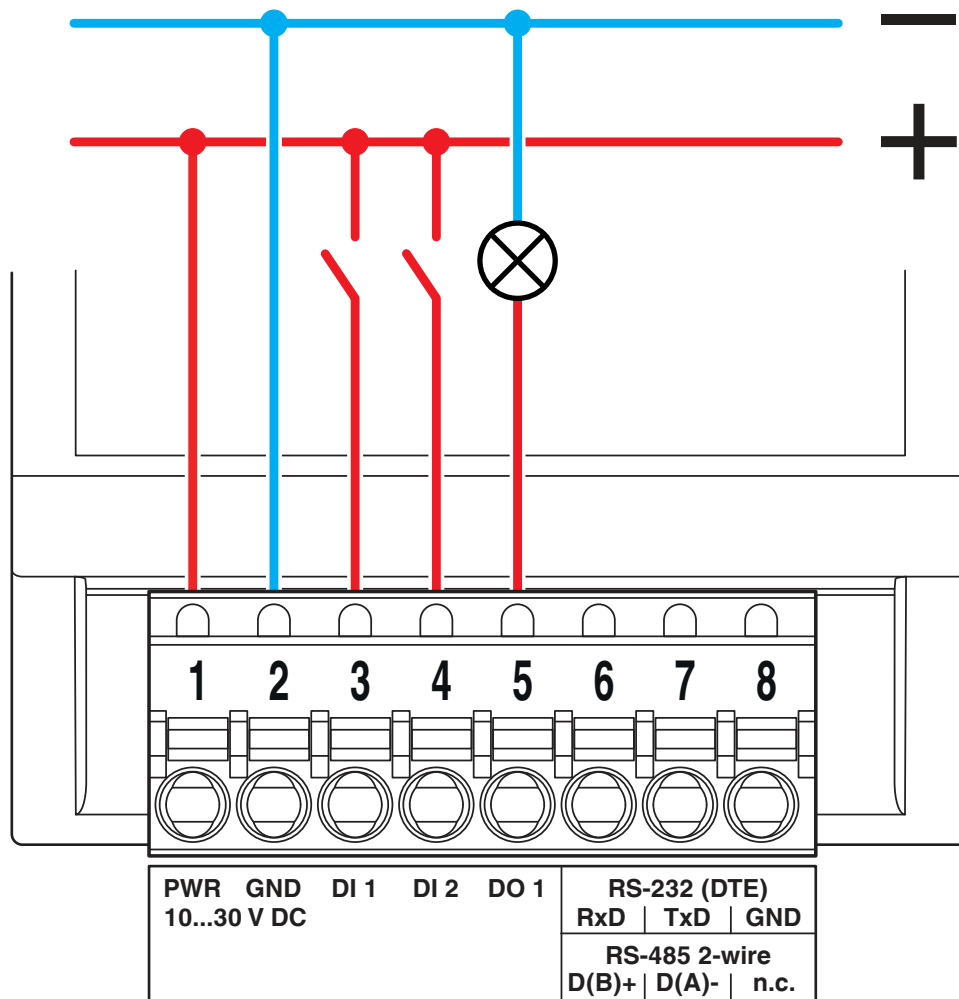


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## Drawings

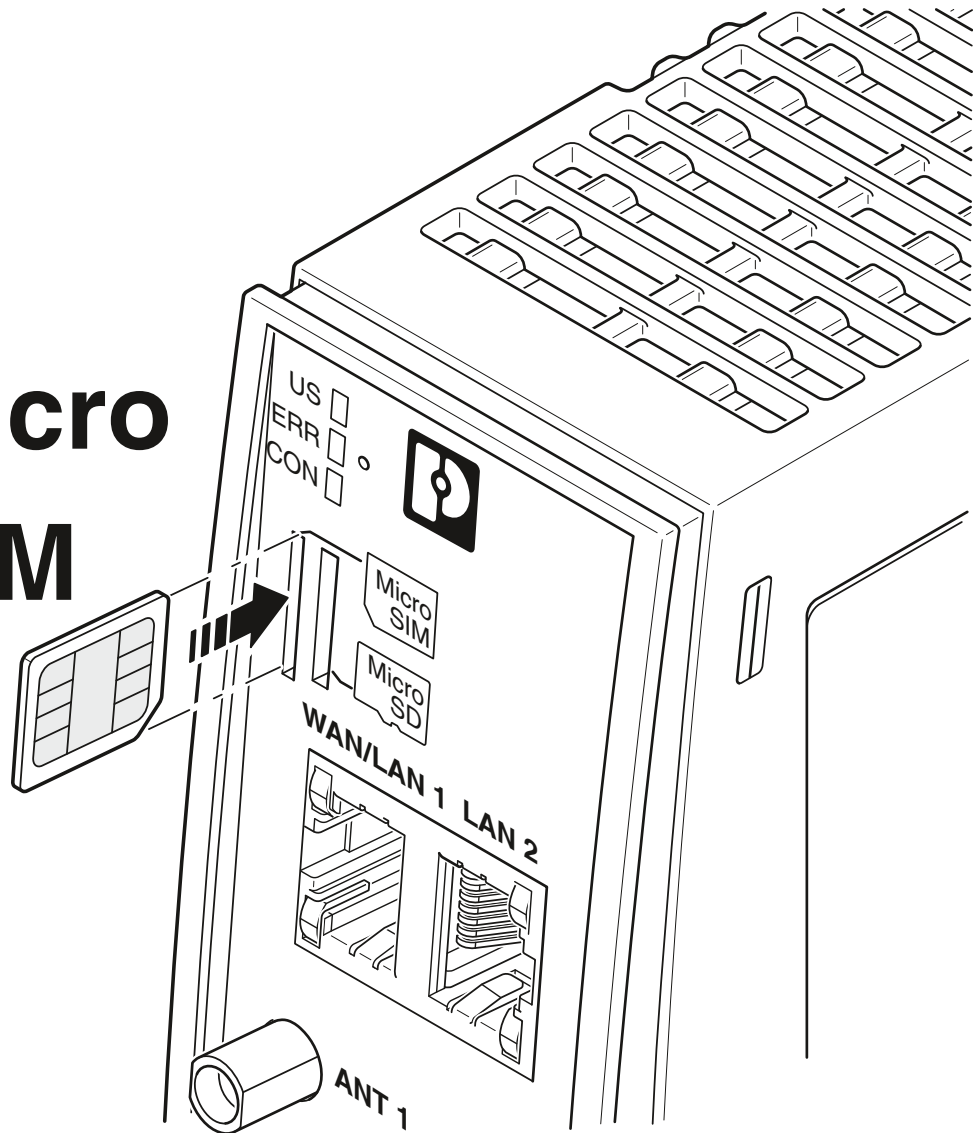
Connection diagram



Switching inputs and outputs

Schematic diagram

**Micro  
SIM**



Insert SIM card

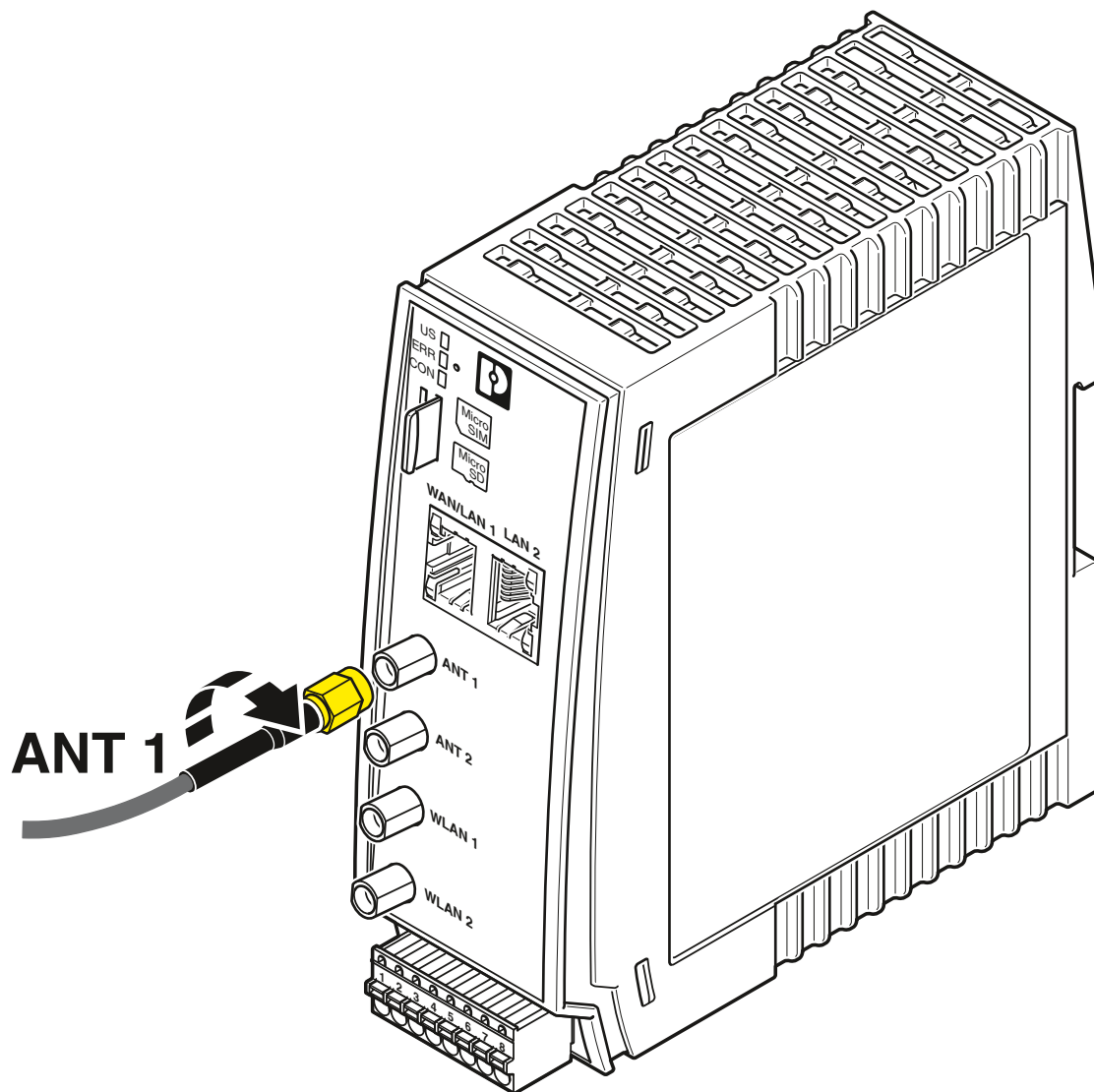


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Schematic diagram



Connect the antenna

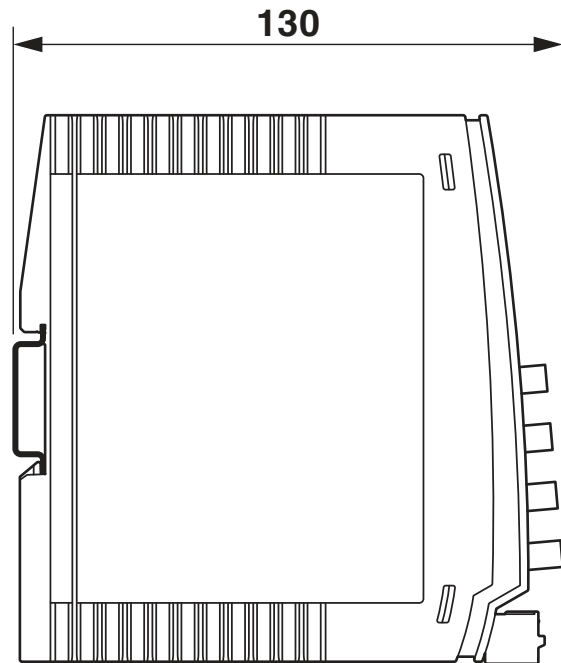
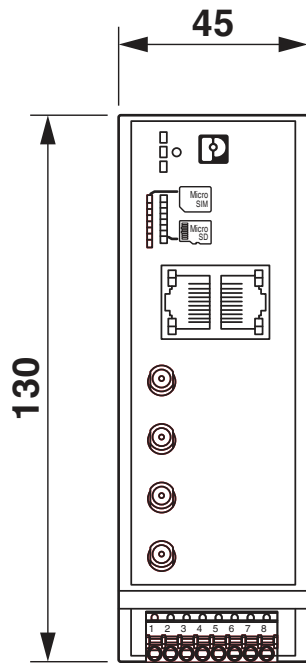
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Dimensional drawing



Dimensions

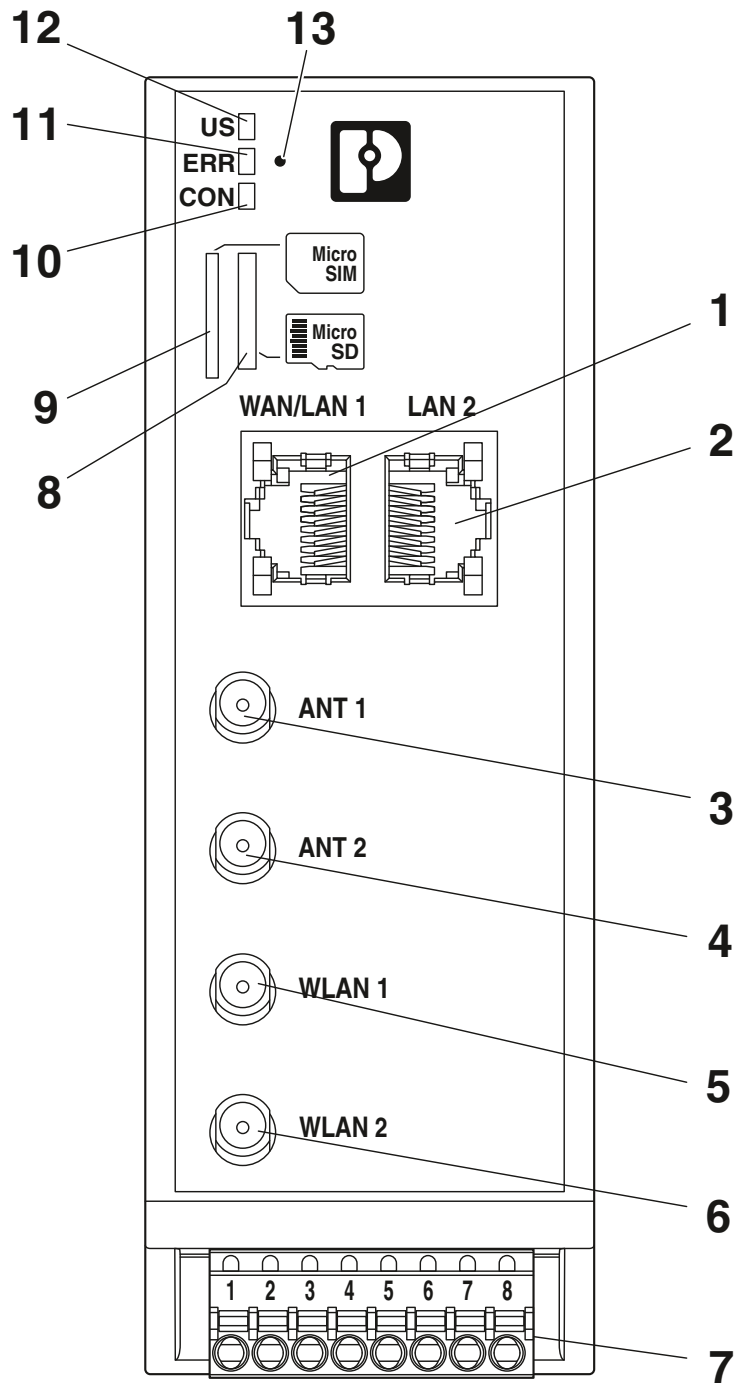
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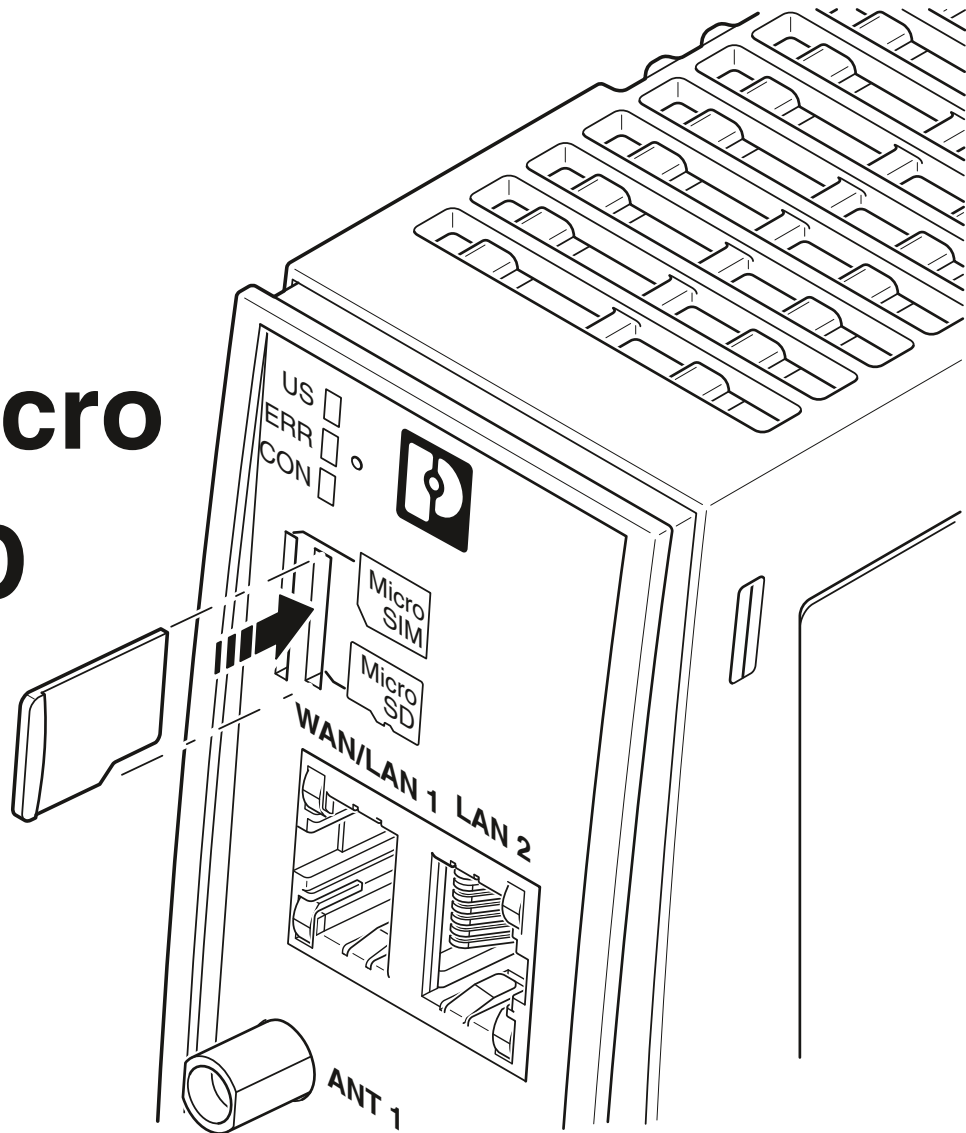
Schematic diagram



Front view

Schematic diagram

# Micro SD



Insert SD card

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001478
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### UNSPSC

UNSPSC 21.0	43222600
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

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

2903147

<https://www.phoenixcontact.com/gb/products/2903147>



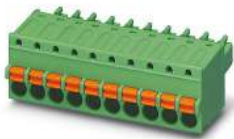
Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 24 V DC/3 A C2LPS

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### FK-MCP 1,5/ 8-ST-3,81 GY7035 - PCB connector

1713311

<https://www.phoenixcontact.com/gb/products/1713311>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: light grey, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, 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

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## MGUARD SECURE VPN CLIENT LIC - License

2702579

<https://www.phoenixcontact.com/gb/products/2702579>



License for mGuard Secure VPN Client v11.x

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## TC ANT MOBILE WALL 5M - Antenna

2702273

<https://www.phoenixcontact.com/gb/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/gb/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

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## ANT-OMNI-0671-02 - Antenna

1396318

<https://www.phoenixcontact.com/gb/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/gb/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

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## ANT-OMNI-2459-02 - Antenna

2701408

<https://www.phoenixcontact.com/gb/products/2701408>



Omnidirectional antenna for control cabinet mounting, frequency band: 2.4 GHz / 5 GHz, gain: 2.5 dBi / 5 dBi, degree of protection: IP68, connection: N (male)

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## RAD-ISM-2459-ANT-FOOD-6-0-N - Antenna

2702898

<https://www.phoenixcontact.com/gb/products/2702898>



Multiband omnidirectional antenna with protection against vandalism for control cabinet mounting, frequency band: 2.4 GHz / 5 GHz / 6 GHz, gain: 6 dBi / 8 dBi / 8 dBi, degree of protection: IP68, shockproof: IK08, resistant to cleaning agents, shock- and vibration-resistant, connection: N (female)

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

1340139

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



Coaxial cable, 50  $\Omega$ , length: 0.5 m, N(m) - SMA(m), external cable diameter: 2.8 mm, transmission frequency:  $\leq 7.25$  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/gb/products/1340143>



Coaxial cable, 50  $\Omega$ , length: 1 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency:  $\leq 7.25$  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

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

1340144

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Coaxial cable, 50  $\Omega$ , length: 3 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency:  $\leq 7.25$  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/gb/products/1340147>



Coaxial cable, 50  $\Omega$ , length: 5 m, N(m) - SMA(m), external cable diameter: 4.9 mm, transmission frequency:  $\leq 7.25$  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

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## RAD-PIG-EF316-N-RSMA - Antenna cable

2701402

<https://www.phoenixcontact.com/gb/products/2701402>



Antenna cable for control cabinet feed-through, outside diameter: 3.2 mm (0.126 in.), inner conductor: stranded, attenuation: 0.6 / 0.9 / 1.4 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (female) -> RSMA (male), cable length: 0.5 m (1.6 ft.)

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## RAD-PIG-RSMA/N-0.5 - Antenna cable

2903263

<https://www.phoenixcontact.com/gb/products/2903263>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.4 / 0.5 / 0.6 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 0.5 m (1.6 ft.)

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## RAD-PIG-RSMA/N-1 - Antenna cable

2903264

<https://www.phoenixcontact.com/gb/products/2903264>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)

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## RAD-PIG-RSMA/N-2 - Antenna cable

2903265

<https://www.phoenixcontact.com/gb/products/2903265>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.9 / 1.3 / 2.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 2 m (6.5 ft.)

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## RAD-PIG-RSMA/N-3 - Antenna cable

2903266

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Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 1.2 / 2.0 / 3.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 3 m (10 ft.)

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## RAD-PIG-RSMA/N-5 - Antenna cable

2702140

<https://www.phoenixcontact.com/gb/products/2702140>



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 2.0 / 3.3 / 4.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 5 m (16 ft.)

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## RAD-CAB-EF393- 3M - Antenna cable

2867649

<https://www.phoenixcontact.com/gb/products/2867649>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.0 / 1.8 / 3.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 3 m (10 ft.)



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## RAD-CAB-EF393- 5M - Antenna cable

2867652

<https://www.phoenixcontact.com/gb/products/2867652>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.6 / 2.9 / 5.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 5 m (16 ft.)

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## RAD-CAB-EF393-10M - Antenna cable

2867665

<https://www.phoenixcontact.com/gb/products/2867665>



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 2.9 / 5.6 / 9.9 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 10 m (32 ft.)

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## RAD-CAB-EF393-15M - Antenna cable

2885634

<https://www.phoenixcontact.com/gb/products/2885634>

Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 4.3 / 8.3 / 14.8 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 15 m (50 ft.)



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

2803166

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

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



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

2867843

<https://www.phoenixcontact.com/gb/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)



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

2903182

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

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



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PHOENIX CONTACT Ltd  
Halesfield 13, Telford  
Shropshire, TF7 4PG  
01952 681700  
[info@phoenixcontact.co.uk](mailto:info@phoenixcontact.co.uk)