Manual

GSM Module Type P

Switching on call or by SMS

Firmware V 2.01

Version:
24.01.2019

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1. Initial Commissioning

1.1 Description

You can easily configure the GSM module via a USB interface and your default web browser (Firefox or Edge recommended):

- The device is recognized as a virtual drive. If autostart is disabled, start **"Setup.exe"** from the virtual CD drive.
- Start a web browser.
- Enter "**http://tcmobile"** or "**169.254.10.1"** in the address line.

Depending on the Windows operating system and web browser, different basic settings, security settings and access rights can make commissioning more difficult. It is not possible to set the parameters via the device. Therefore, you must manually change the settings on your PC.

The following obstacles may occur:

- Initial installation does not start automatically (see 1.2)
- Access via the web browser is not possible (see 1.3)
- The content is not displayed correctly in the web browser (see 1.4)

1.2 Initial installation does not start automatically

Possible causes:

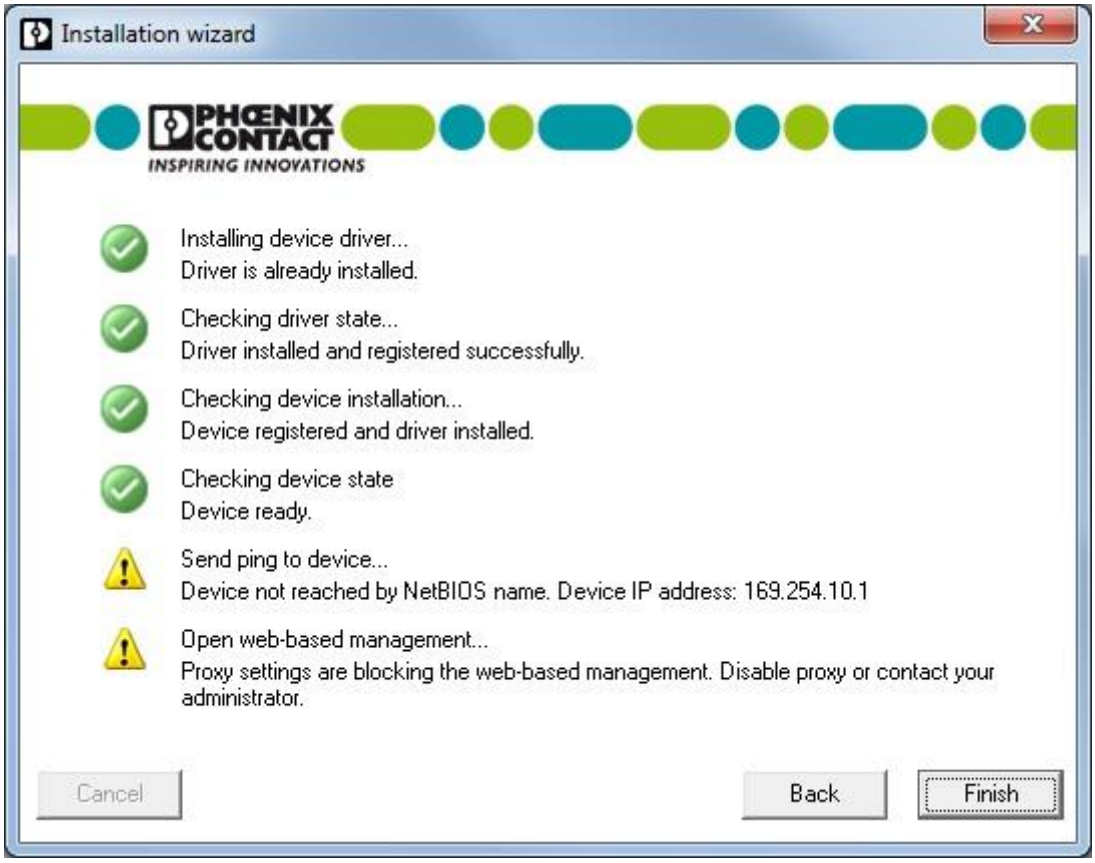
- You are using an outdated Windows operating system, or you are **not** using a Windows operating system.
- Autostart is not activated in the operating system.

Solution:

- Do not use an operating system of a version lower than Windows 7
- Go to "Start, Computer," and select the virtual disk.
- Start the "Setup.exe" from the virtual CD drive. The driver for the device will be installed.
- Follow the instructions in the installation wizard.

1.3 Access via web browser not possible

The driver is installed, but the website of the device does not automatically open in the web browser. Access via the standard web browser is not possible. For example, the installation wizard displays the following problems:



Possible cause 1:

The proxy settings prevent access to the device.

Solutions:

- Install a second web browser on your PC, for example Firefox. When reinstalling Firefox, the proxy settings are generally not activated. Advantage: you do not have to change the configuration of your default web browser.
- Disable the proxy settings in your web browser.

Note:

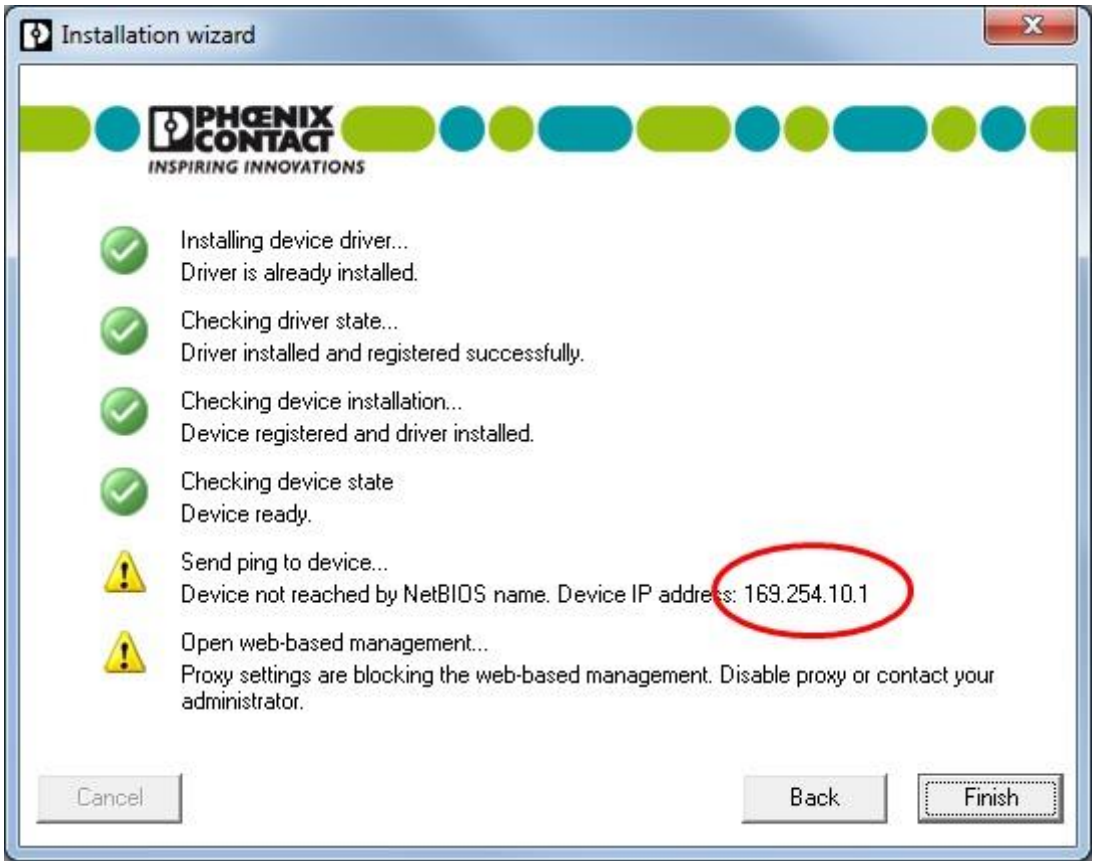
Reset the proxy settings after the configuration. Then you can use internet communication again.

Possible cause 2:

If you enter the NetBIOS name **"tcmobile"** in the address line, the web page will not open.
A security product, such as a firewall or a system setting, prevents access via the NetBIOS name.

Solutions:

- Enter the default IP address in the address line of the web browser: **169.254.10.1**
- If the default IP address 169.254.10.1 is already assigned on your computer, the device will automatically be assigned a different IP address. The installation wizard shows the new IP address during the driver installation.



1.4 The content is not displayed correctly in the web browser

Possible causes:

- You are using an outdated browser.
- The compatibility setting in Internet Explorer is incorrect. You may receive a script error message.

Solutions:

Use one of the following recommended web browsers:

- Firefox 20.0 or higher
- Google Chrome 33.0 or higher
- Opera 18.0 or higher
- Internet Explorer 8.0 or higher

In Internet Explorer, under **"Tools, Compatibility View Settings"** disable the following functions:

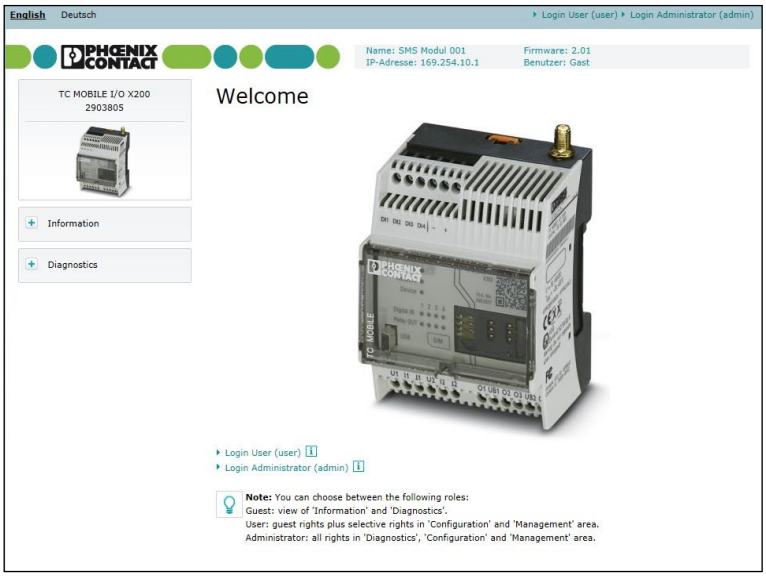
- Display intranet sites in Compatibility View
- Display all sites in Compatibility View

2. Configuration

2.1 General information

The configuration described here describes the inputs for the GSM module. Further setting options, which are not required for normal operation, are not explained in detail.
The configuration must be completed at the end with "**Save & Restart**"!

Open the configuration page by typing **"http//tcmobile"** or **"169.254.10.1"** in the address line in your web browser (preferably Firefox or Edge). The following page opens:



2.2 Language

In the upper left area, you have the option to switch between German and English. The changeover takes place immediately during operation.

2.3 Login

The following users are available:

- **Guest:** View of the tab "Information" and "Diagnostics" (without registration)
- **User:** Guest rights plus selective activation in the "Configuration" and "Administration" areas
- **Administrator:** All rights to "Diagnostics," "Configuration" and "Administration"

At the bottom you have the option to log in as user or administrator.

Default login for registering as a **user**:
User: **user** password: **user**

Default login for registering as **administrator**:
User: **admin** password: **admin**

The passwords can be changed as a registered administrator in the tab **"Administration"** under **"User Management."**

2.4 Access data

In the **"Configuration"** tab under **"Access data,"** the SIM configurations are carried out.

2.4.1 SIM configuration

In this field the PIN of the SIM card used in the GSM module is entered. To do this, activate the "**PIN required**" field and enter the SIM card PIN in the enabled field below. Further entries or settings are not necessary here.

Note:

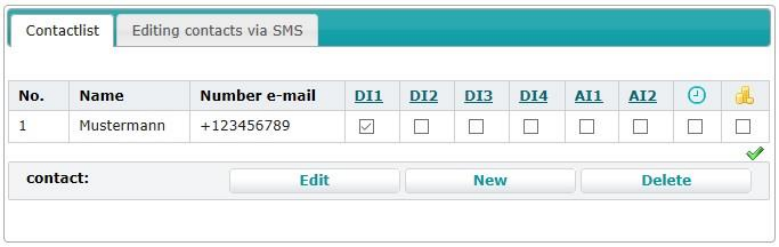
The PIN must be entered before initial operation and each time the SIM card is changed. Otherwise the SIM card may be blocked if an incorrect PIN is entered!

2.5 Contacts

The **"Contacts"** menu point features a list of those who are authorised to switch an output on call or by SMS and to receive messages. To create a new contact, click on "**New**" and enter the necessary details. Click on "OK" to accept the new contact.

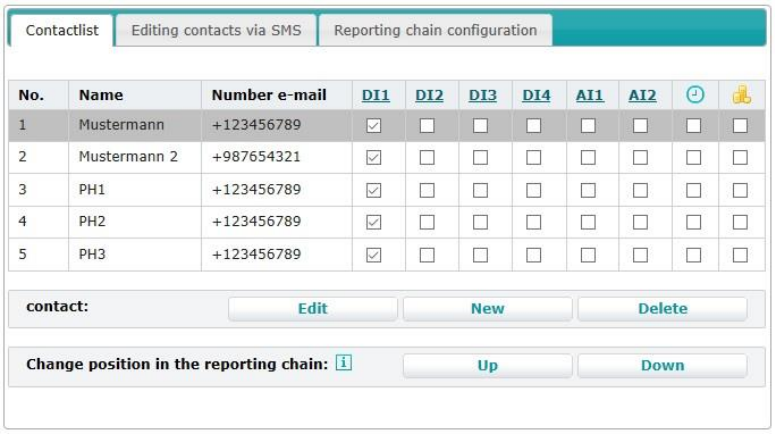
Note:

"**DI1**" must be ticked for the contact to receive feedback. A mobile phone number must be entered to receive feedback.



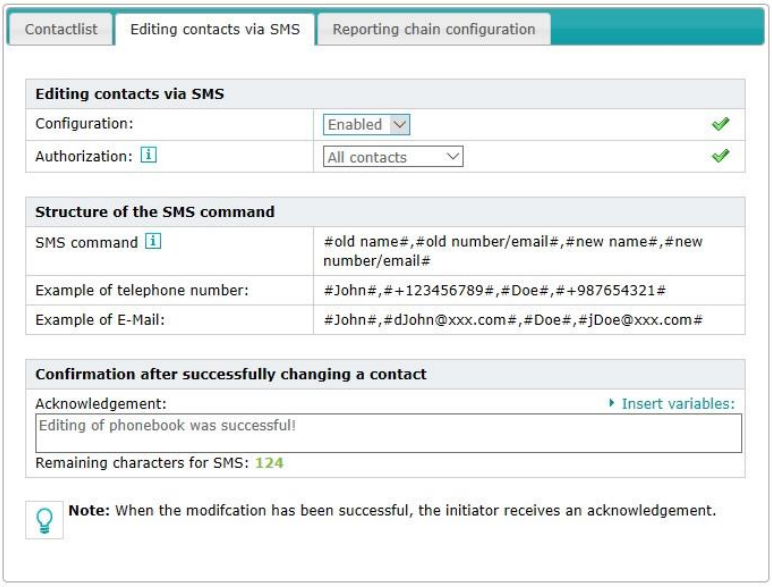
2.5.1 Editing contacts via SMS

This function can be used for remote editing of contacts and their phone numbers via SMS.
It is **not** possible to create a new contact. However, if this is necessary, placeholders have to be created under "**Contacts**" during initial configuration so that these can then be renamed via SMS.



The placeholders, called "**PH1 – PH4**" in the example, must have the phone number of an already existing contact. If a random phone number is used, it is possible that this already exists so that the unknown person receives an SMS.

Drawback: the contact whose phone number is used for the placeholders receives all SMS multiple times.



The "**Configuration**" must be enabled to use this function. Under "**Authorization"**, you can stipulate who is authorized to edit the contacts.
There is a choice of "**Every, All Contacts** and **Certain Contacts"**.

The SMS command must look like this:

#PH1#,#+123456789#,#Tom#,#+49987654321#

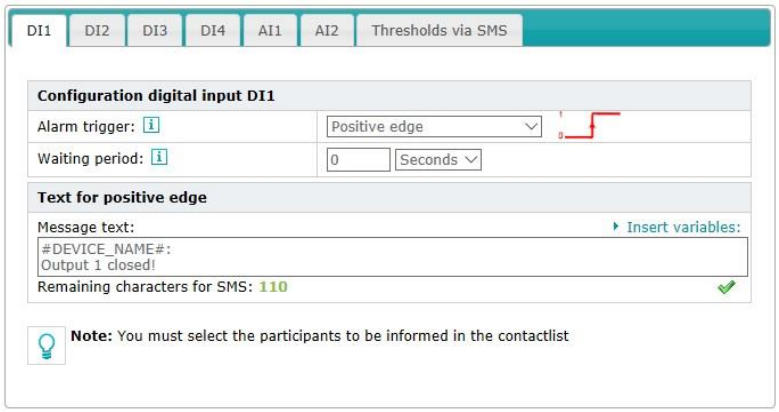
In this example, the placeholder "**PH1**" with phone number "**+123456789**" is edited to "**Tom**" with phone number "**+49987654321**".

When editing has been successful, the initiator receives acknowledgement via SMS. The text of this message can be edited under "**Acknowledgement text**".

It is also necessary to proceed with the corresponding configuration already for the placeholders. As for the normal contacts, this entails stipulating in advance who for example is authorized to switch an output or receive confirmation via SMS. It is **not** possible to change the configuration via SMS!

2.6 Inputs (feedback)

The standard version has a preset feedback message "Output 1".
However, this text can be adjusted if necessary, although the text "**#DEVICE_NAME#"** may **not** be changed. This is the wildcard for the name of the GSM module and is used for identification purposes if you are operating with several GSM modules.



Assignment of the message texts:

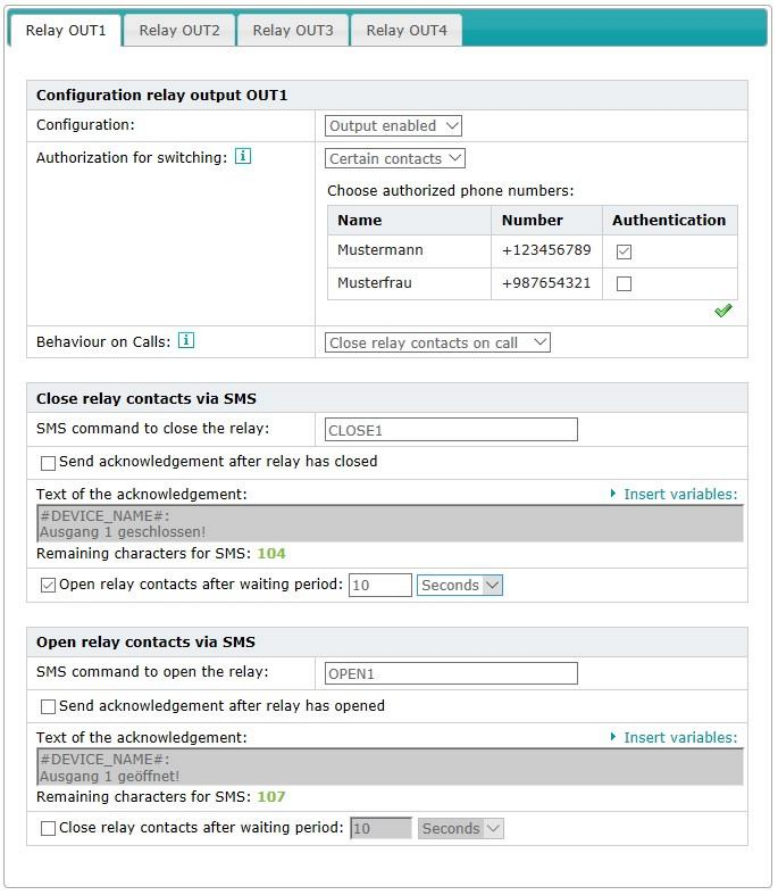
- DI1 = output 1 closed
- DI2 = (not in use)
- DI3 = (not in use)
- DI4 = (not in use)

Note:

Please note that special characters (e.g.: | ~ @ § $ ¡¿) and language-specific letters (e.g. âéçèëë) are not always transmitted correctly as a SMS message. Therefore, use only the numbers (1 to 9), letters of the Latin alphabet (A to Z and a to z) and common punctuation marks (,;.:!?). Also avoid the characters '#' and '*' because these characters are used in the GSM area for the setting of special functions!

2.7 Outputs (relay contacts)

In the standard version, only "**Certain Contacts**" are authorised to switch the output and can be selected with a tick.
Basically the output can be closed with the SMS command "**CLOSE1**" and opened with the SMS command "**OPEN1**". "**Closing**" the output on call is also activated in the standard version.



Furthermore, the function "**Open relay contacts after waiting period**" is activated in the standard version. There are three digits for entering the time in seconds, minutes or hours. The output previously closed per call or by SMS is opened again after the adjusted waiting period.
If another function is required on "Call", it can be adjusted in the selection "**Behaviour on Calls**".

"**Send acknowledgement after relay has closed**" does not have to be ticked. If the output is closed, the hardware is set to "**Input DI1**"; furthermore, the requested recipient also receives a feedback message by SMS (see 2.6).

Note:

If switching on call is activated, the caller incurs no costs. The GSM module does not accept the call.

2.8 Name, time, restart

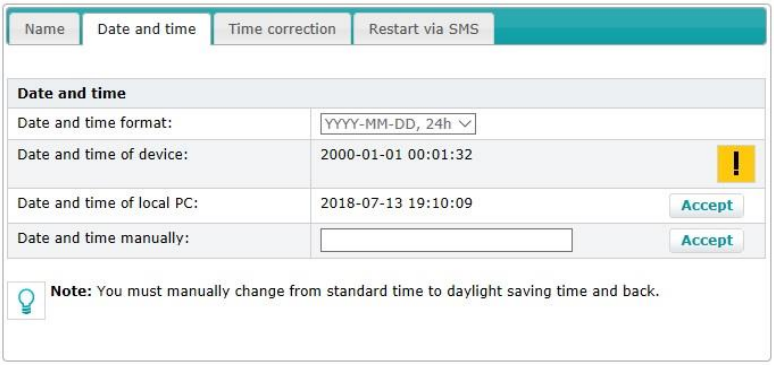
This tab allows the name of the GSM module to be changed and the time to be set.

2.8.1 Name

The name of the device is used for unique identification, especially if you have several SMS modules in use. The default is **"GSM module 001"** and can be changed as desired. However, the name may not exceed 32 characters.

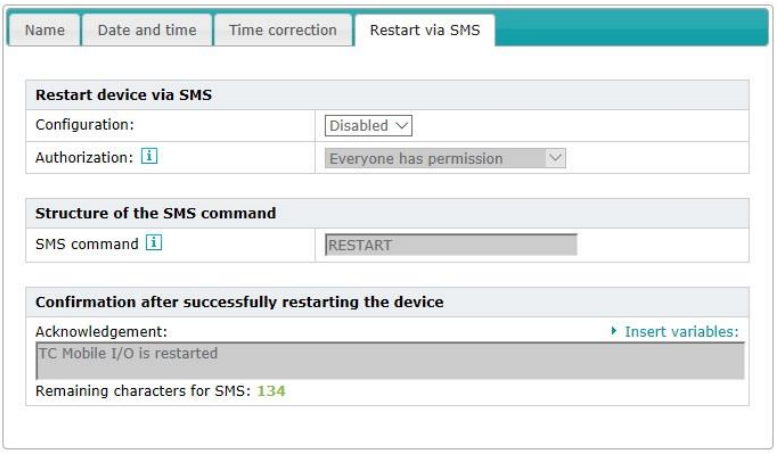
2.8.2 Date and time

In this area the date and time can be corrected. This is required if the GSM module was without supply voltage for several days.



2.8.3 Restart via SMS

If this configuration is activated, the GSM module can be restarted with the SMS command **"RESTART."** The whole command must be written in capital letters and must not contain any additional characters. It is still possible to specify who is allowed to trigger a restart by assigning the corresponding authorization. When selecting **"Everyone has permission"** anyone who knows the phone number of the SMS module can trigger a restart. When selecting **"Only contacts have permission,"** anyone who is in the contact list can trigger this function.

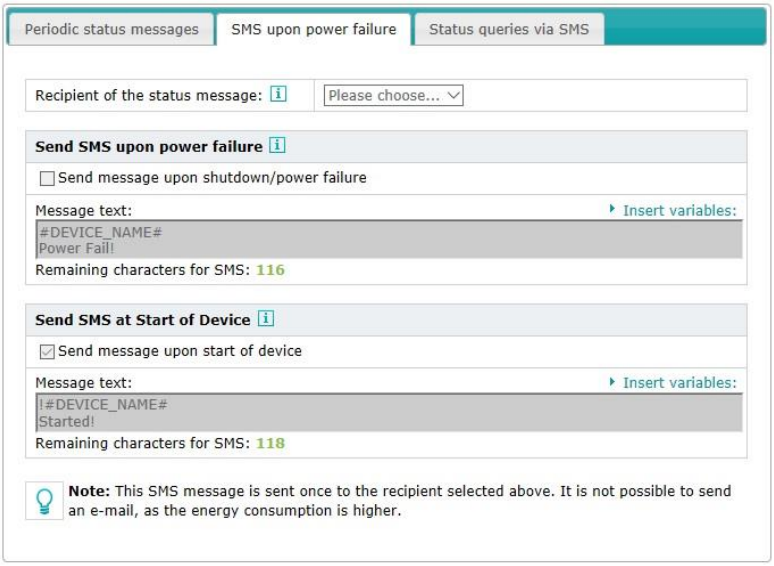


An SMS is sent as confirmation if the restart was successful.

2.9 Status messages

Various status messages of the SMS module can be configured here. The following messages are set at the factory:

- SMS at the start of the device
- Status inquiry via SMS



2.9.1 SMS in case of power failure / start of the device

As soon as the GSM module has been configured and a SIM card is in the device, an SMS with the name of the module and the text **"Ready for operation!"** is sent to the selected recipient after the voltage supply has been connected.

The **"SMS in case of power failure"** is not enabled in the standard template. If this function is required, activate the function with a check mark.

Disadvantage:

An SMS is then sent at each power failure, even when the battery is changed (if you work without a battery switch box or with just one battery).

Note:

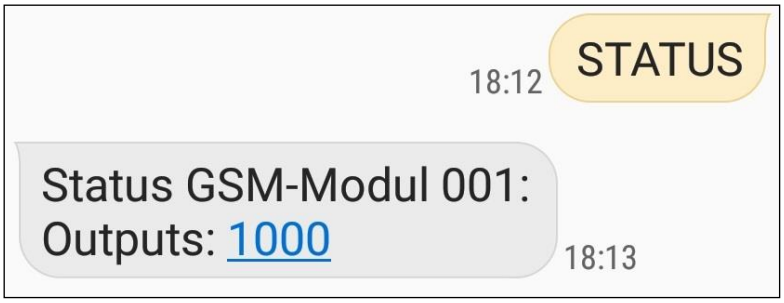
This message can be sent only to the one recipient selected in the upper area.

2.9.2 Status inquiry via SMS

A status query about the outputs can be sent by SMS. To do this, send an SMS message with the word "**STATUS**" to the number of the GSM module. You will then receive a message from the GSM module with all statuses of the individual outputs.

In the standard template, only contacts are allowed to query the status.

The incoming SMS appears like this on a mobile phone / smartphone:



The name of the GMS module appears. The 4-digit numerical sequence indicates whether an output is closed and which one this is.

- **0** means open
- **1** means closed

Assignment of outputs from left to right:

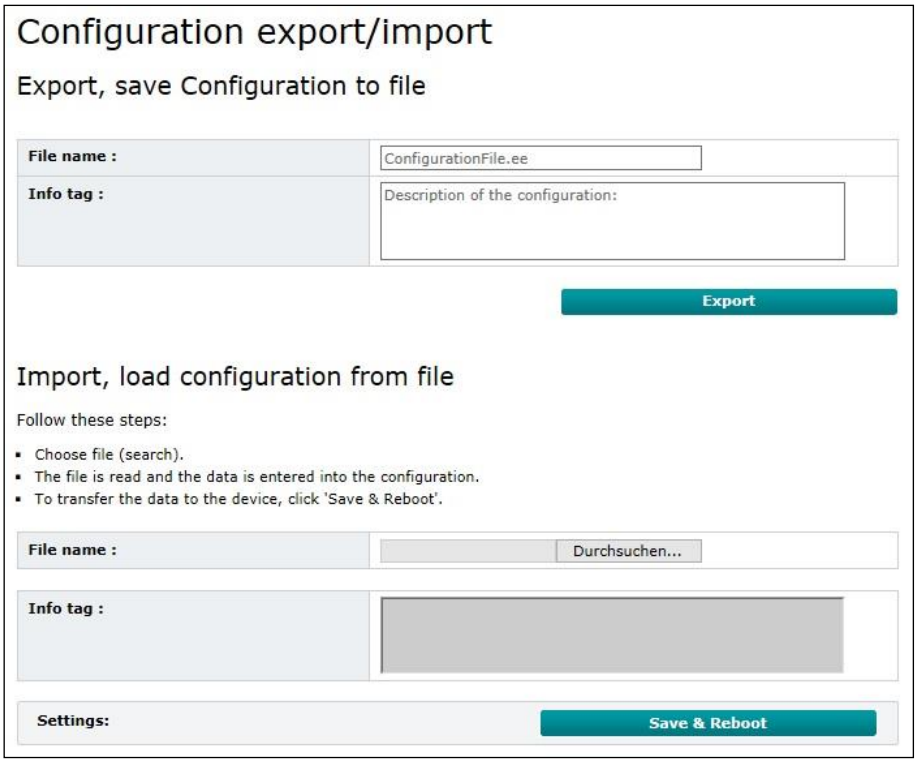
Output 1:
Output 2: (not in use)
Output 3: (not in use)
Output 4: (not in use)

Note:

- The SMS may contain only the word **STATUS**.
- It may not be preceded by empty spaces.
- Only **uppercase letters** may be used.

3. Configuration Export / Import

The **"Administration"** tab takes you to the **"Configuration Export / Import"** menu.



3.1 Export file

Here, the configuration data can be saved in a file on your PC. Enter a file name and, if necessary, a description (e.g. construction site) in the corresponding fields.
The file name may not exceed 20 characters.
By clicking on **"Export"** you can select the location on your PC and save the file.

Note:

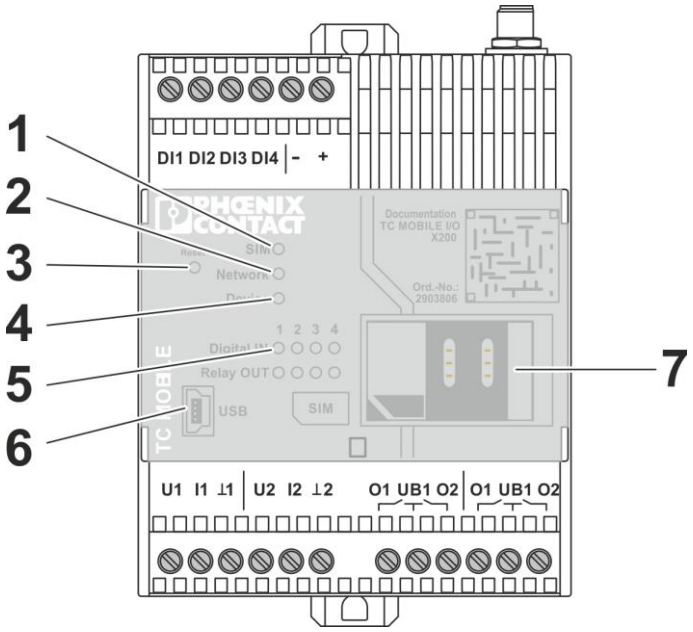
Please make sure that the file extension **.ee** is not deleted. Otherwise, you will receive the error message that the file name is invalid.

3.2 Import file

You can import a previously exported file or the factory standard template. Use the **"Browse"** button to select the desired file on your PC. With **"Save & Reboot"** you transfer them to the GSM module. Thereafter, the reboot takes place, during which the connection to the GSM module is briefly interrupted.

4. Miscellaneous

4.1 Displays and controls



1	SIM	Green on	SIM card operational
		Orange on	SIM card not inserted
		Orange flashing	Module is waiting for PIN
		Red on	SIM card error
2	Network	Green on	Connection available, very good field strength
		Orange on	Sufficient field strength
		Orange flashing	Poor field strength
		Red on	No connection
3	Reset button	Hold down for three seconds to clear **all** data in the device!	
4	Device	Green on	Voltage supply via power supply unit or traffic signal
		Orange on	Voltage supply only via USB (configuration only)
		Orange flashing	Firmware update
		Red on	Hardware error
5	Outputs	Green on	Output closed
		Green off	Output open
6	USB interface		Only for configuration
7	Mini SIM card		

Note:

If you press the reset button for three seconds, the factory standard template in the module is also deleted. Then you will have to load this template or a file you have saved.

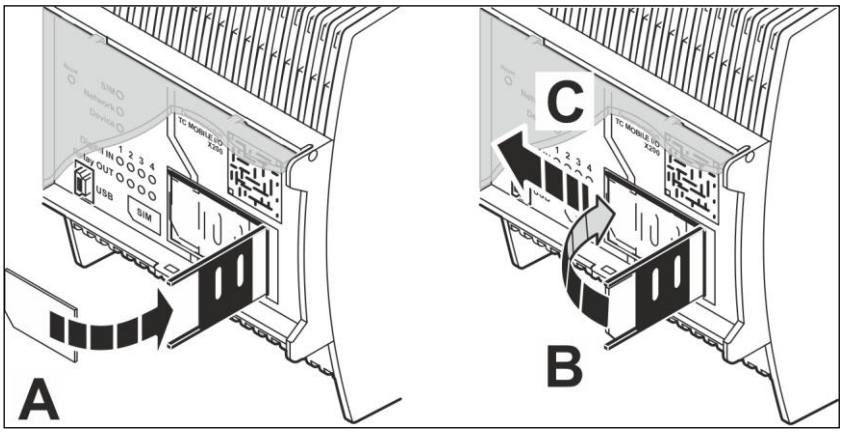
4.2 Inserting the SIM Card

ATTENTION:

Switch the device off before you change the SIM card!

Make sure that there is no connection to the PC via the USB cable, the connecting cable is not connected to any traffic signal or power supply unit and if necessary the internal battery is disconnected.

- Open the housing cover.
- Slide the SIM card cover to the right and then open it.
- Slide the SIM card into the holder with the contact surface facing down. Pay attention to the position of the angled corner.
- Close the cover for the SIM card. Slide it to the left.
- Close the housing cover.
- Protect the SIM card with a multi-digit PIN code.



5. Operation

5.1 Initial commissioning

The configured GSM module with enabled mobile phone card is plugged into the corresponding socket. As soon as the GSM module receives power via the socket, the control lamps on the module housing flash and it logs on to the mobile phone network. The module then sends an "ON" message to the selected recipient.

If the output is closed on call or by SMS, this is indicated by a green LED on the bottom of the weatherproof housing. The LED goes off as soon as the output is opened again.

Note:

The LED only indicates if **Output 1** is switched. If you have configured and connected several inputs and outputs for another purpose, their status is shown directly on the GMS module on the left next to the SIM card (see 4.1)

6. Appendix

6.1 Technical data

Operating voltage:	10-15V/DC
Power consumption:	approx. 80 mA

6.2 Supported mobile networks

Dual-band GSM modem for D and E networks

6.3 Housing dimensions

Width:	200 mm
Depth:	250 mm
Height:	250 mm (including antenna)
Weight:	approx. 4 kg

6.4 Accessories

Item	**Order No.**
USB cable for programming	MP4196U

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