

# TC MOBILE I/O X200 - SMS relay



2903805

<https://www.phoenixcontact.com/us/products/2903805>

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SMS relay and signaling module, monitor analog and digital values via cellular network and switch relay outputs remotely, communication via SMS and GPRS (e-mail transmission, app), supply voltage range 10 V ... 60 V AC

## Product description

The compact TC MOBILE I/O X200 signaling system is the successor to the PSI-MODEM-SMS-RELAY/6ADI/4DO/DC SMS relay (Order No. 2313520) and is used to monitor analog and digital values via the cellular network and switch relay outputs remotely. A USB connection to a computer and a web browser is all that is needed for configuration. The device features numerous helpful software functions, such as cellular diagnostics, sending of log books via e-mail, and different user roles.

## Your advantages

- Notification via SMS on change of status at input
- SMS status query of all inputs and outputs
- SMS relay for remote control of outputs
- Alarm generation on voltage failure via SMS
- GSM mobile phone network: 850, 900, 1800, and 1900 MHz
- Switching of outputs for a predefined time
- Communication via SMS and e-mail
- 2 analog inputs
- Configuration via USB and web browser
- Compact design also for domestic installations (4 HP, DIN 43880)
- Mounting on DIN rail or on the wall

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2903805                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | NULL                           |
| Product key                          | DNC423                         |
| GTIN                                 | 4046356768832                  |
| Weight per piece (including packing) | 247.5 g                        |
| Weight per piece (excluding packing) | 247.5 g                        |
| Customs tariff number                | 85176200                       |
| Country of origin                    | DE                             |

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## Technical data

### Notes

#### Utilization restriction

|            |   |
|------------|---|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---|

### Product properties

|              |   |
|--------------|---|
| Product type | Signaling system  |
| MTTF         | 692 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)    |
|              | 338 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
|              | 134 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)   |

### Electrical properties

|   |                        |
|---|------------------------|
| Maximum power dissipation for nominal condition | 3.85 W                 |
| Mains type                                      | Cellular communication |

#### 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

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## Switching

|                             |  |
|-----------------------------|--|
| Output name                 | Relay output                                   |
| Number of outputs           | 4  |
| Contact switching type      | N/O contact                                    |
| Minimum switching voltage   | 5 V  |
| Maximum switching voltage   | 60 V DC<br>30 V AC                             |
| Limiting continuous current | 6 A  |
| Switching power             | 100 W (Power Source PS2, $P_{out} \leq 100$ W) |
| Electrical service life     | 5000 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  | 6.50 mm   |
| Tightening torque   | 0.5 Nm ... 0.6 Nm (5-7 lbs-in, screw terminal blocks) |

## Interfaces

|            |     |
|------------|-----|
| Web server | yes |
|------------|-----|

### 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   |
| Frequency range       | 850 MHz (2 W (EGSM))<br>900 MHz (2 W (EGSM))<br>1800 MHz (1 W (EGSM))<br>1900 MHz (1 W (EGSM)) |
| GPRS                  | Multislot Class 10   |

## Dimensions

|        |       |
|--------|-------|
| Width  | 72 mm |
| Height | 90 mm |
| Depth  | 62 mm |

## Material specifications

|                            |                       |
|----------------------------|-----------------------|
| Color (Upper housing part) | light gray (RAL 7035) |
| Color (Lower housing part) | black (RAL 9005)      |

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|                    |               |
|--------------------|---------------|
| Material (Housing) | Polycarbonate |
|--------------------|---------------|

## Environmental and real-life conditions

### Ambient conditions

|   |  |
|---|--|
| 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 %   |

## Approvals

### CE

|             |              |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

### ATEX

|                |   |
|----------------|---|
| Identification | Ⓔ II 3 G Ex nA nC IIC T4 Gc X   |
| Note           | Please follow the special installation instructions in the documentation! |

### Wireless approval USA, FCC

|      |                           |
|------|---------------------------|
| Note | Part 15.107(a), 15.109(a) |
|------|---------------------------|

### Corrosive gas test

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

### Wireless approval, Europe

|      |                |
|------|----------------|
| Note | RED 2014/53/EU |
|------|----------------|

## EMC data

|                               |   |
|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
|-------------------------------|---|

### Electrostatic discharge

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

### 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 |
|-----------------------|--------------|

### Electromagnetic HF field

|                 |                  |
|-----------------|------------------|
| Frequency range | 26 MHz ... 6 GHz |
| Field intensity | 10 V/m           |
| Comments        | Criterion A      |

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## Fast transients (burst)

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-4 |
|-----------------------|--------------|

## Fast transients (burst)

|          |   |
|----------|---|
| Input    | ± 2 kV (Unshielded supply line)   |
| Signal   | ± 2 kV (Shielded signal line)<br>± 2 kV (Analog I/O cables, unshielded) |
| Comments | Criterion B   |

## Surge current load (surge)

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

## Surge current load (surge)

|          |   |
|----------|---|
| Input    | ± 0.5 kV (Symmetrical, unshielded supply line)<br>± 0.5 kV (Asymmetrical, unshielded supply line) |
| 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

|  |  |
|--|--|
| 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. |

## Standards and regulations

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

## Mounting

|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

# TC MOBILE I/O X200 - SMS relay

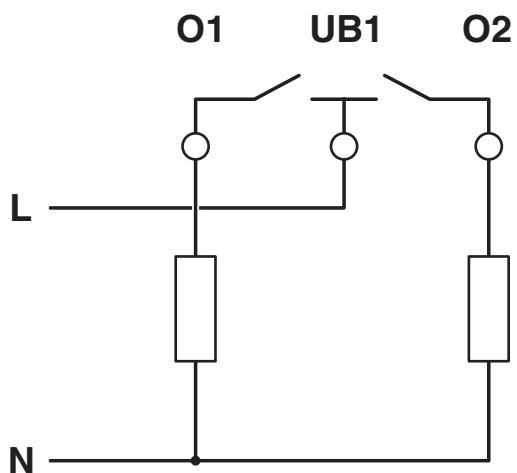
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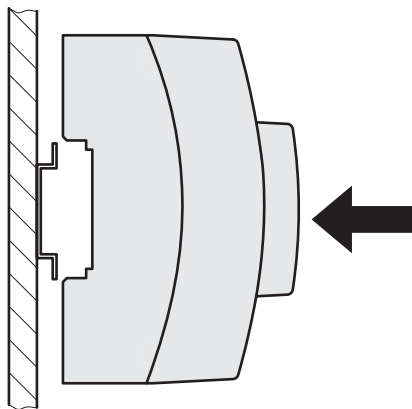
## Drawings

Connection diagram



## Floating relay contacts

Schematic diagram



## DIN rail mounting

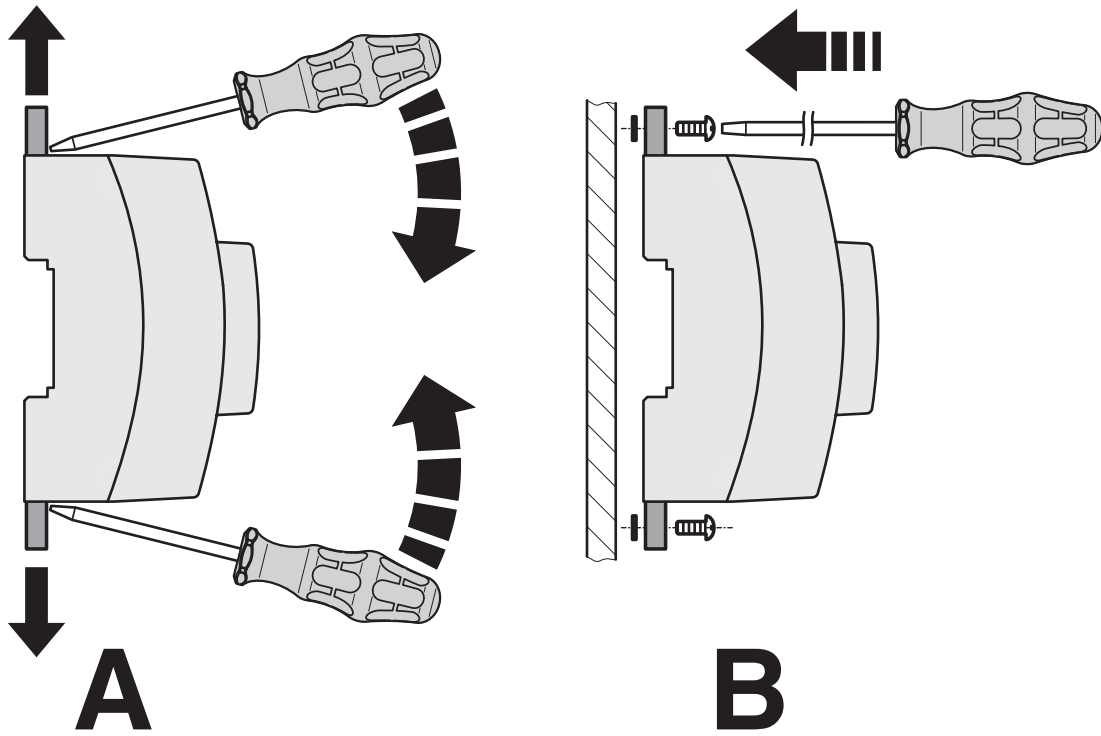
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Schematic diagram

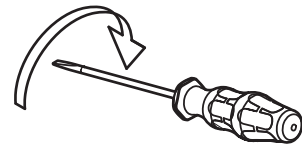
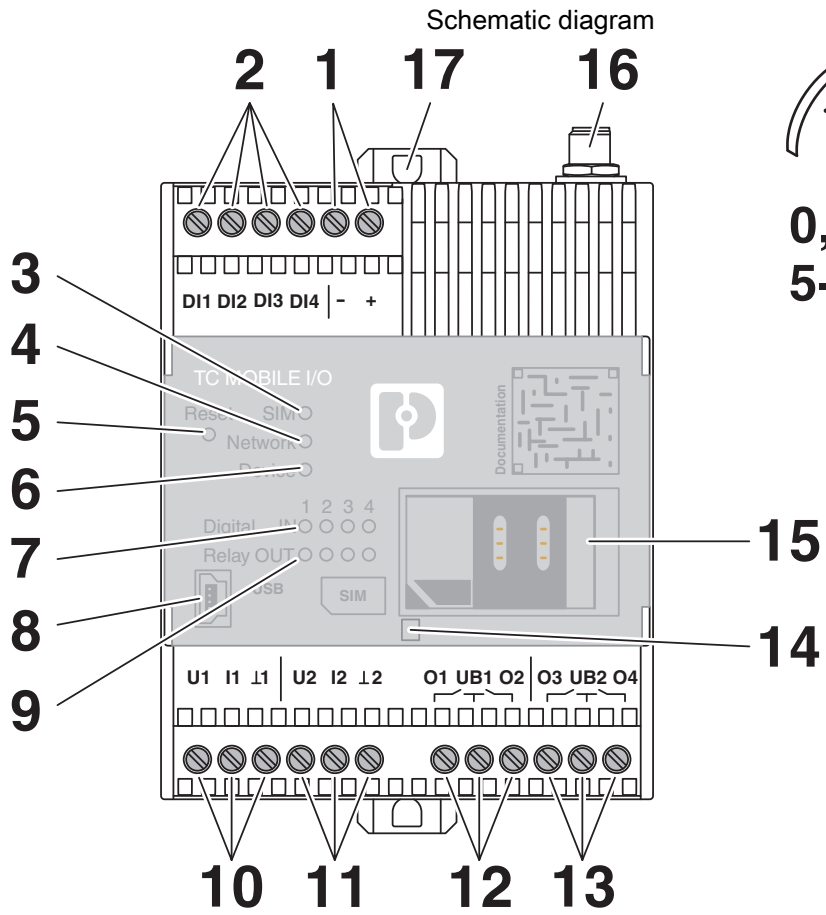


Panel mounting

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

Front view

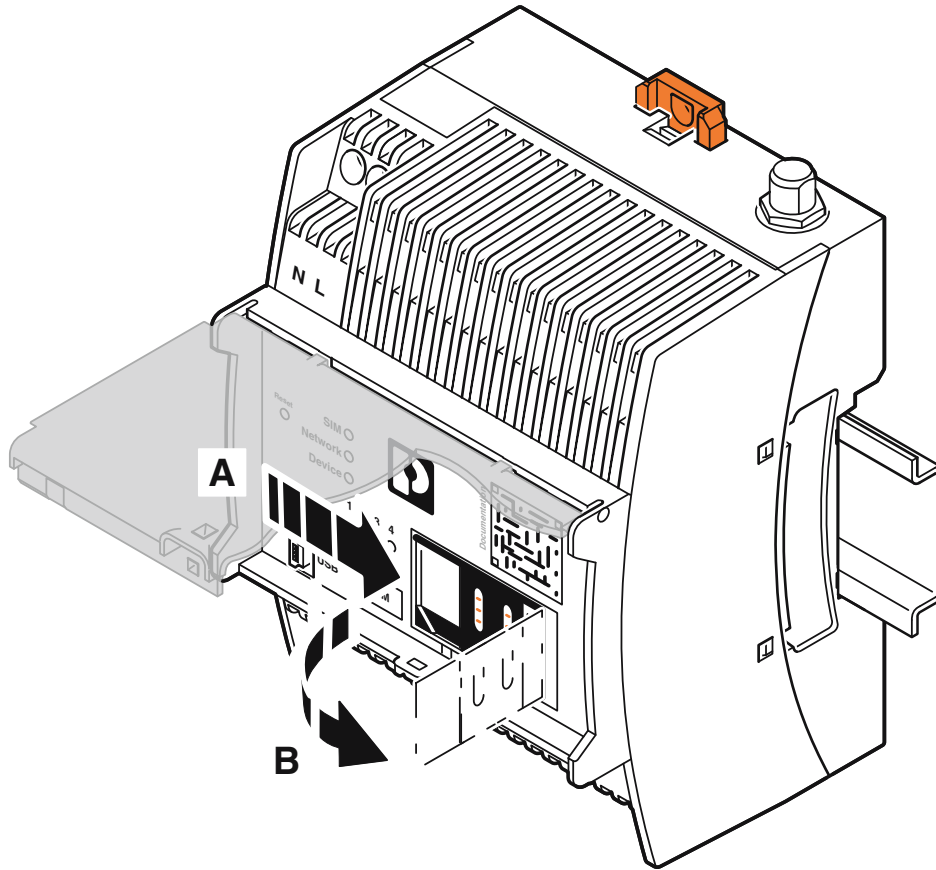
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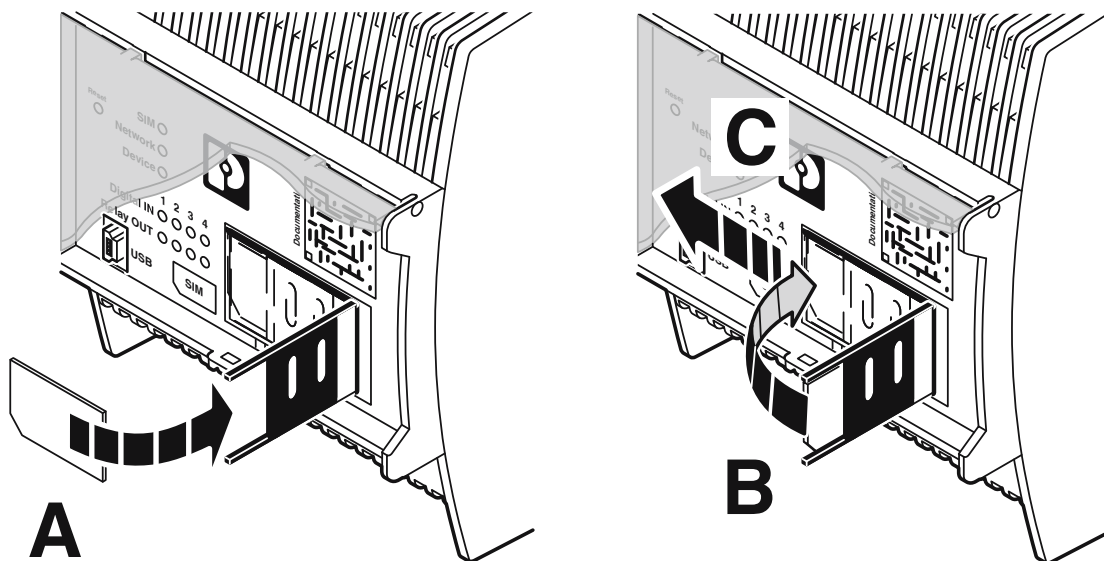


Schematic diagram



Insert the SIM card

Schematic diagram



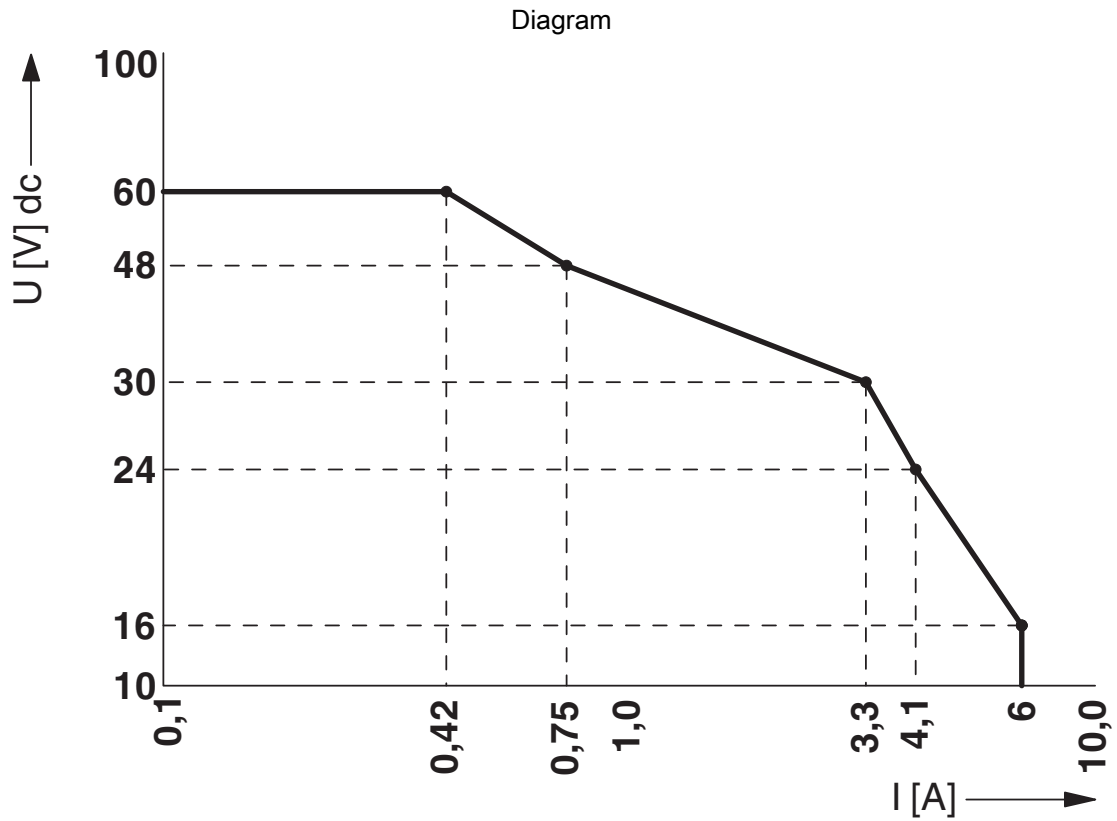
Insert the SIM card

# TC MOBILE I/O X200 - SMS relay

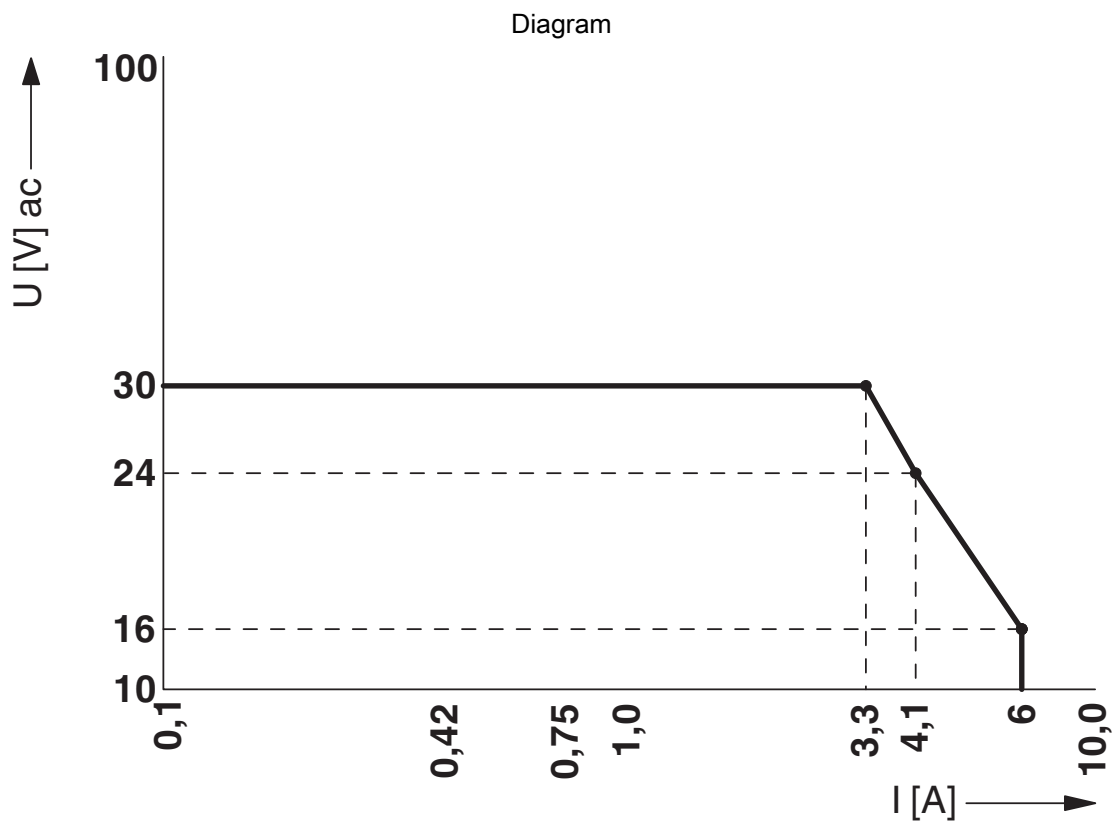


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Relay load curve DC



Relay load curve AC

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## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 7(a), 7(c)-I |

### 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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