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SmartTouch 2.0

# Access control system with KeylessGo technology

## Installation, operating and maintenance manual

Door handles

Smart radio module

Master SmartKey 2.0

SmartKey 2.0

These instructions are to be passed on by the fitter to the user.

MBW26a-EN/09.21-5

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# 1 General information

SmartTouch 2.0 is a state-of-the-art access control system with KeylessGo technology. It allows the convenient, keyless opening of front doors equipped with the FUHR motorised locks **autotronic** 834**, autotronic** 836 or **multitronic** 881. The motor locks are unlocked just by touching the door handle at any position in combination with an active SmartKey.

## 1.1 Scope of delivery

**SmartTouch 2.0 door handles set:**

- Smart radio module with connecting cable
- 750 mm extension cable
- Stainless steel door handles with fixing screws
- Master SmartKey 2.0
- Installation and operating manual

**Optional accessories:**

- Mounting set for surface-covering door panels (Art.no.: 9367768 **/** Reference: VNBZB2460069)

**Please order separately:**

- User SmartKey 2.0 (Art.no.: 9388459 /Reference: VNZ80323)

## 1.2 Function

SmartTouch allows you the convenient door opening via KeylessGo technology. Therefore it is sufficient to carry a tuned in SmartKey and to move it. For unlocking the door by the motorised lock, simply touch the door handle. The Smart radio module installed into the door leaf now sends a radio signal, which is received and answered by the tuned in SmartKey. The Smart radio module checks the opening authorization of the SmartKey and then unlocks the motorised lock.

If the KeylessGo function is not desired, it can be disabled for each individual SmartKey or completely for all, see chapter 6.1 for more information. The door can then still be operated via the SmartKey's transmit button.

The SmartTouch door handle has an LED which is controlled by a sensor, see chapter 3.1.2. This lights up briefly when the door handle is touched and provides orientation. In the darkness the LED lights up permanently. The brightness and size of the light cone depends on the length of the handle bar and the mounting height.

## 1.3 Number of tuned in SmartKeys

The memory of the smart radio module is configured for up to 200 SmartKeys. As soon as the memory is full, the tuning in process is cancelled and no further SmartKey can be paired.

## 1.4 Power failure

A power failure has no effect on the stored SmartKeys. Opening the door automatically cannot be effected.

**We generally recommend the installation of a mechanical locking cylinder in order to ensure that access is possible at any time independent of the power supply.**

# 2 Functions of the individual components

## 2.1 SmartKeys

SmartKeys are battery-powered electronic keys. Besides the KeylessGo function all SmartKeys have additionally 4 transmit buttons for remote control. The SmartTouch system differentiates between master SmartKey for tuning in and deleting, and user SmartKey for door opening.

- **Master SmartKey**

The master SmartKey included in the scope of delivery is paired with the Smart radio module at the factory and cannot be changed. With the upper button, Smart-Keys are tuned in to the Smart radio module, deleted and the radio range is set.


**The Master SmartKey cannot be replaced and must therefore be stored in a safe place! Do not use it for daily door opening, but only for tuning in and deleting the user SmartKeys.**

- **SmartKey**

The SmartKey is intended for regular door opening via the KeylessGo function or optionally via the transmit button. The other buttons can be tuned in to additional Smart radio modules by using the separately available FUHR SmartConnect. This allows, for example, the control of a garage door or a radio socket.


## 2.2 Smart radio module

The Smart radio module receives the signal from the SmartKey and transmits it as an opening impulse to the motorised lock. By pressing the integrated programming button with green LED light the process of tuning in, deleting and adjusting the radio range will be started. The memory of the Smart radio module can hold up to 200 SmartKeys. These remain permanently stored even if the operating voltage is interrupted.

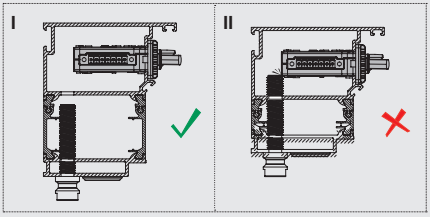
# 3 Installation

## 3.1 Important installation advices

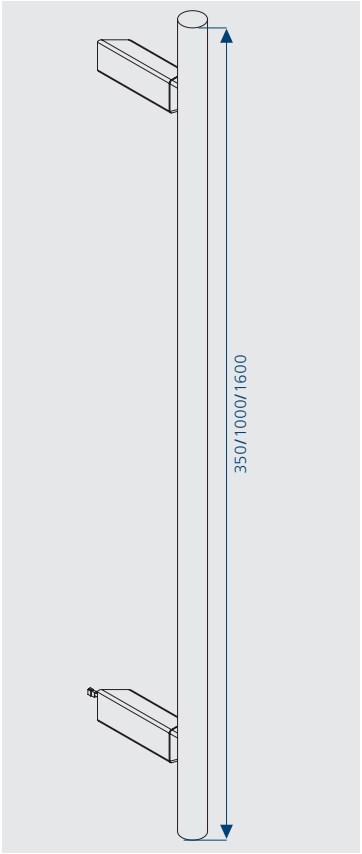
### 3.1.1 Screws and drilling holes

**A** Thread cutting fixing screw

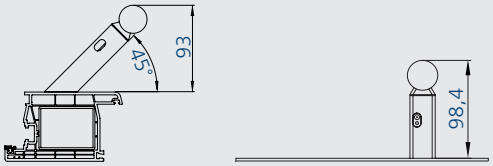
**B** Fixing screw with cable hole



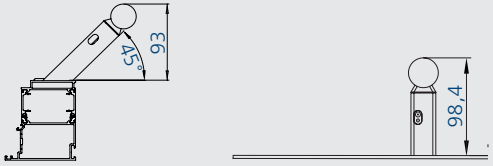

### 3.1.2 Advices for the door handle installation



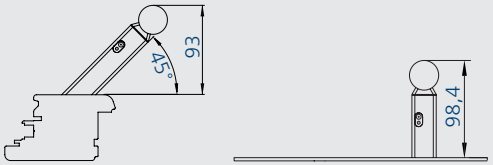

**PVC profiles**



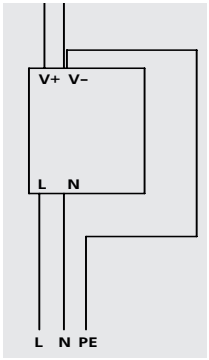

**Aluminium profiles**




**Timber profiles**



### 3.1.3 Important advice for power supply

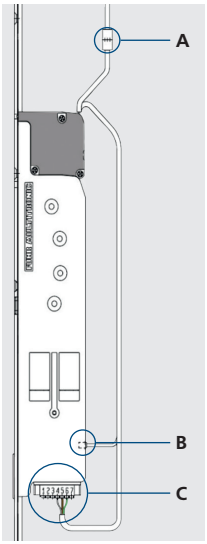



For proper functioning of the SmartTouch, a power supply unit with a passage between the protective earth conductor on the input side (green/yellow, PE 230V AC) and the earth cable on the output side (black, 12 V DV) is absolutely necessary.

**Inform your electrician.**

All FUHR transformers (12V DC/230V AC) installed in the door frame are already carried out for this purpose and can be used without hesitation.

## 3.2 Installation of the Smart radio module




Place the Smart radio module on top of the motorised drive mechanism and push it down carefully until it clicks in place. There are two cables at the back of the Smart radio module. The short cable "A" is the connecting cable to the door handle or sensor.
Now connect the cables as follows:

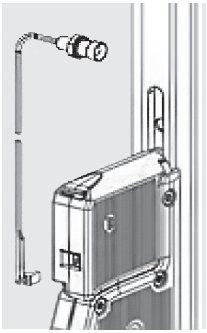
Cable A: The short cable ends in a plug. Connect it with the extension cable of the door handle or the connecting cable of the sensor. See chapter 3.4.

Cable B: The long 2-core cable ends in a plug. Insert this plug into the plug socket on the back of the motor. Through this cable, a feedback on the door status can be sent to the separately available SmartConnect and received via app.

Cable C: Connect the 3 outgoing cables to the motor plug as follows:

Terminal 4: white cable
Terminal 5: brown cable
Terminal 6: green cable

## 3.3 Installing the optional LED indicator for the outside of the door

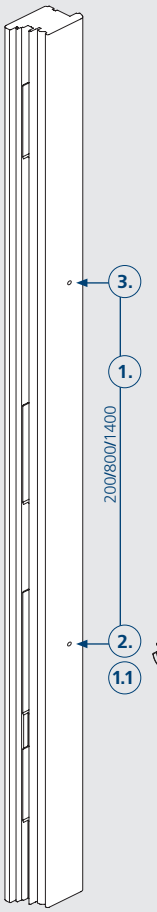


The control LED (Art.-Nr. 9187229 / Reference: VNZ80067) is used to visually indicate the locking status of the door. For installation, connect the plug at the end of the cable of the LED with the plug socket on the back of the Smart radio module. The motorised lock can then be inserted into the door leaf profile.

**Please ensure that there are no kinks in the cables and that they are not squeezed or pulled.**

## 3.4 Installation of the SmartTouch door handle

### 3.4.1 On Aluminium, wood or PVC profiles




1. Screw drill holes with 8,5 mm Ø on desired position.
We recommend choosing the drill hole positions so that the centre of the door handle is at 1,300 mm. The position of the lockcases or a sufficient thickness of the profile must be considered, see picture I and II in chapter **3.1.1**.

On timber profiles there has to be a cross drill additionally. See step **1.1** in the picture below.

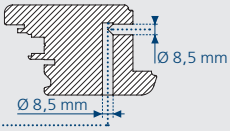
2. Pre-cut the thread with fastening screw **A,** please grease the screw beforehand (for PVC profiles with steel reinforcement please pre-cut with an M10 tap), unscrew it and screw in fixing screw **B**.

3. Screw and tighten fixing screw **A**.

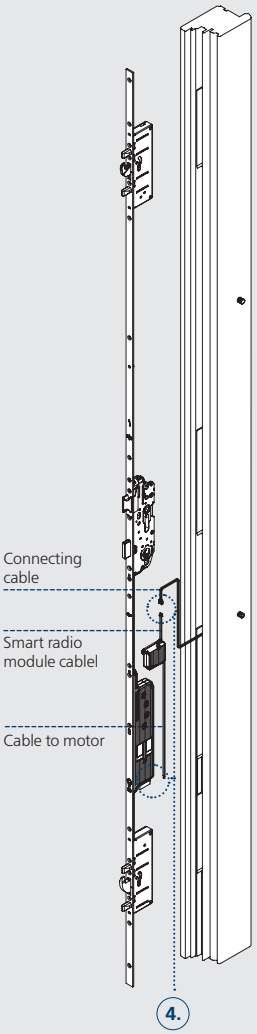
**Avoid damage of lockcases and cables at all costs!**

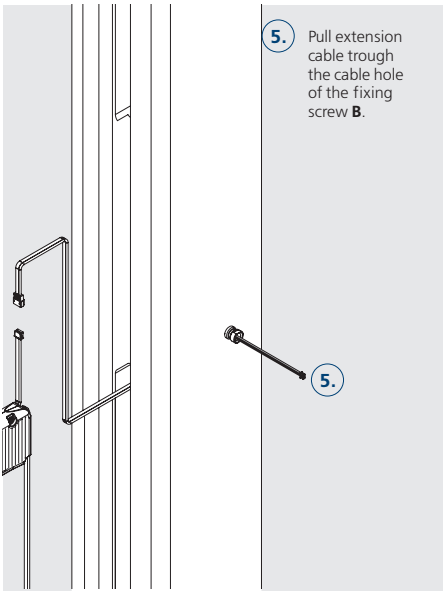
**Additional step at timber profiles:**

1.1 Make a cross drill hole for the Smart radio module on the bottom screw hole.

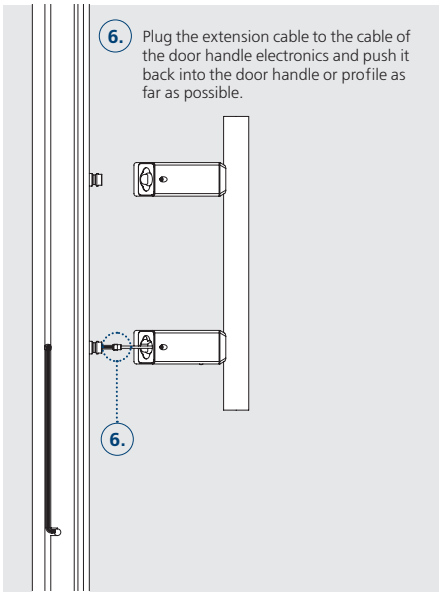



4. Plug all cables together.
For the correct connectionof the smart radio module see chapter **3.2**.

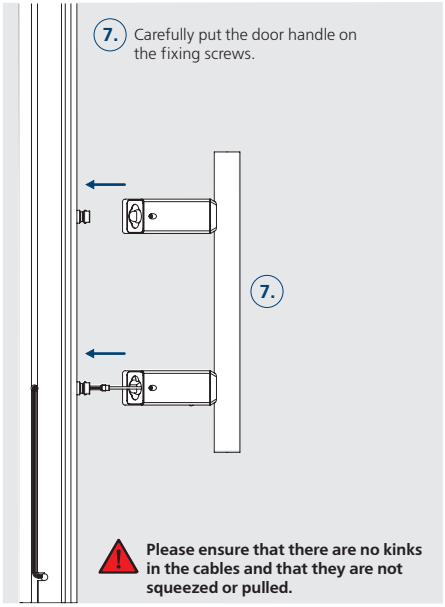





5. Pull extension cable trough the cable hole of the fixing screw **B**.

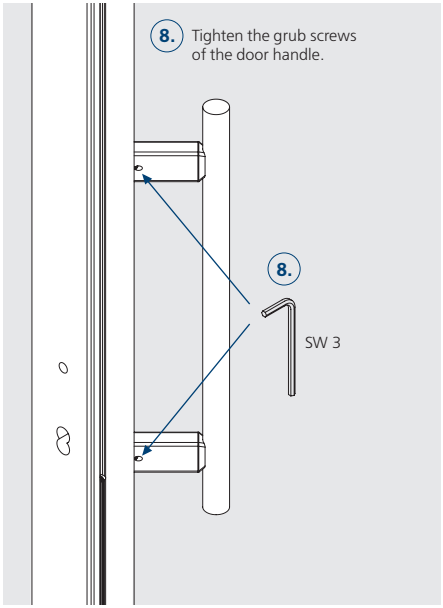



6. Plug the extension cable to the cable of the door handle electronics and push it back into the door handle or profile as far as possible.




7. Carefully put the door handle on the fixing screws.

**Please ensure that there are no kinks in the cables and that they are not squeezed or pulled.**

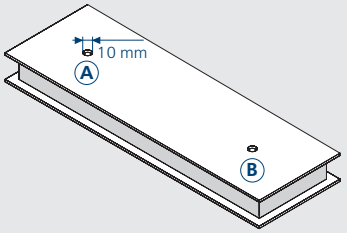



8. Tighten the grub screws of the door handle.

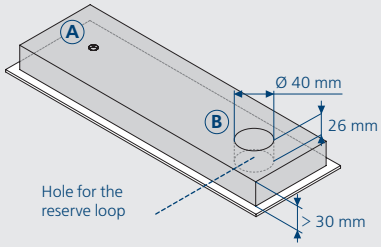
### 3.4.2 On surface covering door panels

For installation on surface covering door panels you need FUHR's mounting set Art.-Nr. 9367768 / Referenz: VN-BZB2460069.

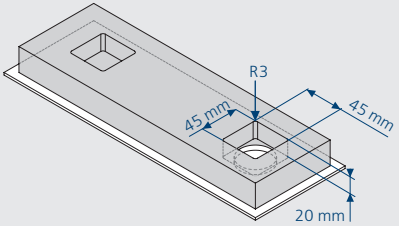
**1.** Put both panel halves on top of each other and drill both holes on the desired handle height with 10 mm Ø.



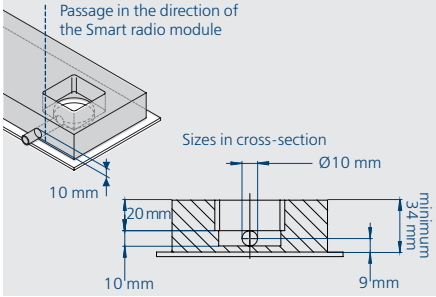

**2.** Remove the upper half of the panel and mill a 26 mm deep hole with 40 mm Ø at hole **B.** The panel needs to have a thickness of at least 30 mm.



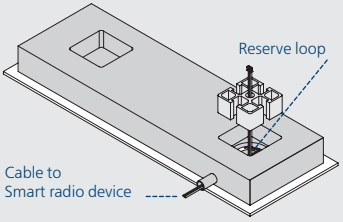

**3.** For both holes, mill a 45 x 45 mm pocket with 20 mm depth (6 mm milling cutter). Drill hole and milling have the same centre.



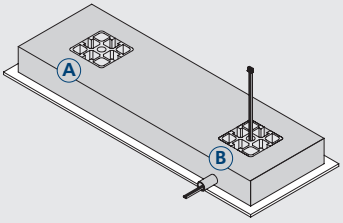

**4.** Drill in the centre of pocket **B** a lateral cable hole with 10 mm Ø into the door panel and insert the supplied protective tube.



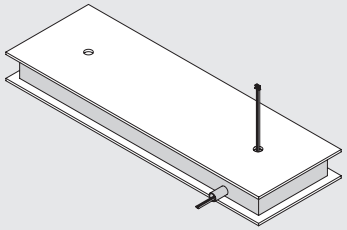

**5.** Pass the extension cable through the protective tube and put the reserve loop into the hole of 40 mm Ø. Push the end of the cable through the centre of the mounting profile.



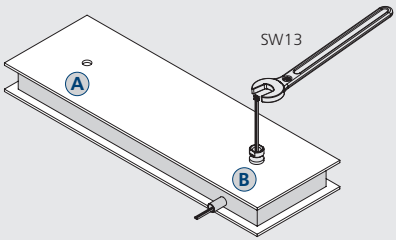

**6.** Press the mounting profile in pockets **A** and **B** into the filling foam glue.



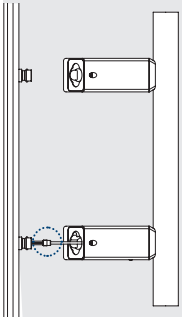
**7.** Place the loose panel half on top, insert the cable through the hole and glue both panel halves together.



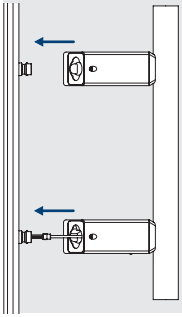
**8.** Pull the cable through the supplied fixing screw with cable hole and screw it in **(B)**. Afterwards screw in the other fixing screw in hole **A**.




**9.** Plug the extension cable to the electricity cable of the handle and push it back into the door handle or the profile as far as possible.

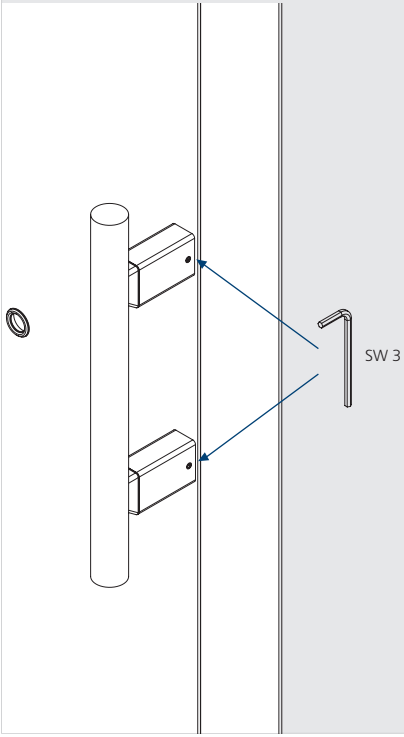


**10.** Carefully put the door handle on the fixing screws.



**Be careful not to pinch or kink the cable.**

**11.** Screw in and fix the grub screws of the handle.



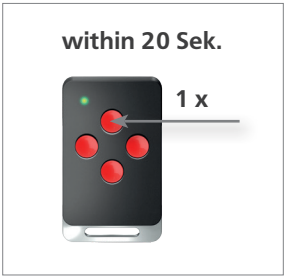
# 4 Tuning in and deleting SmartKeys

## 4.1 Tuning in the SmartKeys

**For security reasons, we recommend to clear the memory of the Smart radio module when first placing the system into operation. This prevents unauthorised persons from tuning in a Smart Key. Delete all SmartKeys as described in chapter 4.3 and start afterwards with the tuning in process.**


1. Carefully press the programming button on the Smart radio module for approx. 1 second.

   The green LED of the Smart radio module lights up for approx. 2 seconds and then starts flashing slowly.




2. Press the tuning in and opening button on your master SmartKey within 20 seconds once.

   The green LED of the Smart radio module lights up for 2 seconds and then starts flashing at one-second intervals.


3. Press the transmit button on the SmartKey to be tuned in within 20 seconds, twice.

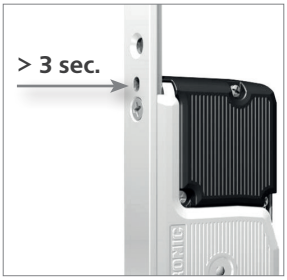
   The green LED of the Smart radio module lights up for 4 seconds and afterwards turns off automatically.

4. The tuning in process is finished and the SmartKey can be used for door opening.
   **Advice:** If there is a SmartTouch door handle installed, it beeps by touching and the door can be opened.

**Note: If you exceed the 20 seconds or use the wrong master SmartKey, the tuning in process will be cancelled.**

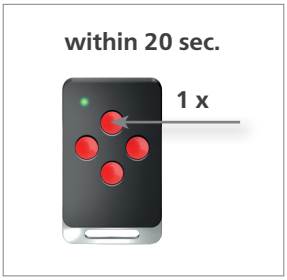
## 4.2 Delete individual SmartKeys

You can remove the opening authorisation of each SmartKey individually. To delete a single SmartKey from the memory of the Smart radio module, proceed as follows:



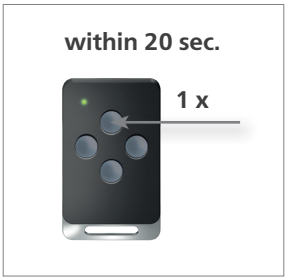

1. Carefully press the programming button on the Smart radio module for at least 3 seconds.

   As soon as the push-button is released, the green LED of the Smart radio module starts flashing rapidly.




2. Press the tuning in and opening button on your master SmartKey within 20 seconds once.

   The green LED of the Smart radio module lights up for 2 seconds and then flashes rapidly again.



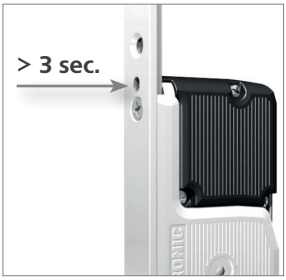

3. Press the transmit button on the user SmartKey you want to delete, within 20 seconds once.

   The green LED of the Smart radio module lights up for 4 seconds and afterwards turns off automatically.

4. The deleting process is completed. Check by pressing the transmit button on the user SmartKey if the deleting process was successful.

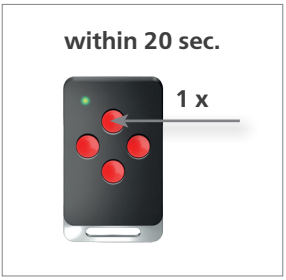
### 4.3 Deleting all SmartKeys

You can remove the opening authorisation for all SmartKeys at the same time. The master SmartKey cannot be deleted. To delete all SmartKeys from the memory of the Smart radio module, proceed as follows:



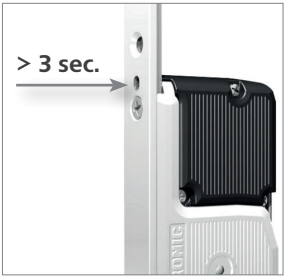

1. Carefully press the programming button on the Smart radio module for at least 3 seconds.

   As soon as the push-button is released, the green LED of the Smart radio module starts flashing rapidly.




2. Press the tuning in and opening button on your master SmartKey within 20 seconds once.

   The green LED of the Smart radio module lights up for 2 seconds and then flashes rapidly again.




3. Now carefully press the programming button on the Smart radio module for at least 3 seconds once again.

   As soon as the push-button is released, the green LED lights up for 4 seconds and afterwards turns off automatically.

4. The deleting process is completed. Check by pressing the transmit button on one user SmartKey if the deleting process was successful.

# 5 Radio range

## 5.1 Range of the KeylessGo function

The distance in which a SmartKey responds to the radio signal of the Smart radio module varies significantly with environmental conditions. If the SmartKey is significantly further away than 1 meter from the door, it usually does not respond. Electrically conductive objects e.g. can increase this distance. The requirement for a SmartKey to respond after touching the handle bar/sensor is in any case that it is in motion.

**Please note that SmartKeys can also be detected from the Smart radio module when you are inside the building under the following conditions:**
**1. The SmartKey is located inside the KeylessGo radio range (please determine this area individ ually at your own door) and**
**2. within the last 3 seconds the SmartKey was in motion.**

**Note the additional security functions in chapter 6.**

**For safety reasons, we recommend to lay the SmartKey down when you are inside the building. The motion sensor is then deactivated after 3 seconds and unauthorised opening of the door is no longer possible.**

## 5.2 Adjusting the range

The KeylessGo range between the Smart radio module and the SmartKeys depends on the door material is therefore adjustable. You can increase this range by 2 steps, for example, if the KeylessGo door opening often does not work.

To change this radio range, proceed as follows:

1. Carefully hold the programming button of the Smart radio module for longer than 10 seconds. The radio range is indicated by the number of periodic LED flashes of the smart radio module:

   1x flashing = smallest radio range
   3x flashing = range by delivery
   9x flashing = maximum radio range
   10x flashing = **KeylessGo is disabled for all SmartKeys!**

2. Each time the programming button of the Smart radio module is pressed again, the radio range increases to another level. The maximum radio range is reached by 9x flashing. As soon as the LED flashes 10 times the KeylessGo function is deactivated for all SmartKeys. By pressing again you will get back to level 1 with the smallest radio range.
3. After setting the desired radio range, press and hold the programming button on the Smart radio module again for at least 10 seconds to exit the setting mode.

## 5.3 Radio range of the remote control function

The radio range of the 4 remote control buttons strongly varies with the environmental conditions. The range is at least 10 m and cannot be changed. However, depending on the door material this range varies. Objects between the SmartKey and the Smart radio module may reduce this distance.

# 6 Security functions

## 6.1 Manually turning on/off the KeylessGo function

You can switch the KeylessGo function – in other words the option of opening the door by touching the door handle or sensor – on or off for each SmartKey separately. To enable or disable this function, simply press the transmit button on the respective SmartKey for at least 5 seconds. The Smart radio module uses acoustical and optical signals to indicate a change of mode:
Switching off = 2x long glow/beep Switching on = 2x short glow/beep

If KeylessGo is disabled, you can still open the door using the transmit button on the SmartKey!

## 6.2 Automatically switching off function of the SmartKeys

For safety reasons, all SmartKeys are fitted with a motion sensor. If a SmartKey is not moved for 3 seconds, it automatically switches off by itself. If the SmartKey is within the detection radius of the Smart radio module, the deactivation prevents unauthorized door opening via KeylessGo. Furthermore the deactivation mode saves battery power. You can activate the sensor again by moving the SmartKey and open the door, as usual, via KeylessGo function.

## 6.3 Automatic blocking times

For safety reasons, after every complete opening of the door (tappet contact and contact surface do not touch) and every closing, the possibility to open via KeylessGo is always blocked automatically for 5 seconds. After a motorised opening touching the door handle it will be disabled for 15 seconds. This prevents an unauthorised opening of the door. Please await this blocking period for using the KeylessGo function again or just use the transmit button on the SmartKeys.

# 7 Errors and failures

**If the motorised lock does not open when touching the door handle, please check first whether one of the safety functions listed in chapter 6 is active.**

## 7.1 Trouble-shooting

If the motorised lock cannot be opened when touching the door handle please work through the following points using a SmartKey step by step:

First, briefly press the opening button of the SmartKey, to open the motorised lock per radio signal.

- If the motorised lock does **not** open with the SmartKey, please check the following points:
  - Is the Smart radio module connected to the motor plug correctly?
  - Was the SmartKey tuned in to the Smart radio module (see chapter 4)?
  - Were any cables damaged when the system was installed in the door leaf?
  - Does the motorised lock have power access?
  - Is the SmartKey battery flat? (If there is still charge in the battery, the SmartKey will light up once when the transmit button is pressed briefly.)

- If the motorised lock opens by pressing the opening button of the SmartKey, check the KeylessGo function. Please consider the blocking times between the door openings.

| Situation | Solution |
|---|---|
| The LED in the bottom of the door handle does not light up by touching the handle? | Check if the door handle is connected correctly to the cable of the Smart radio module (chapter 3, cable A) and that a suitable main adapter (Chapter 3.1.3) has been connected in between. |
| The LED of the SmartKey does not flash by touching the door handle? | Please make sure that the SmartKey is in motion. Check if the battery is discharged (chapter 8.1). Make sure that KeylessGo is activated for this SmartKey (chapter 6.1). |
| Does the Smart radio module beep approx. 6 seconds after touching the door handle three times?<br>(Please note that, depending on the door material, the beeping could be very low!) | There is no authorised SmartKey found. Check if the key was tuned in (chapter 4.1). Change the position of the SmartKey to ensure the radio range. To do so e.g. take the SmartKey in your hand. Afterwards you may increase the radio range (chapter 5.2.). |
| Does the LED in the bottom of the door handle only light up by touching the handle support? | Check if a suitable main adapter has been connected in between (chapter 3.1.3). |
| Does the LED in the bottom of the door handle only light up by touching the door handle and door frame? | Check if a suitable main adapter has been connected in between (chapter 3.1.3). |

# 8 Battery

## 8.1 Charge level of the SmartKey battery

If SmartKey batteries are low, this will reduce the radio range. The SmartKey measures the amount of charge remaining in the battery by pressing its transmit button. If the battery is too low, the LED of the SmartKey flashes 3 times when its transmit button is pressed. If this happens, please replace the battery promptly. All stored data remain saved when changing the battery.

**Please change the batteries in time, if the batteries are completely empty you cannot open the door with the SmartKey anymore.**

## 8.2 Battery change

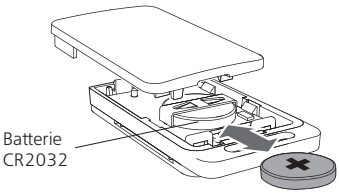
The SmartKey is operated by a battery type CR2032. Immediately it is ready for use just after changing the battery.

Please proceed as follows when changing the batteries:

1. Insert a narrow object (such as a flat-head screwdriver) into the slot at the back of the SmartKey and gently lever the cover up.
2. Replace the battery, making sure the polarity is correct (the positive pole must be visible).
3. Close the case.

**1.**

**2.**



# 9 Safety, maintenance and care instructions

- All components must be protected against moisture. They are not suitable for use in areas with high humidity or for exposure to chemical substances.
- Only genuine FUHR accessories may be used.
- No liability will be accepted in case of incorrect installation or operation.
- Casings and cables must be protected against mechanical damage.
- Damaged or defective components must be taken out of operation and replaced.
- The Smart radio module is maintenance-free.
- If the transmission range of a SmartKey deteriorates, please change its battery.

## 9.1 Disposal information

**Old devices and batteries are not allowed to be disposed with household waste!**

Dispose of the old devices via a collection point for electronic waste or via your specialist shop.
Dispose of the old batteries in a recycling container for used batteries or via your specialist shop.

Dispose of the packaging material in the collection container for cardboard, paper and plastics.

# 10 Technical specifications

## 10.1 Smart radio module

| | |
|---|---|
| Frequency: | 868,92 MHz |
| Modulation: | FSK |
| Security: | Rolling-Code \| AES - 128 bit \| master key principle |
| Anti-collision check: | Yes |
| Antenna: | On-board |
| Power supply: | 12VDC |
| Current consumption: | 0,1 bis 50 mA |
| Activity indicator: | Green light-emitting diode |
| Temperature range: | 5°C to 50°C, non-condensing |
| Dimensions: | 43 x 40 x 15 mm |
| Protection rating: | IP 20 |
| Switching impulse: | Potential-free |

## 10.2 Master SmartKey and SmartKey

| | |
|---|---|
| Frequency: | 868,92 MHz |
| Modulation: | FSK |
| Security: | Rolling-Code \| AES – 128 bit |
| Channels: | 4 |
| Power supply: | 1x 3V battery CR 2032 |
| Temperature range: | 5°C to 50°C, non-condensing |
| Dimensions: | 61,5 x 37 x 10,5 mm |

## 10.3 SmartTouch door handle

| | |
|---|---|
| Frequency: | 125 kHz |
| Power supply: | 12 V DC |
| Material: | High-quality stainless steel |
| Length: | 350 mm, 1000 mm and 1600 mm |
| Supports: | 2 supports, 1600 mm length optionally also with 4 supports |
| Designs: | Square or round door handles with straight supports for mounting on the panels;<br>round door handles with inclined supports |

SmartTouch 2.0

All image, product, dimension and design information in these instructions corresponds to the current state of development on the day of going to press. This product is subject to a continuous improvement process at FUHR and is constantly adapted to technical progress. In the interest of your satisfaction we must reserve the right to make changes to the product. Model and product claims cannot be asserted. The latest version of the instructions can be found on our website **www.fuhr.de**.

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