



TCR IP 4
Operating Instructions

Overview

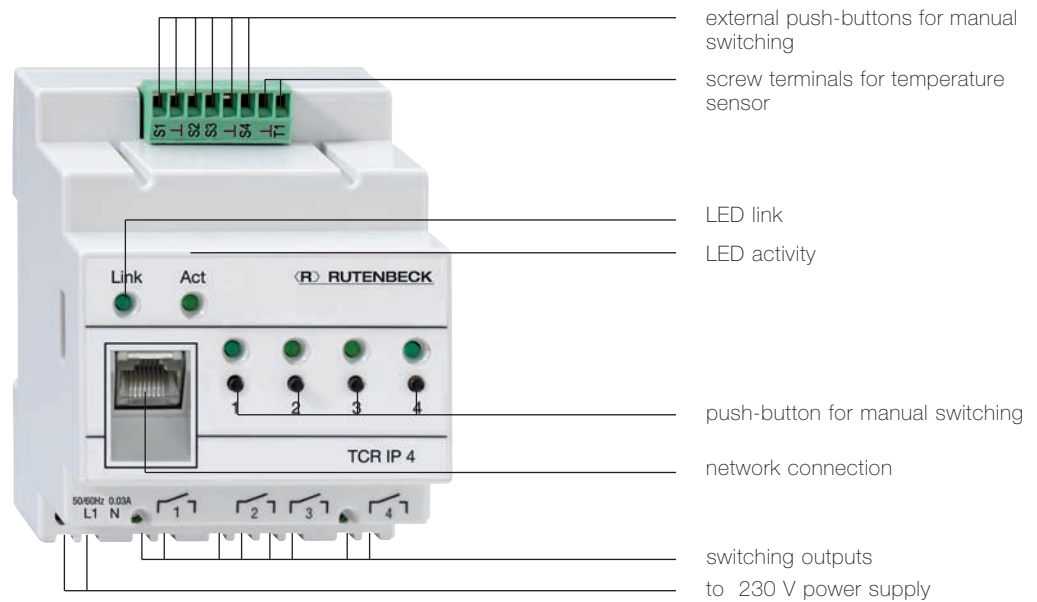


Figure 1

Scope of delivery	Accessories (optional)		
TCR IP 4	700 802 610	Temperature sensor	700 802 201
Operating instructions	293 xxx		

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General

The TCR IP 4 allows the switching of electrical devices via the TCP/IP-network. The device is located in a housing for mounting on a DIN-rail. The TCR IP 4 can be switched from all computers of the same network with their web browser by IP-address 192.168.0.3.

A local operation is possible with the built-in or external connected push-buttons. The actual switching state of an output is indicated by a LED located at the push-button for switching. The TCR IP 4 has an integrated time switching function. For each switching output, up to 5 switch-

ing on or switching off times can be selected. With a web browser it is possible to display the actual temperature at connected temperature sensor as well as the settings of the network characteristics and the time switch. The TCR IP 4 can also be operated from the Internet if there is a

fixed IP-address or a DNS-server for the translation of the dynamic IP in a host name provided. The TCR IP 4 can also be operated from a mobile phone, if this supports JavaScript.

Installation

Warning: Work on the 230-V-supply may only be carried out by authorized electricians!

Danger for life!
Disconnect the main voltage before installation.

In order to fulfill the general safety regulations for telecommunication systems and to avoid disturbances, the DIN VDE 0100 part 520, respectively, the prEN

50174-2, section 5.4 and 5.5 must be taken into account: A physical separation or suitable partition wall must be provided (clearance or shielding). Pay attention to the shock-proof protection of the heavy-current. The shock-proof protection must also be guaranteed, when you have removed the common covering (this is not always given for old installations).

Take care that the minimum distance of 10 mm between data-/telecommunication cables and heavy-current cables are strictly observed during the erection of combined plants. Working in existing data networks requires – if necessary – the assent of the respective person in charge of network and data as well as a preceding data security. Please also observe the permit-

ted operating temperature, do not place the Patch panel directly beside devices with high heat evolution (e.g. dimmer).

Settings

System Settings without DHCP-Server

Figure 2

- 1 Connect the TCR IP 4 with a patch cord (separately available) to the local network.
- 2 Connect the temperature sensor (optional) at the screw terminals.
- 3 Connect the TCR IP 4 to the 230-V-power supply.
- 4 After entering the address <http://192.168.0.3> or <http://TCRIP4> (factory settings), the TCR IP 4 can be reached with a browser.
- 5 Choose the button "network configuration" in the main menu (figure 2, 1).
- 6 For calling the TCR IP 4 directly, choose an individual "network name".
- 7 Modify the IP-address of the TCR IP 4 to particular needs.
- 8 With "send" the configuration will be saved.

System Settings with DHCP-Server

- 1 Connect the TCR IP 4 with a patch cord (separately available) to the local network.
- 2 Connect the temperature sensor (optional) at the screw terminals.
- 3 Connect the TCR IP 4 to the 230-V-power supply.
- 4 After entering the address <http://192.168.0.3> or <http://TCRIP4> (factory settings), the TCR IP 4 can be reached with a browser.
- 5 Choose the button "network configuration" in the main menu (figure 2, 1).
- 6 In order to call up the TCR IP 4 directly, choose under "network name" an individual name.
- 7 Now activate the DHCP-server (figure 2, 2).
- 8 The TCR IP 4 will be assigned a free IP-address.

Settings

Configuration

Figure 3

Increase the access protection of your network connection through an individual user name and password in the field „configuration“ (figure 3, 1).

Once a password has been chosen, the user name and password will be required to have access to the website.

The user remains logged in until

the browser will be switched off. Three categories are possible:

- 1 Neither "administrator name" nor "user name" has been saved: everyone has full access to all functions.
- 2 Only "administrator name" has been saved: everyone can access the website and perform the manual switching

functions. The "network configuration" can only be done from the administrator.

- 3 An "administrator name" and a "user name" have been saved: the "administrator" and the "user" can access the website and perform the manual switching functions. The "system settings", the setting

of the switch-time and the configuration can only be done from the administrator.

You can assign individual names for the four outputs, which are found in the menu bar. With "send" the configuration will be saved.

Factory Settings

The factory settings of the delivery state can be replaced with individual settings. In order to reload the factory settings, separate the TCR IP 4 from the 230-

V-power supply. Press both push-buttons of the device and switch on the device with pressed buttons. After about 3 seconds the LED

starts blinking to indicate that the factory settings have been restored.

Operating Elements

The outputs of the TCR IP 4 can be switched directly with the in-

tegrated push-button or from the website of the TCR IP 4.

A connected temperature sensor displays the actual temperature

on the website.

Push-buttons

- 1-4:** Switches the connected devices directly on or off. By pressing both push-buttons 1 and 2, the factory settings will be restored (see above).

LEDs

- 1-4:** Indicates the switching state of the connected device. It lights up if the connected device is switched on.
- Link:** It indicates the link. The LED lights, if a network connection exists.
- Act:** It indicates the activity of the network connection and flashes, if a user has accessed the home of the TCR IP 4.

Switching

Impulse Mode

The outputs can be switched in impulse mode if needed. It will be distinguished between two kinds of impulses. The on-impulse switches on the output for the selected time and the off-impulse switches off the output for

the selected time.

If the output is already switched on while sending an on-impulse, a window will pop up and display "Impulse time activated!" The impulse duration starts by activating the "impulse switching"

button.

The time of the confirmation by activating "ok" does not influence the procedure of the impulse duration. The output will be switched off after expiration of time.

The TCR IP 4 operates the other way around by impulse switching of an off-impulse at switched off output.

The light bulb on the website indicates the actual switching state (yellow - on, grey - off).



Figure 4

Switching Function



Figure 5

The TCR IP 4 has an integrated time switching function. For each switching output, up to 5 switching on or switching off times can be selected.

In the above example (figure 5) the lighting of a company is controlled from a TCR IP 4.

In the configuration names for the three outputs are assigned. They are found in the menu bar and can be clicked on for settings.

The lighting of the hall is connected to the switching output 1 of the TCR IP 4 and will be switched on Monday to Friday at half past 5:30 am in the morning (no. 1) and switched off at 5:00 pm (no. 2). It is even possi-

ble to select one-time switching on a certain date.

At switching output 2 is the lighting of the staircase of the company connected. The lighting of the courtyard is connected to the switching output 3.

The user is also able to switch on the lighting outside the programmed times directly at the push-buttons or through the website. (figure 4). The output can be switched in impulse mode if needed – as described above and in figure 4, 1. This allows to switch on the lighting for a certain time (i. e. 1 hour). After the hour the lighting is automatically switched off. Furthermore a temperature sen-

sor is installed in the hall. The temperature can be checked from the website (figure 4, 2). Above the table of switching function the systemtime of the PC and the TCR-IP-4-time are displayed.



The system time is the actual time of the PC. With activation of the button "time switching function accepted", the system time of the PC will be stored in the TCR IP 4. The system time will be updated every second. In order to avoid unnecessary traffic on the network, the display with the time of the TCR IP 4 will only be updated all 30 seconds. The internal time of the TCR IP 4 will be

buffered up to 4 days after disconnecting from the mains power supply.

Switching

Switching of the TCR IP 4 via the internet

The TCR IP 4 can be operated from the Internet, if certain pre-conditions are fulfilled.

Every time you login to the Internet, you start a new session and receive from your provider an IP-address.

Through this IP-address your local network or PC can be identified from the internet for the time of the connection to the internet.

With each new session you also receive a new IP-address.

Permanent connections, i.e. in case of a flatrate, will automatically be disconnected after max. 24 hours and established again with a new IP-address (dynamic IP).

In order to always access the TCR IP 4 or another IP-device with the same address from the internet, additional mechanism must be activated. The TCR IP 4, respectively, the IP-device receives a so called hostname (freely selectable) which allows the device to be found from the internet. A provider translates the hostname to the valid IP-address during the actual session.

Following steps are necessary:

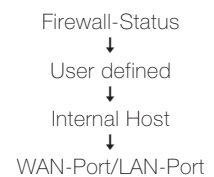
- A DNS-server (provider) for the translation of the dynamic IP into a host-name, i.e. free of charge provider DynDNS (www.dyndns.com).
- Optionally additional software to ensure, that after an interruption of a session, the translation will be done again. This software is also free of charge and also available at the provider (i.e. "DynDNS-updater" under www.dyndns.com). Up-to-date router and telephone systems perform this translations by themselves.

Procedure

- 1 Register at a dynamic DNS-server of your choice.
- 2 Define a Hostname. Choose a name that is easy to remember to make the dial-in from the internet as easy as possible.
- 3 Install, if required, the additional software (DNS update client) on at least one PC within the network to be accessed. It is even better, if you install the software on all PCs that have access to the internet. This guarantees that with each connection of any PC to the internet, the address translation will automatically be done.
- 4 Configure your router. First, the corresponding port number for the remote access must be defined and opened. The router must know that telegrams must be directed to the TCR IP 4 within the local network via the requested

port number. The TCP-protocol is being used for the operation of the TCR IP 4, which should be directed to the address of the TCR IP 4 (default-address of the TCR IP 4 = 192.168.0.2). In general, port 80 is being used at http.

This configuration will be done at the DRMR from Rutenbeck under item "virtual server". The port can be configured at the KRR from Rutenbeck as follows:



Switching of the TCR IP 4 with your mobile phone

The TCR IP 4 can be operated from your mobile phone, if this supports JavaScript.

Furthermore, all preconditions for the switching from the internet must be fulfilled.

Troubleshooting

Fault	Help/Measure
Testing of the switching function	Press the push-button 1-4
The Link-LED does not light up after the connection of the network patch cable:	Check the network connection/patch cable
The TCR IP 4 can not be switched via the network	Use an IP-address that belongs to the subnet (the first three number blocks of the IP-address must be identical).
	Check the network settings. Enter the command "ipconfig/all" under "Start/Programs/Accessory/Command prompt".
	Switch off the Proxy-Server for local addresses At the Internet Explorer: Type in an exception under "Extra/Internet options/Connections/Lan-Connections/Extended" for the IP-address of the TCR IP 4 (z.B. 192.168.0.2)
Switching times will not be executed as programmed	Check the time of the TCR IP 4

Technical Data

Mechanical characteristics

Dimensions L x B x H:	72 x 90 x 65 mm, 4 TE
Material:	PC
Weight:	210 g
Color:	light grey (similar RAL 7035)
Protection class:	IP20 according to EN 60529

Temperature range

Operation:	-20 to 55 °C
Storage:	-25 to 70 °C

Electrical characteristics

Power supply:	100–240 V AC/50–60 Hz
Switching capacity:	max. 230 V AC/50–60 Hz/10 A ohmic load ($\cos\phi=1$) max. 230 V AC/50–60 Hz/7 A inductive load ($\cos\phi=0.4$)

Current consumption

all outputs switched off, without network:	app. 1 W
all outputs switched on, with network:	app. 3.5 W

Time switch

Power reserve:	app. 4 days (after cutting off from 230 V)
Time accuracy:	≤ 1.7 seconds/day

Accesses

Network access	RJ45, 10 Mbit/s
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Temperature sensor (optional)

Article number:	700 802 201
Length:	0.6 m
Extension:	to max. 10 m
Temperature range:	-25–55 °C, resolution 1 °C
Temperature drift	-25 °C: 86.4 k Ω 25 °C: 10 k Ω 50 °C: 4.1 k Ω

B value:	3435 K \pm 1%
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Subjected to technical changes.

Manufacturer's Warranty

We guarantee the perfect function of the TCR IP 4 for 2 years after date of purchase (receipt) assuming that it was professionally installed and operated.

Service

In case of a malfunction consult the expert who installed the TCR IP 4 or send it with the receipt and a short description of the malfunction to the following address:

**Rutenbeck Service-Center
Gewerbegebiet
Im Meilesfeld 5
99819 Marksuhl
Germany**

**Phone +49 36925 90091
Fax +49 36925 90092**

Manufacturer's Declaration

We, Wilhelm Rutenbeck GmbH & Co. KG declare, that the TCR IP 4 was manufactured under a full quality assurance system and that the mentioned equipment is in compliance with the essential requirements and provisions of the directives 2004/108/EG und 2006/95/EG. The complete declaration of conformity can be found under www.rutenbeck.de in the download-sector.

Disposal

Please do your part to protect the environment by properly recycling this equipment at the end of its useful life. You should never dispose of this device in general unsorted garbage. Improper disposal of electronic waste can introduce dangerous substances into the environment and affect public health.

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