Product information
transponder reader
AZC41000-0010

Ferienwohnung
Meersand

Walter Grütner
Westerende 87
Tel. 0120567758

Table of contents

Scope of delivery

1 x transponder reader
1 x infrared remote control
1 x win:clip^{TM}-key
1 x screwdriver
    foil for info tags, empty
    product information
    key list

Introduction

Notes on this product information

i	This product information refers exclusively to qualified electricians.

The product information contains important notes on intended use, installation and initial operation. Please, keep the product information at a suitable place, where it is easily accessible for maintenance and repair reasons.

☞ All product informations are available in the download area at www.tcsag.de .

Used symbols and warning notices

Symbol	signal word	Explanation
⚠	**DANGER!**	The signal word describes an endangering with a high level of risk. Failure to observe this warning will result in death or very serious injury.
⚠	**WARNING!**	The signal word describes an endangering with a medium level of risk. Failure to observe this warning could result in death or very serious injury.
⚠	**CAUTION!**	The signal word describes an endangering with a low level of risk. Failure to observe this warning could result in a minor or moderate injury.
!	**ATTEN-TION!**	The signal word indicates that damage to equipment, environment and property can occur.

Further used symbols and designations

i	important note or important information
►	Step
☞	cross reference for further information on this topic, see source
•	list, list entry 1 level
–	list, list entry 2 level
a)	Explanation

Safety instructions

General safety regulations

i	Assembly, installation, commissioning and repair of electronic devices must be carried out by qualified electricians. Observe the latest regulations and standards for system installations.

⚠️	**WARNING! Danger to life due to electric shock** Observe the safety regulations according to DIN VDE 0100, when working on main power connections of 230 V.

i	When installing TCS:BUS systems, the general safety regulations for telecommunication systems according to VDE 0800 must be observed. Inter alia: • separated cable routing of high and low voltage lines, • minimum distance of 10 cm in case of a common cable routing, • use of separators between high and low voltage lines within shared cable ducts, • use of standard telecommunication lines, e.g. J-Y (St) Y with 0.8 mm diameter, • already existing lines (modernization) with deviating cross-sections can be used in compliance with the loop resistance.

Requirements to protect against lightning

!	**CAUTION! Device damage due to over-voltage** By suitable lightning protection measures it has to be ensured that the electric voltage of 32 V DC at each connection is not to be exceeded.

Product description

Intended use

The transponder reader is a transponder unit to read transponder keys and cards* without contact. It is a surface-mounted system, which can be used both indoors and outdoors.
If the installation recognizes the key, it sends a door opener protocol or a freely configurable protocol and the internal relay is activated. In combination with the power supply and control unit BVS20-SG, it can be used as a stand-alone system.
The transponder reader can be combined with all TCS:BUS audio and video kits. It can be integrated into large bus installations with up to 64 external units.

*   *MIFARE Classic® is a registered trademark of NXP B.V.*

|	
i	For applications, which differ from the intended use or goes beyond it, the manufacturer accepts no liability.

Short description

- Transponder (Mkey, MCard) with MIFARE Classic® 1K / 4K technology
- shatter-proof nameplate glass
- Configuration with configuration software configo™
- Configuration with infrared remote control (included)
- Password protection against unauthorized configuration
- Key confirmation tone when pressing the infrared remote control
- Setting a master transponder via infrared remote control or with configo™
- Programming of MIFARE Classic® compatible transponder
  – up to 10 per master transponder
  – up to 50 per infrared remote control
  – up to 250 TCS:BUS installations possible using configo™
- Visual and acoustic notification when reading the key
- Visual and acoustic error indication
- Operation with 2/3 wires can be switched
- RS485 interface
- Maximum line resistance: 20 or 60 Ω / can be activated
- Door opener function with potential-free relay contact (two-way switch: 24 V DC / 2 A)
- Adjustable door opening time, factory settings at 3 seconds
- Sabotage contact
- Update possible via ISP interface

i	The device is based on another technology such as the transponder-readers tLeser-GH and tPAKL-EN. Transponder of types tKey01 and tCard01 cannot be used.

Display and control elements

|		
🟢	LED green	• **On** (3 s): transponder card recognized, access granted • **Blinks slowly**: programming in programming mode is possible using infrared remote control or master transponder
🔴	LED red	• **On** (3 s): transponder card is not recognized • **On** (2 min.): blocking time after master code has been entered incorrectly 3 x using infrared remote control or wrong master transponder was used 3 x, wrong transponder was used 3 x • **blinks slowly**: possible to delete in the programming mode via master transponder
🟠	LED orange	• **On**: manual programming mode via master transponder, all memory locations are assigned • **blinks**: manual programming mode via master transponder, one memory location still available • **flashes**: error indication

Device overview
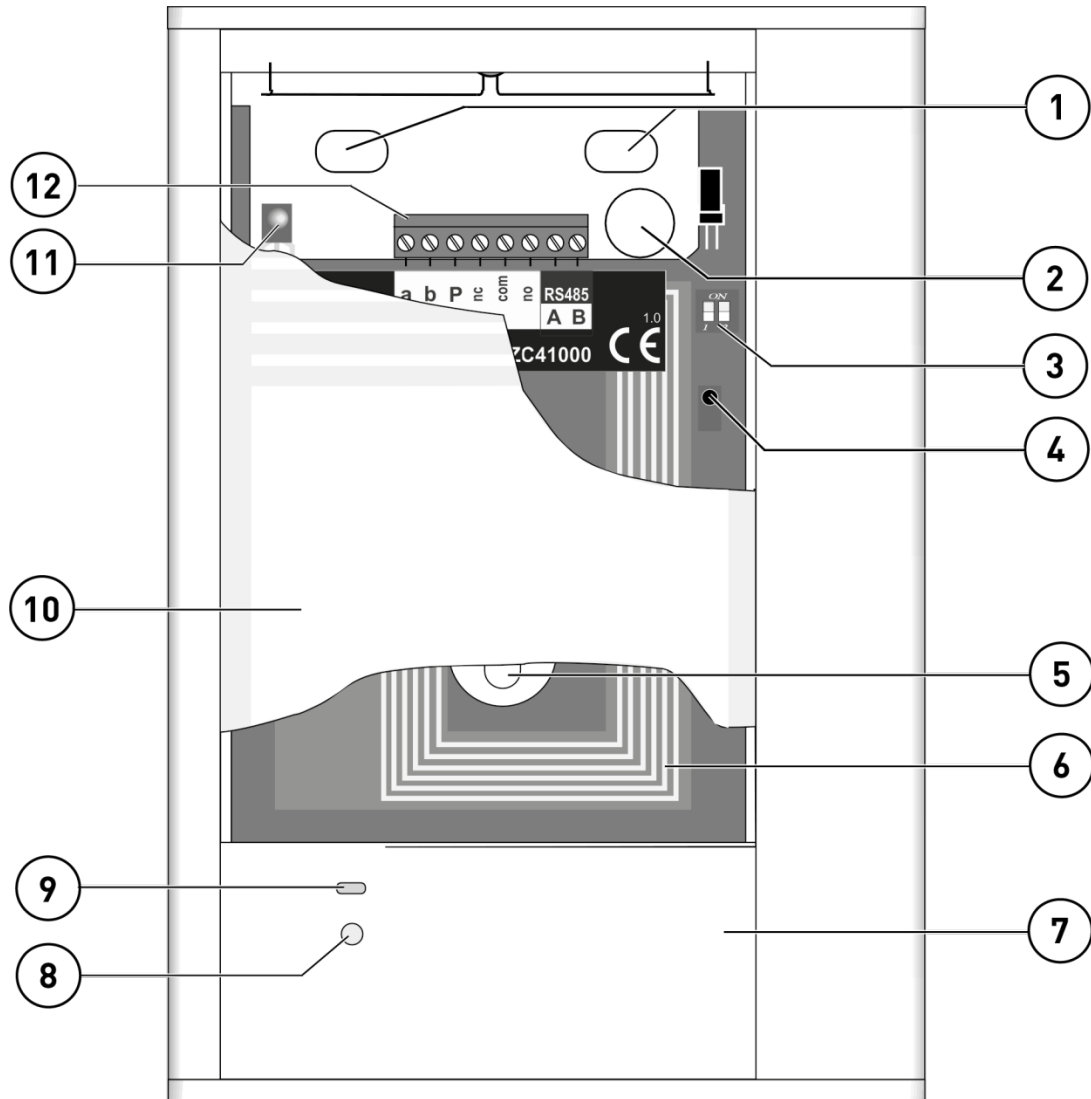
Fig. 1: AZC41000, nameplate partially visible

1	attachment hole 1, 2	**7**	flush panel
2	cable gland	**8**	LED (green / red / orange)
3	DIP-switch	**9**	opening for win:clip™-key
4	sabotage contact	**10**	nameplate glass
5	attachment hole 3	**11**	IR receiver
6	print card	**12**	connection terminal

Tecnical data

supply voltage	+24 V ± 8 % (power supply and control unit)
	18 bis 28 V (for stand-alone mode)
input current in resting position	3-wire operation: $I(a) = 0,1$ mA, $I(P) = 17$ mA
maximum input current	$I(Pmax) = 40$ mA
degree of protection	IP44
acceptable ambient temperature	-25°C ... +55°C
housing	aluminum, anodized nature
dimensions (mm)	H 153 x B 104 x T 16
weight	340 g
RFID-Technology	MIFARE Classic®, carrier 13,56 MHz
relay contact	change-over, 24 V AC / DC / 2 A
Infrared remote control	
carrier frequency	37,9 KHz ± 125 Hz
signal range	at least 1 m in open spaces (15 ° deviation from direction at a distance of 3 m)
operating temperature	-10 to +50 °C,
storage temperature	-20 to +60 °C
remote control batteries	button cell battery CR2025 (DC3.0 V)

Mounting and installation

win:clip^TM-System

The device is equipment with the win:clip^TM system to open and close the station without using any screws.

Open the housing

► Push the enclosed win:clip key into the small opening within the loudspeaker cover.
► Press the key into the opening until stop and keep it in this position.
► Push the name plate glass slightly upwards until it jumps out.
► Put out the glass carefully.
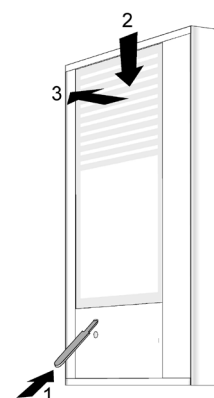► Remove the plug of the name plate illumination.
► Remove the win:clip key.

Fig. 2: win:clip^TM, open

Close the housing

► Connect the plug of the name plate illumination (see instal-
  lation).
► Push the enclosed win:clip key into the small opening within
  the loudspeaker cover.
► Press the key into the opening until stop and keep it in this
  position.
► Push the name plate glass under the loudspeaker
  cover.
► Press the name plate glass onto the device. Push it slightly
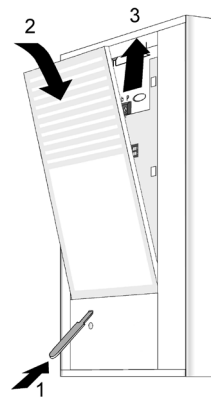 downwards until it snaps-in.
► Remove the win:clip key.

Fig. 3: win:clip^{TM}, close

Install the front door station

► Open the device (see win:clip system)
► Perforate carefully the foam cover on the backside of the device.

!	**ATTENTION! Damage to the connection wires.**
	Ensure that the cables from the rear panel do not get clamped.

► Mount the device via the mounting holes onto the wall using suitable screws.

Connecting the lines

Connecting lines

i	Allowed cross-section (diameter):	0,08 ... 1 mm^2 (Ø 0.3 ... 1.4 mm)
	Max. number of wires per terminal contact:	2 x 0.8 mm or 3 x 0.6 mm
	Connect further wires by using auxiliary terminals. Use only connecting lines made of the same material and with the same diameter within one terminal contact.	

General information

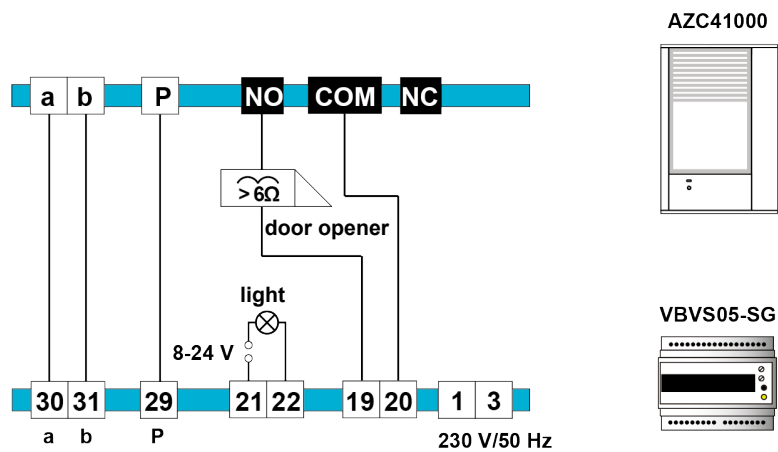| i	• Use the small slot screwdriver (enclosed in the delivery) to connect the lines. Avoid damag-ing the device.
	• The internal resistance of the door opener shall not exceed 6 Ω.

Example circuit 1: TCS:BUS with VBVS05

AZC41000

VBVS05-SG

Fig. 4: example circuit 1

Example circuit 2: installation with multiple transponder readers

AZC41000

AZC41000

AZC41000

BVS20-SG **NGV1011-0400**

NWV1000
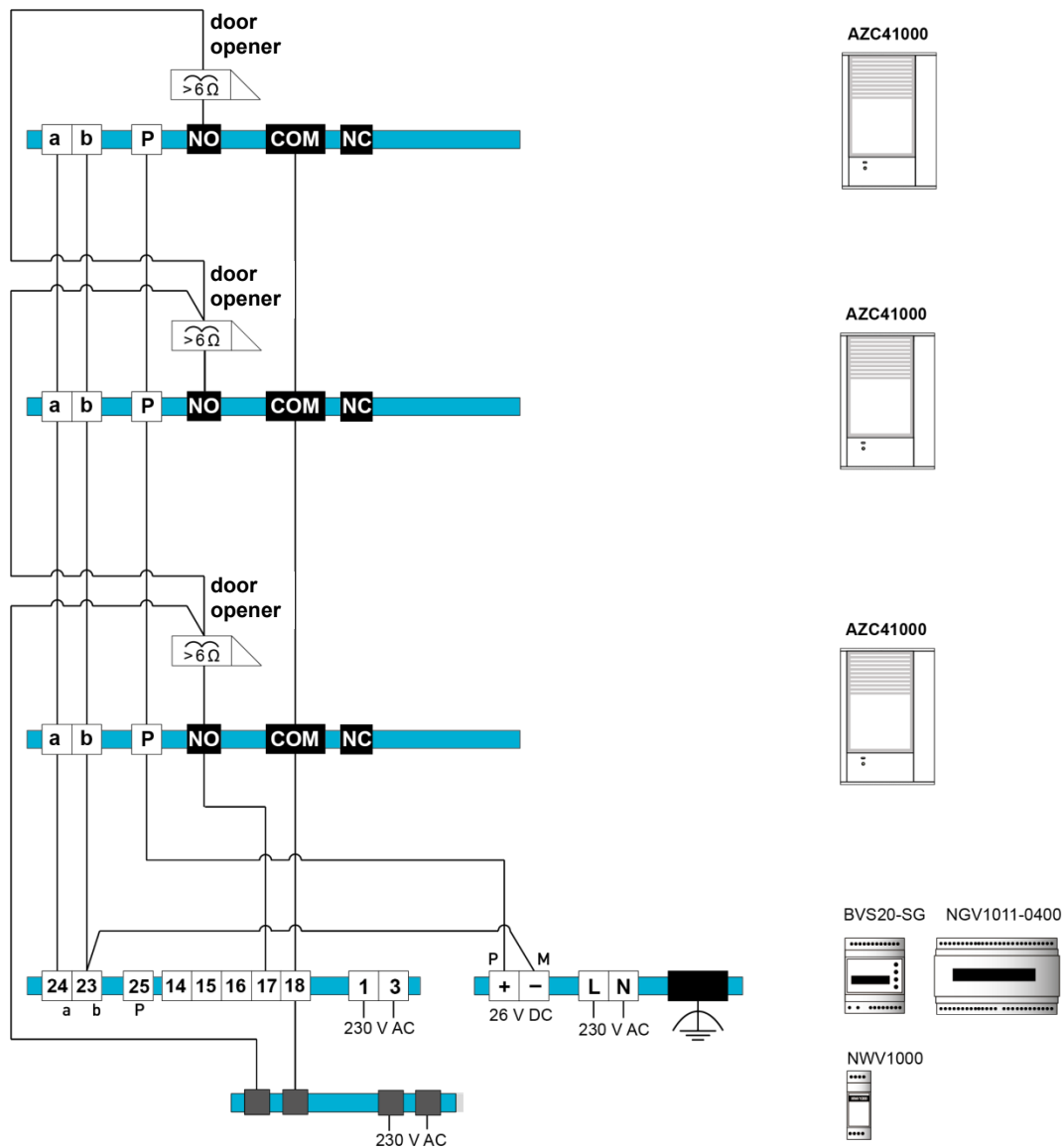
Fig. 5: example circuit, door opener with separate power supply

Example circuit 3: TCS:BUS with BVS20-SG

AZC41000

| a | b | | P | NO | COM | NC |

> 6Ω

door opener

light

8-24 V

| 24 | 23 | | 25 | | 14 | 15 | 16 | 17 | | 1 | 3 |

a   b   P

230 V/50 Hz

BVS20-SG
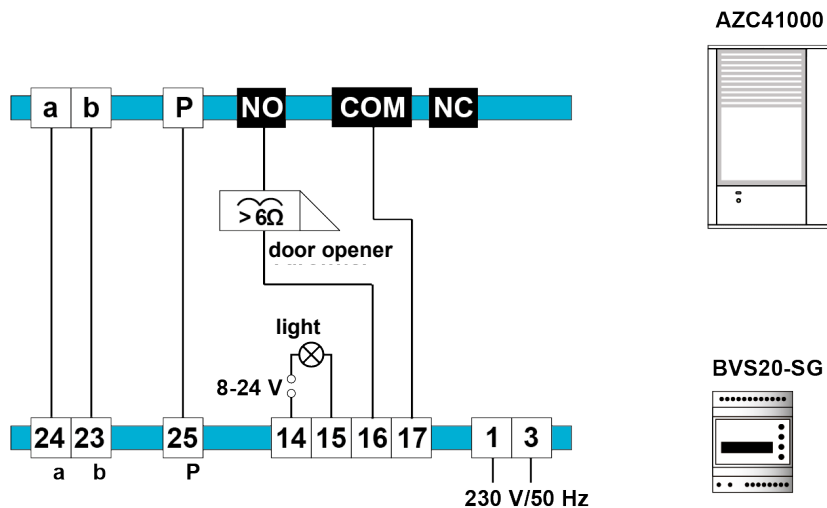
Fig. 6: example circuit 3

Door opener in mixed installation

ℹ️ If, in addition to the AZC41000, there are also audio and/or video front-door stations installed, the function "Switch door release relay with door release protocol" must be activated using configo™ (is already activated in the delivery state). The same AS-address must be assigned to the AZC41000 as to the front-door station of the associated door. It is not necessary to connect an FAA11000 or FAA1200 door release relay to the audio/video front-door station.

Adapting the device

Adapting the device

The transponder reader is factory set for systems with loop resistance of ≤ 20 Ohm and operation on the TCS:BUS (3-wire technique). The adjustment is made at a DIP switch which is secured with a plastic plate. See device overview, p. 7.

ℹ️ Only remove the self-adhesive plastic plate on the DIP switch if you need to make an adjustment.

Adjust systems without P-wire (2-wire operation)

ℹ️ Requirement: Only one reader can be connected per power supply and control unit.
For new installations, a P-wire must be provided.

► Remove the plastic plate.
► Set switch 1 to ON if there are only two lines in a system.

a) *factory preset*

Switch 1

2-wire technique

3-wire technique [a]

ON

1
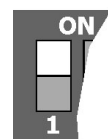
Fig. 7: DIP-switch 1

| ℹ️ | Requirement: Front-door stations and power supply and control units connected to the system, must be suitable for systems with a loop resistance of up to 60 Ohm. |

switch 2

lines

long   ($Z_s \leq 60$ Ohm)

normal ($Z_s \leq 20$ Ohm) [a]

Fig. 8: DIP-switch 2

► Remove the plastic plate.
► Set switch 2 to ON, in order to use a line resistance Zs up to 60 Ohm.

a) factory preset
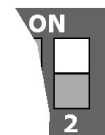
Activate infrared remote control

► Remove the battery cover on the back of the infrared remote control.
► Remove the foil strips.
► Replace the battery cover.

Initial operation

► Install the devices of the system completely.
► Proof the a-, b- and P-wire against each other on short-circuits.
► Switch on the mains voltage.

Error detection and indication

Errors are signaled acoustically and optically: one error tone and constant flashing of the operation indication.
The optical error indication stays active until the error is fixed.

error cause	indication error mode	error tone	solution
a- and P-wire interchanged or short circuited		))) ▬■▮▮	change a- and P-wire or remove short-circuit, device goes into stand-by mode again
a-wire: not connected or not supplied	☀️ 🔲 LED flashes orange	))) ▬■▮▬	connect a-wire or check power supply, device goes into stand-by mode again
Sabotage contact activated: control function 199 with own serial number for "silent alarm" is sent		))) ▬■■▮▮	insert nameplate correctly

Settings

Sabotage contact

When the sabotage contact is activated, a protocol is sent and an error message is displayed (LED flashes orange). A control function with its own serial number is sent. If the device is properly closed again, full functionality is restored.

► Configure the control function number using the configuration software configo™.

12

The device is equipped with an EEPROM in which the following device settings are stored at the factory:

AS-address for door opening function	0
switching time for relay contact	approx 3 s
programming lock	OFF (= 0)
switch relay contact on receipt of a door opener protocol	ON (= 1)
Programming mode can only be switched on at the power supply and control unit	ON (= 1)
acoustic signaling	AN (= 1)
free protocols 1 to 4	00000000 (16 bit)
Master code	Serial number of the device
Master transponder code	00000000 (no master transponder)
TCS:BUS connected	YES
Sabotage contact activated	ON (= 1)
control function in case of sabotage	199

Configuration

Possible configurations

Function	Infrared remote control	Master transponder	configo™
train transponder	x (limited to 50)	x (limited to 10)	x (limited to 250)
delete transponder	x (delete individually) number memory address must be known	-	x
	x (delete simultaneously)	x (delete simultaneously)	x
set AS-address	x	-	x
set relay switching time	x	-	x
load factory setting	x	-	x
train master transponder	x	-	x
change master code	x	-	x
set programming lock	-	-	x
stand-alone operation	-	-	x
free protocols 1 to 4	-	-	x
control function sabotage	-	-	x

Initial commissioning

with infrared remote control	see page 15
with configuration software configo™	analog see page 15
with user program access control (PCiACC)	see manual *PCitACC*
with service device TCSK	no programming possible
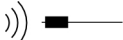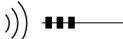
Legend

Acknowledgement tones

tone	symbol	meaning
short acknowledgement tone	))) ■—	• Infrared remote control confirms pressing the button with a short button acknowledgement tone.
positive acknowledgement tone	))) ■—	• Correct entry or correct operation.
negative acknowledgement tone	))) ■■■—	• Wrong entry or wrong operation.

Legend LED indication

LED	status	symbol	meaning
green	ON (for 3 s)	☀G	• Transponder card recognized, access granted.
	flashes	☀G	• ready for programming in programming mode via infrared remote control or master transponder
red	ON (for 3 s)	☀R	• Transponder card not recognized
	ON (for 2 min)	☀R	lock wait after: • triple entry of an incorrect master code via infrared remote control • triple use of an incorrect master transponder • triple use of an incorrect transponder
	flashes	☀R	• delete readiness in programing mode via master transponder
orange	ON	☀O	• manual programming mode via master transponder • all memory addresses are occupied
	flashes	☀O	• manual programming mode via master transponder • only one free memory
	blinks	☀	• error indication when commissioning
Run/ Prog- button	ON	☀●	• Programming mode of the system is switched OFF.
	blinks	☀●	• Programming mode of the system is switched ON.

Notices

- For programming you need the 6-digit serial number of the transponder reader.
- A transponder contains a unique number that can be assigned to one or more transponder readers. This number is stored in the transponder reader.
- A transponder (or master transponder) can be allocated to several devices.
- If the entry is correct, a positive acknowledgement tone (⁾⁾⁾ ▪▬) sounds.
  If the entry of a command sequence ⊛ ⓪…⑨ ⓟ is interrupted for 8 s, the entire command sequence is rejected and a negative acknowledgement tone (⁾⁾⁾ ▪▪▪▬) sounds.
- If the command sequence does not correspond to the specified syntax or if too many parameters have been entered, the entire command sequence is also rejected and a negative acknowledgement tone sounds.
- When operating the infrared remote control, always aim the head of the remote control directly at the front-door station. The range of the infrared remote control is max. 1 m in direct distance.
- Each press of a button on the infrared remote control is confirmed by the transponder reader with a short acknowledgement tone (⁾⁾⁾ ▪▬).

ℹ	For safety reasons, the master code set ex works should be changed.

Programming with infrared remote control

ℹ	Keep the device closed during programming to prevent programming errors due to an open sabotage contact.

In order to program the device with the infrared remote control, you need the infrared remote control included in the scope of delivery.

Pressing a key at the remote control is confirmed with a short key acknowledgement tone ⁾⁾⁾ ▪▬.

Initiate programming

Power supply and control unit: put transponder reader in programming mode		
Switch ON and OFF the programming mode of the system	**RUN ↑↓ PROG**	► Shortly press RUN/PROG Button, LED blinks. You now have 5 min. to program.
	RUN ↑↓ PROG	► Shortly press RUN/PROG Button, LED is ON.
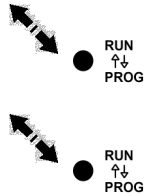
Authorize via infrared remote control		*Pressing a button is confirmed by the device with a short button acknowledgement tone.*
Enter master code	⊛ ⓪ ... ⑨ #	► **master code** (WE*: 6-digit serial number of the transponder reader) ► *WE= factory setting* a positive acknowledgement tone sounds, LED lights green for 3 s,
Device ready for programming		LED blinks green.
Wrong entry, unknown master code		A negative acknowledgement tone sounds when pressing the #-key. *LED lights red for 3 s,* *LED lights green again.*
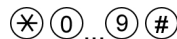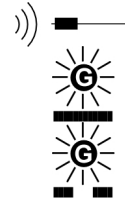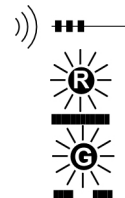
> **i** *The code entry is blocked for 2 min after the code has been entered wrong 3 times.*

LED lights red for 2 min., then blinks green again.

► Then start again.

No entry

If after 2 min. no command has been entered, the device will automatically terminate the programming mode.
The LED switches off.

Train transponder

▦	**Initiate program-ming**		If not yet done

Enter command	⊛ ⓪ ＃…	►	*** 0 # SpNr #**
			SpNr = memory location 0 to 49

Present transponder		►	Hold the transponder in front the de-vice
			a positive acknowledgement tone sounds,
			LED lights green for 3 s,
Transponder is trained			LED blinks green again.

Train further tran-sponders	▶▶▶	►	Repeat the steps below.
Only 1 memory address is free.			LED blinks orange.
All 50 memory addresses are occupied			LED lights orange.
Transponder is rejected:			*A negative acknowledgement tone sounds when the transponder is held in front of the device,*
• *memory is occupied*			
• transponder has al-ready been trained on another memory ad-dress			*LED lights red for 3 s,* *LED lights green again.*
		► ►	Delete the occupied memory address! Or delete the transponder which has been trained on the wrong memory address!

i	Number of transponder which can be trained: max. 50.

Delete a transponder

▦	**Initiate program-ming**		If not yet done

Enter command		✳ ③ #…	► *** 3 # SpNr #**
			SpNr = memory location 0 to 49

	a positive acknowledgement tone sounds,	
delete occupied memory	LED lights green for 3 s,	
	LED blinks green again.	
Occupied memory has been deleted		
	a negative acknowledgement tone sounds,	
Memory is not occupied	*LED lights red for 3 s,*	
	LED blinks green again.	

Delete all transponders

▦	**Initiate program-ming**		If not yet done

Enter command		✳ ⑨④ #…	► *** 94 # Mastercode # Mastercode #**
			Mastercode = 6-digit number

|	
	a positive acknowledgement tone sounds,
	LED lights green for 3 s,
	LED blinks green again.
All transponders are deleted	

---
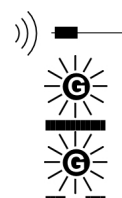
i	Number of transponder which can be deleted: max. 50.

Set switching time for R-terminal

▦ **Initiate program-ming**		If not yet done	

Enter command	⊛ ⑧ ⌗ …	▶ *** 8 # SpNr #**
		 SpNr = memory location 0 to 49
		 value = switching time adjustable in 1 s-steps, 0 to 255 s
		 0 = deactivated, no response
		 (WE = 3 s)	

switching time is set		*a positive acknowledgement tone sounds,* LED lights green for 3 s, *LED blinks green again.,*	
incorrect value has been entered		*a negative acknowledgement tone sounds,* *LED lights red for 3 s,* *LED blinks green again.*	

Set AS-address

▦ **Initiate program-ming**		If not yet done	
Enter command	⊛ ④ ⌗ …	▶ *** 4 # Wert #** AS-address = 0 bis 63 (WE = 0)	
		a positive acknowledgement tone sounds,	
AS-address is set		LED lights green for 3 s, LED blinks green again.	
incorrect value has been entered		*a negative acknowledgement tone sounds,* *LED lights red for 3 s,* *LED blinks green again.*	

Define a transponder as master transponder

▦ **Initiate programming**		If not yet done

Enter command	✳ ⑨ ⑦ #	► *** 97 #**

8 seconds	ℹ️ It must not pass more than 8 s until presenting the transponder!
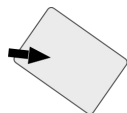
Present transponder		► Shortly hold any transponder in front of the nameplate glass.
		a positive acknowledgement tone sounds,
Master transponder is saved		LED lights green for 3 s,
		LED blinks green again.
time is exceeded: transponder is rejected		*a negative acknowledgement tone sounds,*
		LED lights red for 3 s,
		LED blinks green again.
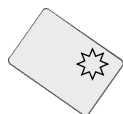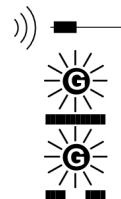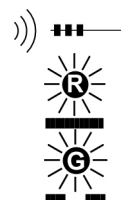
ℹ️	When training another transponder as master transponder, the previously trained one will be overwritten.

ℹ️	We recommend marking the master transponder afterwards.

Loading factory settings

i	• The master code is reset to the factory setting. • The master transponder is deleted. • The trained transponders stay active.

Initiate program-ming		If not yet done	

Enter command	✳ ⑨ ⑨ # …	*** 99 # Mastercode # Mastercode #**
		Mastercode = 6-digit number	
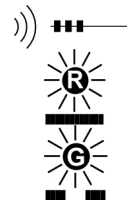
		a positive acknowledgement tone sounds,	))) ▬
		LED lights green for 3 s,	G
Loading factory settings		*LED blinks green again.*	G
wrong entry, unknown master code		*a negative acknowledgement tone sounds,* *LED lights red for 3 s,* *LED blinks green again.*	))) ▪▪▪ R G
		i *The code entry is blocked for 2 min after the wrong master codes has been entered wrong 3 times.*	

Change master code

i	For safety reasons, the master code set ex works should be changed when commissioning!

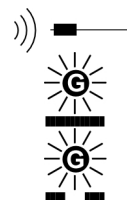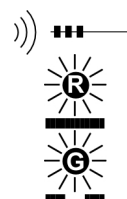|			
Initiate program-ming		If not yet done	

Enter command	✳ ⑨ ⑧ # …	► *** 98 # old master code # new master code # new master code #**
		Mastercode = 6-digit number	

		a positive acknowledgement tone sounds,	))) ▬
		LED lights green for 3 s,	G
master code is changed		*LED blinks green again.*	G
wrong entry, unknown master code		*a negative acknowledgement tone sounds,* *LED lights red for 3 s,* *LED blinks green again.*	))) ▪▪▪ R G
		i *The code entry is blocked for 2 min after the wrong master code has been entered wrong 3 times.*	

End programming

⊞ **Initiate program-ming**		If not yet done	

Enter command	⊛ ⑨ #	▶ *** 9 #** LED OFF.	●

or wait		…no programming for 2 min.:	
		a positive acknowledgement tone sounds,	
		LED lights green for 3 s,	
end		LED is OFF again.	●

> ℹ The front-door station is still ready for programming for the next 5 min. The programming must not be initiated again.

Programming with master transponder

- The transponder (cards or keys) must be positioned max. 30 mm from the nameplate glass in front of the transponder reader.
- If the instruction sequence is interrupted for 8 seconds, the whole instruction sequence is dismissed and a negative acknowledgement tone sounds.
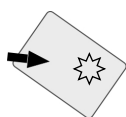
| i | Keep the device closed during programming to prevent programming errors due to an open sabotage contact. |

Initiate programming
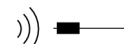
authorization via master transponder	

present master transponder	► Hold the master transponder in front of the nameplate glass.

a positive acknowledgement tone sounds,

Master transponder is recognized: device ready for programming

LED lights green for 3 s,

LED blinks green again.

a negative acknowledgement tone sounds,

wrong, unknown master transponder
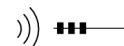
LED lights red for 3 s,

LED goes OFF.

| i | The code entry is blocked for 2 min after the wrong master transponder has been presented 3 times. |

The LED lights red for 2 min.

► Start again.

No input

After 2 min the device automatically terminates the programming mode, the LED goes out.

Train transponder

■	**Initiate program-ming**	If not yet done

all memory address emp-ty	The transponder number is written in the next available memory address. SpNr = memory address 00 bis 09

Present transponder ► Shortly hold the transponder in front of the nameplate glass.

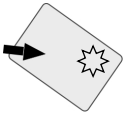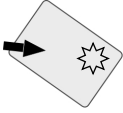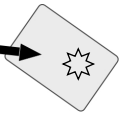*a positive acknowledgement tone sounds,*

LED lights green for 3 s,

Transponder is trained ► *LED blinks green again.*

Train further tran-sponders ► Repeat the steps..

Only 1 memory address is free. LED blinks orange.

All 50 memory addresses are occupied LED lights orange.

Transponder is rejected: *a negative acknowledgement tone sounds,*

LED lights red for 3 s,

- *memory is occupied*

LED blinks green again.

- transponder has al-ready been trained on another memory ad-dress

► Select another memory location or take the next transponder.

ℹ Number of transponder which can be trained: max 10.

Delete all transponders

Initiate program-ming		If not yet done

shortly present master transponder 3 x times		► Hold the master transponder in front of the nameplate glass 3 times in a row. ►
		ℹ️ Placing the transponder in front of the reader each time, must take max 3 s, else the device ends the pro-gramming mode.
		a positive acknowledgement tone sounds,
		LED flashes green briefly.
ready for deleting		LED blinks red for 8 s.
present master tran-sponder again		► As long as the LED blinks red, shortly place the master transponder in front of the nameplate glass again.
all transponder deleted		*a positive acknowledgement tone sounds*,
		LED blinks green again.
time for deleting exceed-ed (8 s)		*The device goes into programming mode.*

End programming

Present master tran-sponder		► Shortly hold the master transponder in front of the name plate glass.
		a positive acknowledgement tone sounds,
		LED lights green for 3 s,
		LED goes OFF
or wait		• If no programming is realized for 2 min. a positive acknowledgement tone sounds, LED lights green for 3 s, LED goes OFF.
Programming mode is ended		

Label info sign

| ℹ️ | Labelling templates as WORD files are available for download at www.tcsag.de . |

► Select the label template for iPAKL and tPAKL.
► Enter the desired inscription (e.g. names, opening hours, notes) in the template.
► Use a laser printer to print the inscription templates on a laser film.
  The laser film can be ordered directly from TCS, see p. 28.
► Cut out the info sign on the dotted lines.
► Alternatively, you can label the info signs (included in delivery) with a waterproof pen.
► Take out the name plate glass, see *win:clip^{TM}-System*, p. 8.
► Push the info sign from below into the pockets in the name plate glass.
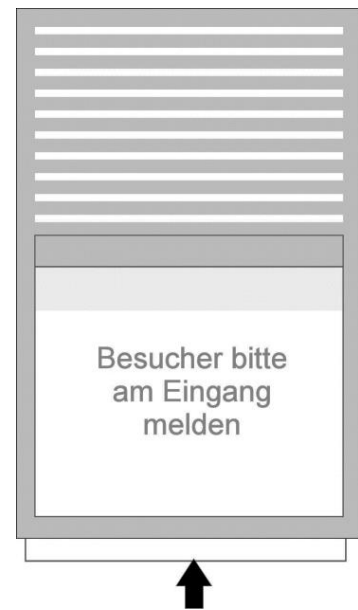
Fig. 9: Label info sign

Operation

► Hold the electronic key in front of the device with a distance of max 30 mm.
  • The LED lights green.
  • A simple positive acknowledgement tone sounds when the key is recognized (in factory setting).
  • The door release contact is triggered (in factory setting).

| ℹ️ | If a beep tone sounds 3 times (negative acknowledgement tone), no access is granted (no access right, key is not recognized). After 3 unsuccessful tries, the reader is blocked for 2 minutes for further access. |

Fig. 10: Operation

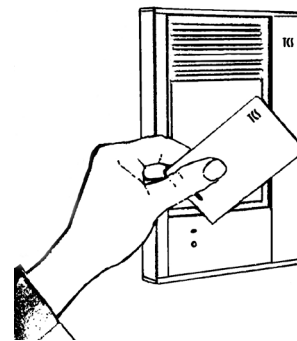# Infrared remote control change batteries

For the infrared remote control, 1 button cell CR2025 (DC 3.0 V) is necessary.
- ► Remove battery cover on the back of the infrared remote control.
- ► Observe the polarity of the battery and the marking "+/-" in the battery compartment.
- ► Insert the batteries.
- ► Replace battery cover.

⚠	**CAUTION!** **Danger of explosion.**
	Do not recharge the used button cells.

Cleaning

❗	**CAUTION!** **Loss of function due to short-circuit and corrosion.**
	Water and cleaning agents can enter the device. Electronic elements can get damaged due to short-circuit or corrosion. Avoid water and detergents from entering the device! Clean the device with a dry or slightly wet cloth.

❗	**CAUTION!** **Damages on the surface of the device**
	Abrasive or scratching detergents damage the surface of the device. Do not use any abrasive detergents! Remove stronger stains with a pH-neutral household cleaner.

Conformity

CE Declarations of conformity are available for download under www.tcsag.de.

Information on disposal

Dispose the device separately from domestic waste via a collection point for electronic scrap. Ask your county administration for the responsible collection point.

Dispose the parts of the packaging in collecting tanks for cardboard and paper resp. plastics.

Disposal instructions for batteries

Used batteries should not be disposed of with household waste!
They must be returned to a collection point for used batteries.

Warranty

We offer **a simplified processing** in case of warranty for qualified electricians.
- Please contact the **TCS HOTLINE** under **hotline@tcsag.de**.
- Our **standard terms and conditions of sale** you'll find under www.tcsag.de.

Spare parts, accessory

Short text	Article number
Infrared remote control	E23253
Transponder card	MCARD01
Transponder key	MKEY01
User program access control	PCitACC
laser fil foil A4, matt, 5 pieces	SPNA4

Service

Please send your questions and inquiries to
TCS HOTLINE 04194 9881-188.