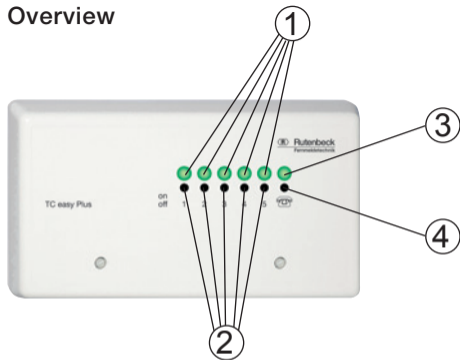




## **TC easy Plus**

Operating instructions

## Overview



- 1 LED S1 to S5
- 2 pushbutton S1 to S5
- 3 LED "automatic call acceptance"
- 4 pushbutton "automatic call acceptance"

2

## Accessory

Plug power supply 12 V  
Operating instructions

### optional

Temperature sensor  
700 802 201  
Emergency power supply  
NV 2 TC GB 700 900 139  
Additional module  
SAR 2 Ap GB 500 101 05

# Table of Contents

<b>Overview</b> . . . . .	<b>2</b>
<b>Accessory</b> . . . . .	<b>2</b>
<b>General</b> . . . . .	<b>5</b>
<b>Installation</b> . . . . .	<b>6</b>
Wall Mounting . . . . .	6
Putting into Operation . . . . .	7
Factory Settings . . . . .	8
Connection of Telephone Line, Plug Power Supply, Inputs and Temperature Sensor. . . . .	9
Connection of Outputs and Pushbuttons . . . . .	10
<b>Operation</b>	
State Request . . . . .	12
General Settings. . . . .	13
Menu Settings . . . . .	14
Alarm Phone Numbers . . . . .	14
Own Phone Number . . . . .	15
Answering Machine Mode . . . . .	15

Ringing Signals . . . . .	16
Code Number . . . . .	16
Impulse Time . . . . .	16
Temperature Level . . . . .	17
Setting Procedures. . . . .	18
Switch Devices and Impulse Time, Check the State of Devices and Temperatures . . . . .	25
Alarm Messages. . . . .	27
Unprotected Mode . . . . .	29
Time out . . . . .	29
Power Supply. . . . .	29
Behavior at Power Failure . . . . .	30
<b>Technical Data. . . . .</b>	<b>31</b>
Current Consumption . . . . .	33
<b>Guarantee . . . . .</b>	<b>34</b>
<b>Service. . . . .</b>	<b>34</b>
<b>Manufacturer's Declaration . . . . .</b>	<b>35</b>

## General

The TC easy Plus is a remote switching and alarming device. It allows the switching of five electrical devices and can send off two alarm messages via the telephone network. Each alarm input can automatically dial a phone number and notify with a voice message, if an alarm input has been activated by a connected contact.

The switching takes place with DTMF-signals (DTMF= Dual-tone multi-frequency). This can either be performed with a DTMF-telephone or a DTMF pocket dialer.

Individual user data are easy to program by a telephone call. The operation is supported by announcements. The temperature can be acquired via the telephone, if a temperature sensor is connected to an analogue input. An alarm call can be initiated if a temperature level is set. Two of the five switching outputs are equipped with relays for the connection of devices with low voltage up to 48 V AC/DC. The remaining three outputs deliver a control voltage of 12 V/

150 mA for relays (i.e. SAR 2 GB 500 101 05). The TC easy Plus is placed in a housing for surface mounting.

The switching functions can be carried out via the telephone line as well as with the built-in pushbuttons (s. p. 10).

They will be protected by use of a 4-digit code number.

All settings and switching states of the outputs will be saved during a power failure and be restored after return of power.



## Putting into Operation

- 1 Connect the subscriber line at the screw terminals La and Lb (ring and tip). Additional telephone jacks can be connected to terminal a2 and b2 (see page 9). The TC easy Plus can also be connected at an extension of a telephone system.
- 2 Connect the black wire of the plug power supply with "⏏" and the red/black wire with "12V" (see page 9). If the wires are cross-connected the device will not be damaged but simply will not operate.
- 3 The wiring for the devices must be carried out according to the diagram on page 10.
- 4 Install the equipment to be switched, respectively, the control relays as shown in the connection diagram on page 10.
- 5 Insert the plug power supply in the 230-V-power outlet.

## Installation

### Factory Settings

The default settings of the delivery state can be restored any time by pressing pushbutton "S1" and "🔊" until the LEDs start blinking while powering up the TC easy Plus.

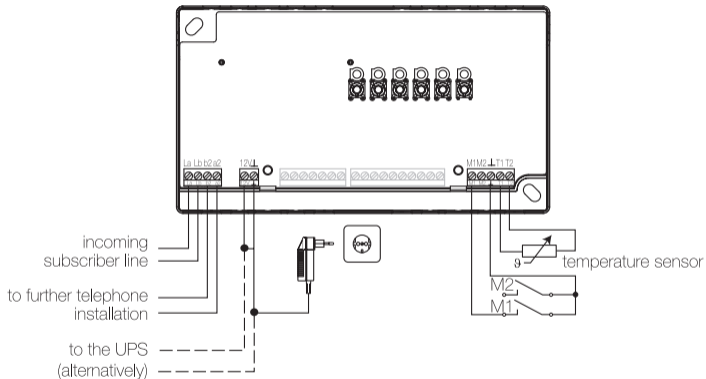
Enter your own settings in the right column. The following parameters are set:

		Own Settings:
Alarm phone number 1:	none	-----
Alarm phone number 2:	none	-----
Own phone number:	none	-----
Answering machine mode:	off	-----
Ringing signals:	2	-----
Code number:	0000	-----
Impulse time:	3 sec.	-----
Temperature level:	none	-----



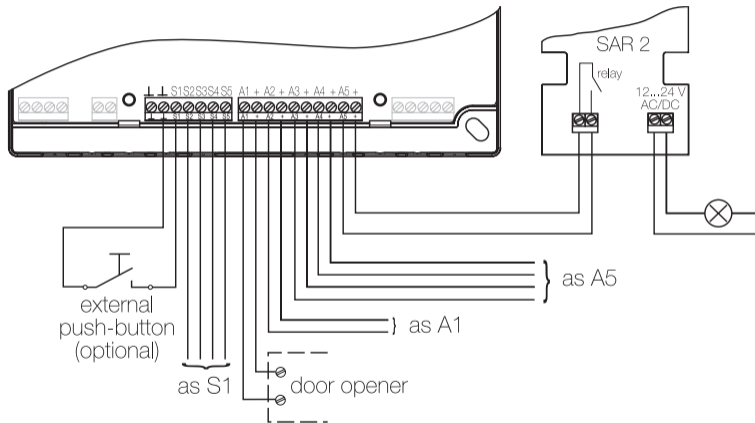
## Installation

### Connection of Telephone Line, Plug Power Supply, Inputs and Temperature Sensor



# Installation


## Connection of Outputs and Pushbuttons




## Installation

The external pushbuttons for local operation are connected electrically parallel to the integrated pushbuttons S1 to S5. The outputs A1 and A2 have relay contacts with a load capacity of 48 V/2 A AC/DC. The outputs A3 to A5 can deliver 12 V/150 mA.

## Operation

The automatic call acceptance will be activated with the pushbutton . The assigned LED lights up. The device seizes the telephone line after reception of the programmed number of ringing signals (see page 16 and 21).

The LED  starts blinking after receiving the first ringing signal. With the pushbuttons S1 to S5 devices connected to the output can be switched on or off. The assigned LEDs S1 to S5 indicates the switching state (LED lit = on).

After calling and seizure of the telephone line as well as correct entry of the code number, one can check the state of the connected devices, switch the devices on or off, or modify the individual settings of your TC easy Plus – like alarm phone numbers, own phone number, answering machine mode, ringing signals, code number, impulse time or temperature level.

## State Request

Call the TC easy Plus and dial the code number.



"Please dial a digit."



input device digit 1-5  
or 6 request for temperature  
or # all devices



input state (not after digit "6")  
0 switch off device  
1 switch on device  
6 impulse mode  
# state request



temperature or state announcement

# Operation

## General Settings

Call the TC easy Plus and dial the code number.



"Please dial a digit."



setting digit



9 menu settings

★ disconnection



settings announcement


With ★ disconnection

without announcement.

# Operation

## Menu Settings

Call the TC easy Plus and dial the code number and the digit „9“ for the selection of the menu settings.

-  menu item
- 0 temperature level
- 1 alarm phone number 1
- 2 alarm phone number 2
- 3 own phone number
- 4 answering machine mode
- 5 ringing signals
- 6 code number
- 7 impulse time in sec.
- 8 impulse time in min.

9 impulse time in hours



announcement of menu item



input of value  
1-24 digits number



confirmation  
# Confirmation of input  
\* abort of input



announcement of value  
input or menu settings  
announcement

## Alarm Phone Numbers

The TC easy Plus has two alarm inputs. If a connected contact is activated, the programmed alarm phone number for the alarm input will automatically be called and an announcement can be heard at the called party. An alarm occurred during a telephone conversation will be processed after releasing the telephone line. The alarm phone numbers (max. 24 digits) can be programmed with the telephone and DTMF in the menu settings ("1", respectively "2").

## Operation

### Alarm Phone Numbers

If no confirmation takes place, alarm messages will be announced at the programmed alarm phone number up to two times within intervals of circa two minutes, independent from whether or not the called party answered the call.

### Own Phone Number

If the TC easy Plus sends off an alarm message via the telephone line, it will first announce the own phone number. The own phone number (max. 24 digits) will be programmed in the menu settings ("3").

### Answering Machine Mode

In order to address a connected answering machine instead of the TC easy Plus via the telephone line, the device can be set to an answering machine mode in the menu settings ("4"). If the answering machine mode has been activated, the base module will not switch on at an incoming call. If the caller releases the telephone line after one ringing signal, waits at least 10 seconds and calls again within 60 seconds the base module switches on after the first ringing signal.

## Operation

### Ringling Signals

The number of ringing signals until answering an incoming call by the TC easy Plus can be set in the menu settings ("5"). The default setting is "2".

If the answering machine mode is activated, the setting of the number of ringing signals does not have any meaning.

### Code Number

The four digit code number can be set in the menu settings ("6"). In delivery state the code number "0000" is set. If the code number "1111" is set, the testing of the code number is left out (see page 29). The default settings can be restored by a procedure (see page 8) if you have forgotten your code number.

The connection will be released, after entering the wrong code number three times.

### Impulse Time

With the impulse time the outputs can be activated for a pre-determined time. For instance, a door opener can be activated for a short time or a pump can be turned on for several hours. The selected impulse time ("7", "8" or "9" in menu settings) is valid for all outputs. The impulse time can be selected from 1 second and up to 24 hours. In delivery state the impulse time is set to 3 seconds.



## Operation

### Temperature Level

If a temperature sensor is connected to the analogue input, an alarm call can be initiated if a certain temperature level is reached. In this case, the alarm phone number 1 will be called and an announcement will inform about the temperature. The programming ("0") in menu settings can be done in a way, that the exceeding ("more than") or the falling short ("less than") of a certain temperature will send off an alarm call. Negative values can be set by placing a "9" before entering the tem-

perature level. The adjustable range comprises temperatures from  $-9\text{ }^{\circ}\text{C}$  to  $40\text{ }^{\circ}\text{C}$ . The TC easy Plus has a hysteresis of  $3\text{ }^{\circ}\text{C}$ , that means, if for instance a temperature level of more than  $25\text{ }^{\circ}\text{C}$  has been reached, a new alarm will only be send off again, if the temperature has fallen below  $22\text{ }^{\circ}\text{C}$  before.

# Operation

## Setting Procedures

For programming the parameters the phone line of the TC easy Plus must be called from a telephone. After entering the code number, the menu settings can be selected by dialing the digit "9". The menu will start with the following announcement described as "setting announcement" in the examples: "Settings. To set the alarm phone numbers, press 1 for input 1 and press 2 for input 2. To set the own phone number, press 3. To set the answering machine mode, press 4. To set

the amount of ringing signals, press 5. To set the code number, press 6. To set an impulse time in seconds, press 7, for minutes press 8 and for hours press 9. To set a temperature level, press 0."

The announcement will be repeated several times. It can be interrupted at any position by entering a DTMF-digit. During a voice message, the entry will not always be recognized, so that the entry of the digit eventually must be repeated.

An overview of the operational sequences is printed on the supplementary sheet. The following examples show how the below stated values can be set starting from delivery state.

alarm phone no. 1	
4711	
alarm phone no. 2	0815
own phone no.	0235582224
a. machine mode	off
ringing signals	7
code number	1873
impulse mode	35
sec.	
temperature level	> 28 °C

## Setting Procedures

Call the TC easy Plus:	Phone number of the TC easy Plus line	"Here is the TC easy Plus. Please dial the code number."
Dialling of code number:	"0000"	"Please dial a digit."
Changing to the menu settings:	"9"	setting announcement
Set alarm phone number 1:	"1"	"Phone number one. Please dial. For confirmation press the pound key, for cancellation the asterisk key."
	"4711#"	"Phone number one: 4711"

## Setting Procedures

Set alarm phone number 2:		setting announcement
	"2"	"Phone number two. Please dial. For confirmation press the pound key, for cancellation press the asterisk key."
	"0815#"	"Phone number two: 0815"
<hr/>		
Set own phone number:		setting announcement
	"3"	"Own phone number. Please dial. For confirmation press the pound key, for cancellation press the asterisk key."
	"0235582224#"	"Own phone number: 0235582224"

## Setting Procedures

Setting of answering machine mode:	"4"	setting announcement "Answering machine mode. Please dial. Answering machine mode on: 1, Answering machine mode off: 0. For confirmation press the pound key, for cancellation press the asterisk key."
Confirmation of the actual setting	"#"	"Answering machine mode off."
Setting of ringing signals:	"5"	setting announcement "Ringing signals 2. Please dial. For confirmation press

## Setting Procedures

		the pound key, for cancellation press the asterisk key."
	"7#"	"Ringing signals: 7"
		setting announcement
Setting of code number:	"6"	"Code number: 0000. Please dial. New code number. For confirmation press the pound key, for cancellation press the asterisk key."
	"1873#"	"New code number: 1873"
		setting announcement

## Setting Procedures

Setting of impulse time (sec):	"7"	"Impulse mode: 3 seconds. Please dial. Seconds. For confirmation press the pound key, for cancellation press the asterisk key."
The setting of the impulse time is alternatively possible in minutes (dial:8) or hours (dial:9).	"35#"	"Impulse mode: 35 seconds"
<hr/>		
Setting of temperature level:		setting announcement
	"0"	"Temperature level off. Please dial. More than: 1, Less than: 2. For confirma- tion press the pound key, for cancellation press the aster- isk key."

## Setting Procedures

...still setting of temperature level:

"1#"

"Please dial temperature level. For confirmation press the pound key, for cancellation press the asterisk key."

"28#" <sup>1</sup>

"Temperature level more than 28 degrees."

---

setting announcement

Abort menu settings:

"\*"

"Please dial a digit."

Release connection:

"\*"

---

<sup>1</sup> For negative values the first digit must be a "9".



## Switch Devices and Impulse Time, Check the State of Devices and Temperatures

Turning on device 5:	Call the phone number of the TC easy Plus.	"Here is the TC easy Plus. Please dial the code number."
	"1873"	"Please dial a digit."
	"51"	"The device 5 is turned on. Please dial a digit."
Turning on device 5 for the programmed time:	"56"	"The device 5 is turned on. Impulse mode 35 seconds. Please dial a digit."
Checking the temperature	"6"	"The temperature is 22 degrees. Please dial a digit."

## Switch Devices and Impulse Time, Check the State of Devices and Temperatures

Checking the state of  
device 2:

"2#"

"The device 2 is turned off.  
Please dial a digit."

---

Checking the state of  
device 5:

"5#"

"The device 5 is turned on.  
Impulse mode 35 seconds.  
Please dial a digit."

Release connection:

"\*"

## Alarm Messages

Input 2 has been activated.  
TC easy Plus dials the programmed alarm phone number.

The alarm will not be confirmed. After a 2 min. break, the alarm phone number 2 will be called again.

The alarm has been confirmed.

"★"

"★"

"Here is the TC easy Plus.  
0235582224. The alarm 2  
has been activated."

"Here is the TC easy Plus.  
0235582224. The alarm 2  
has been activated."

"The alarm has been confirmed.  
Please dial the code  
number."

---

<sup>2</sup> The TC easy Plus will send off a maximum of 2 dialing attempts.

## Alarm Messages

Release connection or enter the code number for switching on or off devices.  
The programmed temperature level (25 °C) has been exceeded.

"4711"

"Here is the TC easy Plus. 0235582224. The temperature level is more than 25 degrees. The temperature is 27 degrees."

The TC easy Plus calls the alarm phone number 1.

The alarm has been confirmed.

"★"

"The alarm has been confirmed. Please dial the code number."

Release connection or enter the code number for switching on or off devices.

"★"

## Special Features

### Unprotected Mode

If the code number "1111" is set, the testing of the code number will be left out, which means directly after seizing the telephone line switching functions and menu settings can be performed.

### Time out

When the TC easy Plus seized the telephone line and no DTMF-signals have been received for 60 seconds, the device will release the telephone line.

### Power Supply

The power feeding must be connected at terminals 12 V (plus) and **⏚** (minus; see page 9).

## Special Features

### Behavior at Power Failure

All settings and the actual switching states are permanently stored and are therefore, available after a power failure. If a power failure takes place during an alarm call, the alarm call will be repeated after the power returns.

#### **Hint:**

Should a power failure occur during an impulse operation of an output, the appropriate output will remain switched off after the power returns.

## Technical Data

Dimensions L x W x H:	143 x 81 x 28 mm
Weight:	400 g
Color:	pure white, according to RAL 9010
Temperature range Operation:	-5 to 45 °C
Storage:	-25 to 70 °C
Protection class:	IP30 according to EN 60529
Power supply:	12 V DC with screw terminals
Switching outputs 1 and 2:	potential-free contact max. 48 V/2 A AC/DC
Switching outputs 3 to 5:	control voltage 12 V/150 mA
Alarm input 1 and 2:	for potential-free contacts (Schaltdauer > 50 ms)
Power consumption:	see table on page 33
Ringling frequency:	20 Hz to 60 Hz
Telephone connection:	analogue connection according to CTR 21
Plug power supply Input voltage:	12 V/1,25 A DC

## Technical Data

Class:	II
Temperature sensor (optional)	
Article number:	700 802 201
Length:	600 mm
Extension:	to approx. 10 m
Temperature range:	-10 °C to 40 °C, resolution 1 °C
Temperature values	
-10 °C:	42,4 kΩ
25 °C:	10 kΩ
40 °C:	5,8 kΩ
B-value:	3435 K±1%

All inputs and outputs are exclusively designed for the connection of electrical cir-

cuits with SELV according to DIN VDE 0100-410.

Subjected to technical changes.



## Power Consumption

Switching state	Power consumption at supply voltage of 12 V		
	Idle state (call acceptance on)	Connection state	
		no announcement	during announce- ment
all relays off	28 mA	45 mA	57 mA
one relay on	45 mA	60 mA	74 mA
two relays on	62 mA	77 mA	92 mA

## Guarantee

We guarantee the perfect function of the TC easy Plus and TC Z easy for 2 years after date of purchase (receipt) providing that it was professionally installed and operated.

## Service

In case of a malfunction, consult your dealer or send the device with receipt and a short description of the malfunction to:

**Rutenbeck Service-Center  
Gewerbegebiet  
Im Meilesfelde 5  
99819 Marksuhl  
GERMANY**

**Phone: +49 36925 90091**

**Fax: +49 36925 90092**

## Manufacturer's Declaration

We, Wilhelm Rutenbeck GmbH & Co. KG declare in our sole responsibility, that the TC easy Plus was manufactured under a full quality assurance system according to Annex V of directive 1999/5/EC, certified by Notified Body No. 0682 and that the mentioned equipment is in compliance with the essential requirements and provisions of the directive 1999/5/EC.

The complete declaration of conformity can be found

under [www.rutenbeck.de](http://www.rutenbeck.de) in the download-sector.



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