

# SMS relay - TC MOBILE I/O X200-4G



1038567

<https://www.phoenixcontact.com/de/produkte/1038567>

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SMS relay and signaling module, European version, monitor analog and digital values via cellular network, switch relay outputs remotely, communication via SMS or cellular network data connection (e-mail transmission, app), supply voltage 10 V ... 60 V DC

## Product Description

The TC MOBILE I/O X200-4G compact electronic signaling system is the successor to the TC MOBILE I/O X200 (2903805) and PSI-MODEM-SMS-RELAY/6ADI/4DO/DC (2313520) SMS relays. The electronic signaling system monitors digital and analog values via the cellular network. It also switches relay outputs remotely. The device offers numerous helpful software functions, such as SMS message chain, SMS in the event of a voltage drop, sending logbooks via e-mail, and different user roles. A USB connection to a computer with a web browser is all that is needed for configuration.

## Your advantages

- Future-proof 4G technology (LTE CAT1), simultaneous use of well-established 2G networks (GSM, GPRS, EDGE)
- Alerts via SMS in the field and, for example, via e-mail in the control room
- Message chain for sending an alert to the relevant service technician
- Alarm generation on voltage failure via SMS
- Free switching via phone call
- Cost control for prepaid cards
- Remote commands to avoid on-site servicing: switching, configuration commands, and logbook transmission
- Compact design also for domestic installations (4 HP, DIN 43880)
- Mounting on DIN rail or on the wall

## Commercial Data

Item number	1038567
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	M1 - Kommunikationstechn.
Product Key	DNC423
Catalog Page	Page 403 (C-6-2019)
GTIN	4055626592046
Weight per Piece (including packing)	240,1 g
Weight per Piece (excluding packing)	240,1 g
Customs tariff number	85176200
Country of origin	DE

## Technical Data

### Product properties

Product type	Signaling system
Application	I/O
MTTF	674 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	324 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	130 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

### Electrical properties

Mains type	Cellular communication
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#### Supply

Supply voltage range	10 V DC ... 60 V DC
Typical current consumption	50 mA (24 V DC)
Max. current consumption	80 mA

### Input data

#### Digital

Description of the input	Digital input
Number of inputs	4
Switching threshold "0" signal in reference to $U_N$	$\leq 0.3$
Switching threshold "1" signal in reference to $U_N$	$\geq 0.7$

#### Analog

Description of the input	Analog input
Number of inputs	2
Input signal	Current or voltage
Resolution	15 bit
Input impedance	600 k $\Omega$ (Voltage inputs)
	50 $\Omega$ (Current inputs)
Voltage input signal	0 V DC ... 60 V DC
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA (configurable)
Precision	$\pm 0.1 \%$

### Output data

#### Switching

Output name	Relay output
Number of outputs	4
Contact type	N/O contact

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Minimum switching voltage	100 mV
Maximum switching voltage	60 V DC
	30 V AC
Limiting continuous current	6 A
Switching capacity	100 W (Power Source PS2, $P_{out} \leq 100$ W)
Electrical service life	30000 cycles

## Connection data

### Supply

Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.20 mm <sup>2</sup> ... 2.50 mm <sup>2</sup>
Conductor cross section, rigid	0.20 mm <sup>2</sup> ... 2.50 mm <sup>2</sup>
Conductor cross section AWG	24 ... 14
Stripping length	6.5 mm
Tightening torque	0.5 Nm ... 0.6 Nm (5-7 lbs-in, screw terminal blocks)

## Interfaces

### Data: USB 2.0

Connection method	Mini-USB type B, 5-pos.
Transmission length	≤ 3 m (only for configuration and diagnostics)

### Wireless

Interface description	GSM / GPRS / EDGE / LTE (FDD)
Frequency range	800 MHz (LTE B20)
	1800 MHz (LTE B3)
	2600 MHz (LTE B7)
	900 MHz (2 W (EGSM))
	1800 MHz (1 W (EGSM))
GPRS	Multislot Class 33
EDGE	Multislot Class 33
LTE	CAT1

## Dimensions

Width	72 mm
Height	90 mm
Depth	62 mm

## Material specifications

Material	Polycarbonate (Housing)
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## Environmental and real-life conditions

### Ambient conditions

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Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (SMS mode only, note the derating information in the technical documentation for data connection)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	2000 m
Permissible humidity (operation)	0 % ... 95 %

## Approval data

### CE

Certificate	CE-compliant
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### Wireless approval, Europe

Note	RED 2014/53/EU
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### UKCA

Certificate	UKCA-compliant
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## EMC data

Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
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### Electrostatic discharge

Standards/regulations	EN 61000-4-2
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### Electrostatic discharge

Contact discharge	± 6 kV
Discharge in air	± 8 kV
Indirect discharge	± 6 kV
Comments	Criterion B

### Electromagnetic HF field

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

Frequency range	26 MHz ... 6 GHz
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 (Unshielded supply line)
Signal	± 2 kV (Shielded signal line) ± 2 kV (Analog I/O cables, unshielded)
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, unshielded supply line)
	± 0.5 kV (Asymmetrical, unshielded supply line)
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

Emitted radio interference in acc. with EN 55011	Class B, area of application: Industry and residential
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

## Standards and regulations

Standards/regulations	EN 50360
Standards/regulations	EN 50121-4

## Mounting

Mounting type	DIN rail mounting
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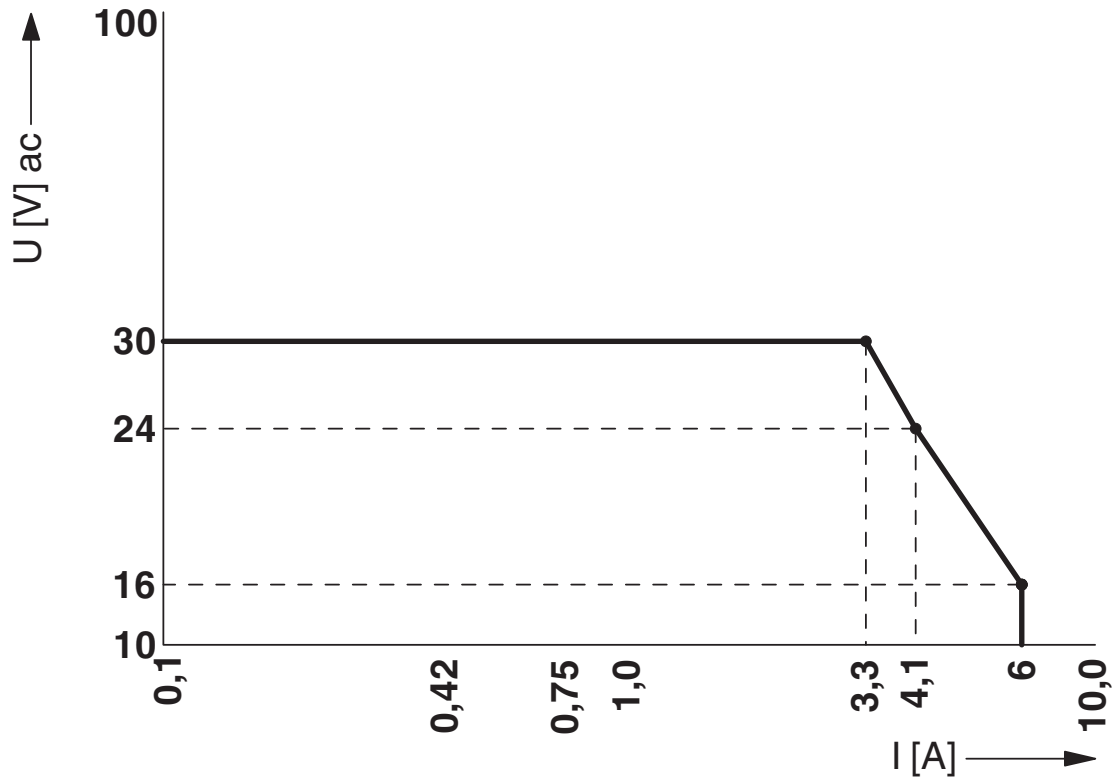


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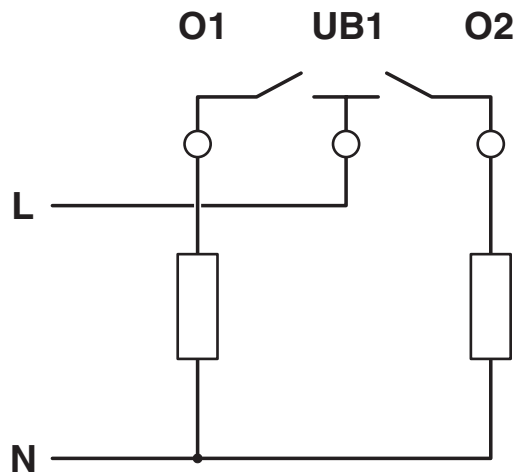
## Drawings

Diagram



Relay load curve AC

Connection diagram



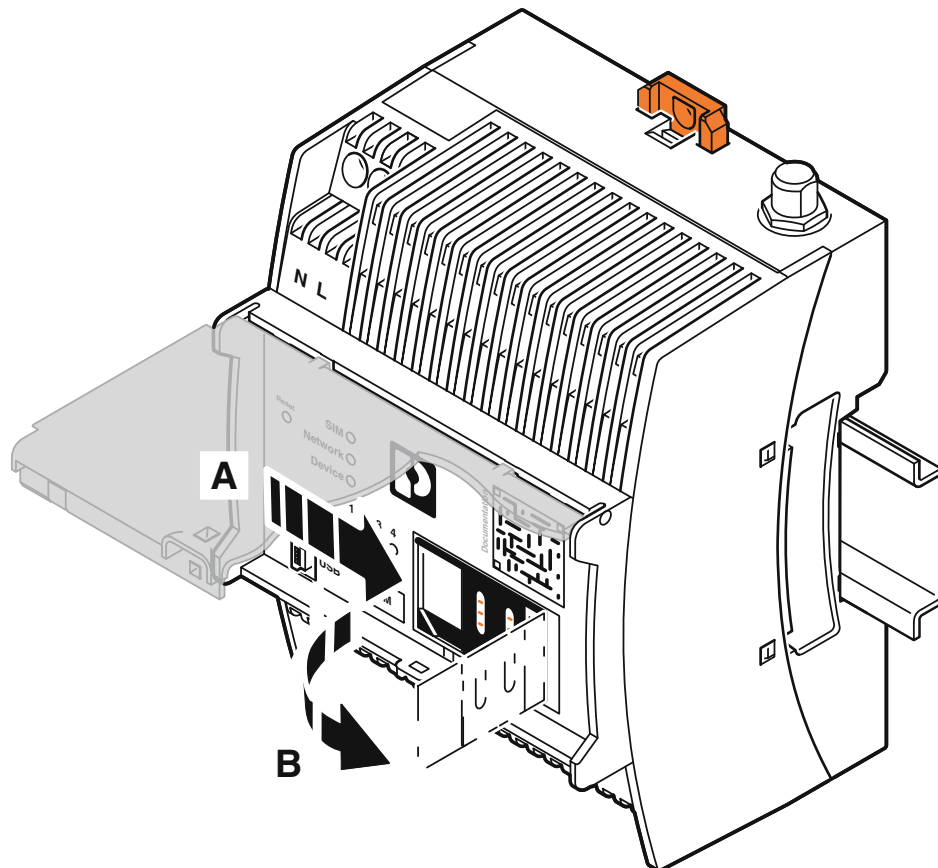
Floating relay contacts

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Schematic diagram

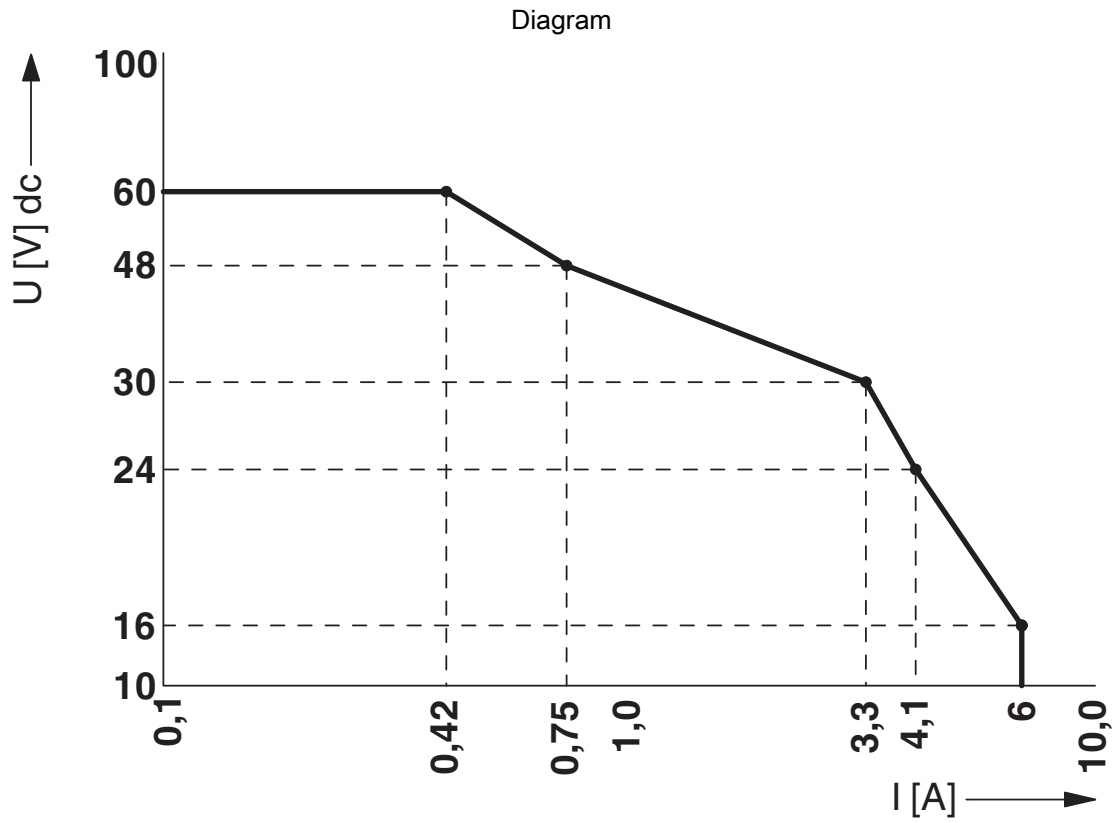


Insert the SIM card

# SMS relay - TC MOBILE I/O X200-4G

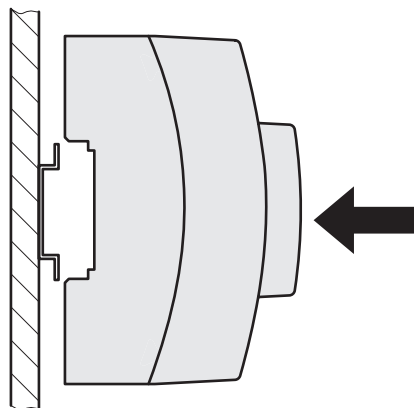
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Relay load curve DC

Schematic diagram



DIN rail mounting

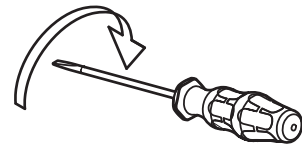
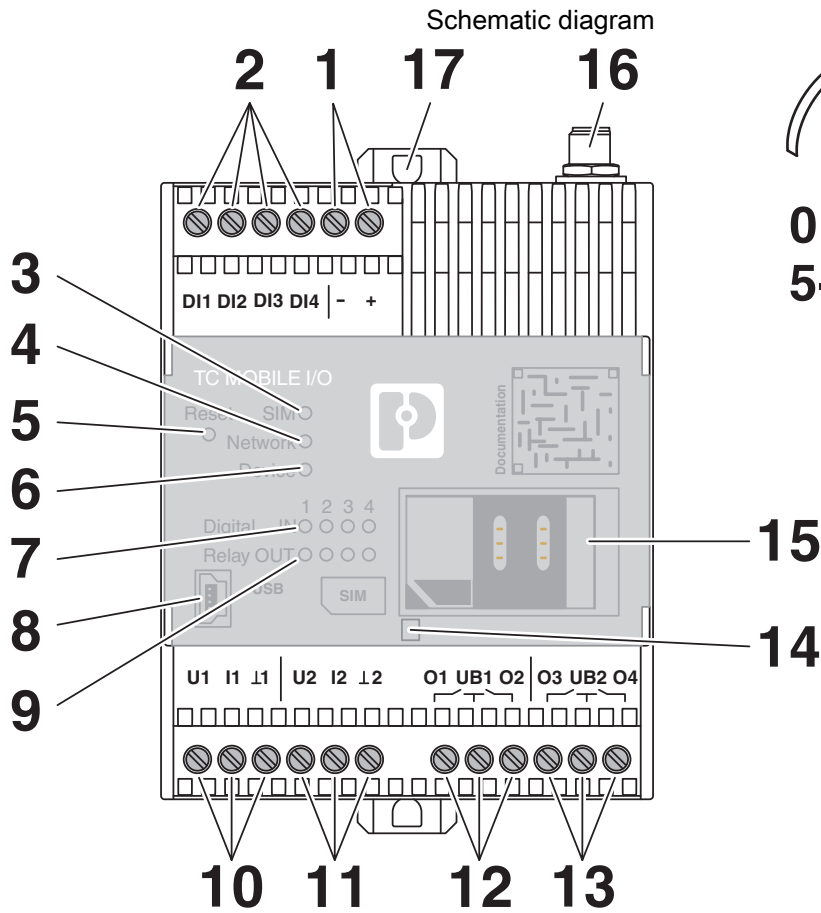


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**0,5-0,6 Nm**  
**5-7 lb In**

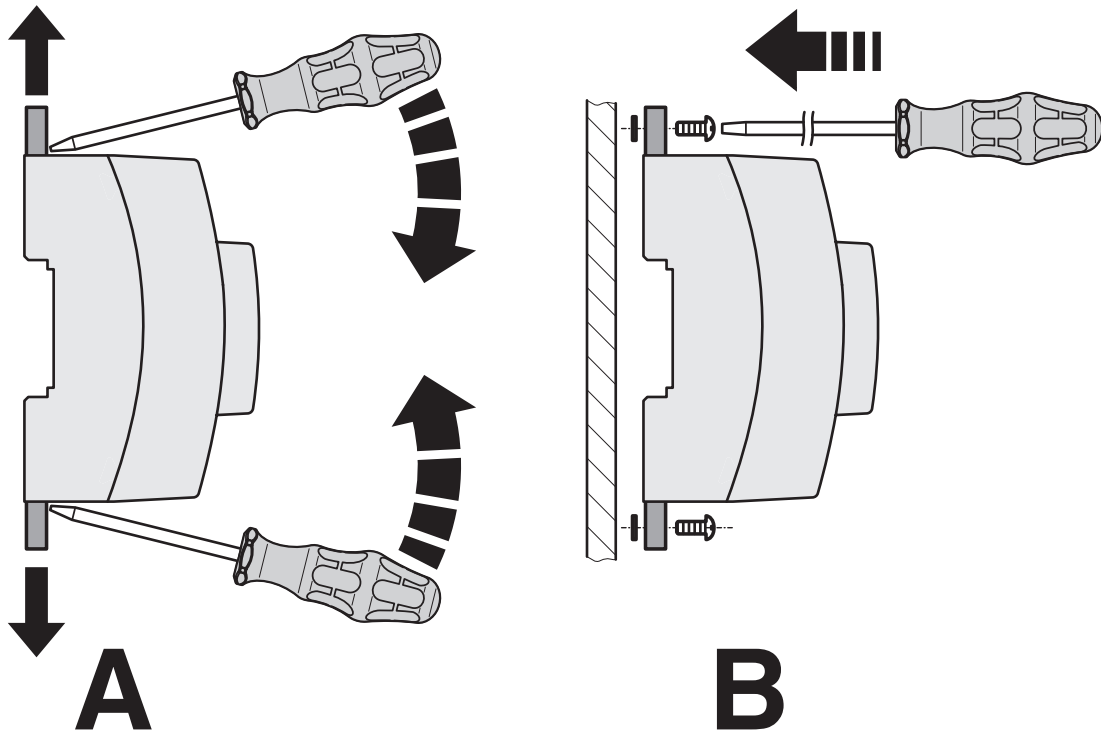
Front view

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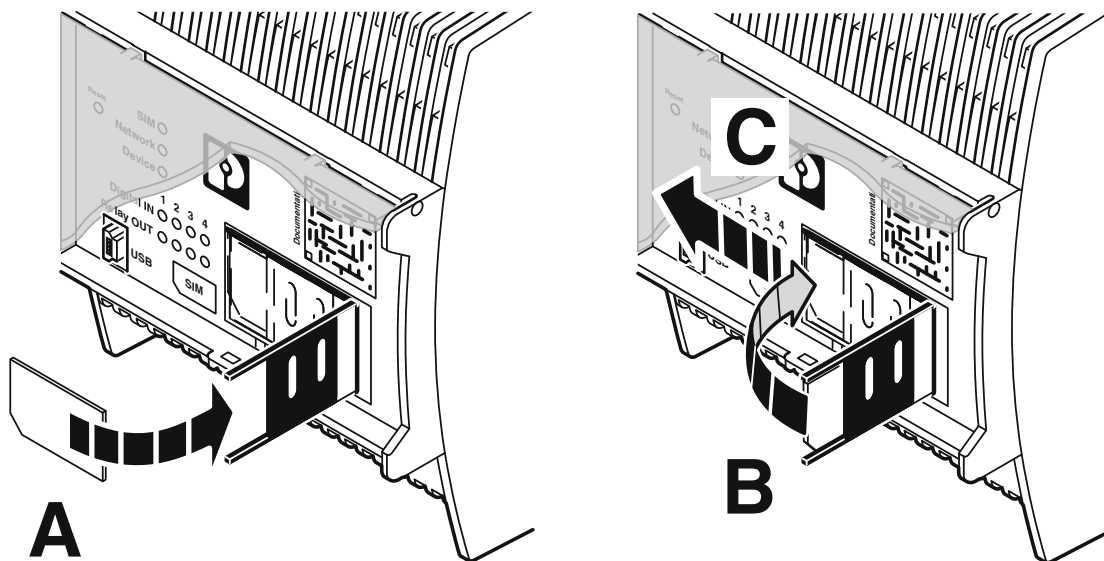
<https://www.phoenixcontact.com/de/produkte/1038567>

Schematic diagram



Wall mounting

Schematic diagram



Insert the SIM card

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## Classifications

### ECLASS

ECLASS-9.0	27242608
ECLASS-10.0.1	27242608
ECLASS-11.0	27371216

### ETIM

ETIM 8.0	EC000225
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### UNSPSC

UNSPSC 21.0	39122200
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### USB cable

USB cable - CABLE-USB/MINI-USB-3,0M - 2986135

<https://www.phoenixcontact.com/de/produkte/2986135>

USB connecting cable: USB plug type A to USB plug type Mini-B; length: 3 m



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### Power supply unit

Power supply unit - STEP-PS/ 1AC/24DC/0.5 - 2868596

<https://www.phoenixcontact.com/de/produkte/2868596>

Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/0.5 A



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## Antenna

Antenna - TC ANT MOBILE WALL 5M - 2702273

<https://www.phoenixcontact.com/de/produkte/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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## Antenna

Antenna - ANT-OMNI-0671-02 - 1396318

<https://www.phoenixcontact.com/de/produkte/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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<https://www.phoenixcontact.com/de/produkte/1038567>

## Antenna

Antenna - ANT-OMNI-0671-01 - 1396316

<https://www.phoenixcontact.com/de/produkte/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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## Coaxial cable

Coaxial cable - NBC-COX-CNM/0.5-S/COX-CKM - 1340139

<https://www.phoenixcontact.com/de/produkte/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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## Coaxial cable

Coaxial cable - NBC-COX-CNM/1.0-M/COX-CKM - 1340143

<https://www.phoenixcontact.com/de/produkte/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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## Coaxial cable

Coaxial cable - NBC-COX-CNM/3.0-M/COX-CKM - 1340144

<https://www.phoenixcontact.com/de/produkte/1340144>



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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## Coaxial cable

Coaxial cable - NBC-COX-CNM/5.0-M/COX-CKM - 1340147

<https://www.phoenixcontact.com/de/produkte/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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## Antenna cable

Antenna cable - RAD-CAB-EF393- 3M - 2867649

<https://www.phoenixcontact.com/de/produkte/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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## Antenna cable

Antenna cable - RAD-CAB-EF393- 5M - 2867652

<https://www.phoenixcontact.com/de/produkte/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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## Antenna cable

Antenna cable - RAD-CAB-EF393-10M - 2867665

<https://www.phoenixcontact.com/de/produkte/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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## Antenna cable

Antenna cable - RAD-CAB-EF393-15M - 2885634

<https://www.phoenixcontact.com/de/produkte/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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## Surge protection device

Surge protection device - CN-UB-70DC-6-BB - 2803166

<https://www.phoenixcontact.com/de/produkte/2803166>

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



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<https://www.phoenixcontact.com/de/produkte/1038567>

## Adapter

Adapter - RAD-ADP-N/F-N/F - 2867843

<https://www.phoenixcontact.com/de/produkte/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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## Weather protection tape

Weather protection tape - RAD-TAPE-SV-19-3 - 2903182

<https://www.phoenixcontact.com/de/produkte/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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