

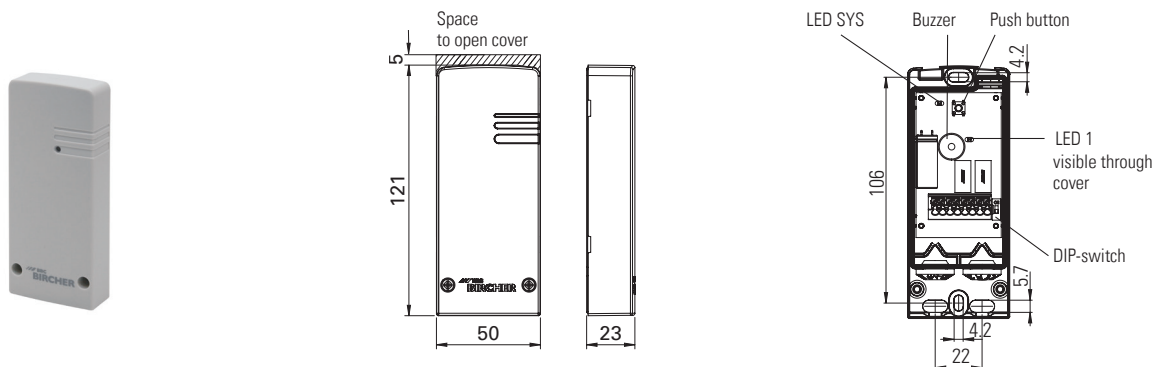
# XRF-R.1

Single channel receiver to XRF wireless transmission system

## Original operating instructions

**Intended use: Monitoring safety edges and switches on industrial doors and gates**

Receiver (Rx)



## 1 Safety instructions

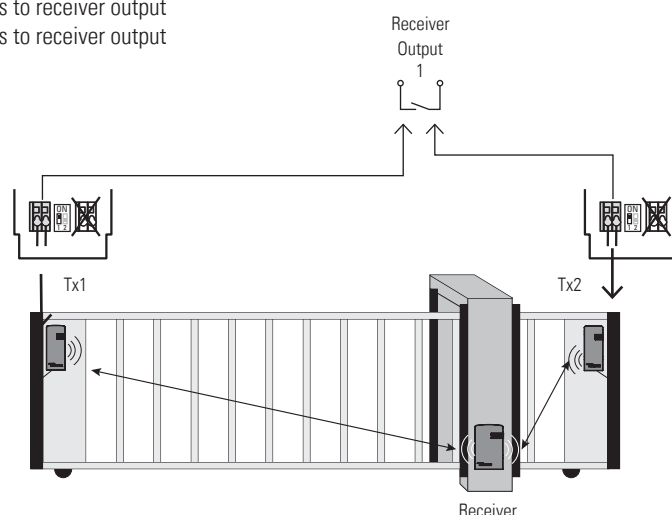
- Read these operating instructions thoroughly before putting the device into operation and keep them for future reference.
- Do not use this product other than for its specified application.
- Only trained and qualified personnel may install and initialize the device.
- Only authorized factory personnel may perform hardware/software changes or repairs to the product.
- Failure to follow these safety precautions may cause damage to sensor or objects, serious personal injury, or death.
- It is the responsibility of the equipment manufacturer to carry out a risk assessment and to install the system in compliance with applicable local, national and international regulations, safety standards, codes and laws as well as the Machinery Directive 2006/42/EC, should this apply.
- Always consider the safety functions of your applications as a whole, never just in relation to one individual section of the system.
- The installer is responsible for testing the system to ensure it meets all applicable safety standards.
- Safety devices that are classified as Category 2 according to EN ISO 13849-1 must be tested regularly – at least once per cycle.

- If the safety device is not requested operationally at least once a year, it must be checked manually by the operator at least once a year.
- During the operation of electrical components
  - e. g. in the case of a short circuit, hot and ionised gases can be emitted; protection covers must not be removed!
- The sensor should only be operated from a safety extra low voltage (SELV) system with safe electrical separation according to EN 61558. The wiring must be protected against mechanical damage.
- Check the voltage data on the label of the switching device.
- Pay attention to all local relevant electrical safety regulations.
- Ensure that the device/installations cannot be switched on.
- Ensure that the power supply is disconnected.
- Protect the device with a housing against contamination or harsh environments.
- Disconnect device from mains in the event of a fault.
- After accessing the inside of the device, ensure the cover/protection seal is closed tightly to achieve the designated protection rating.

## 2 Common application

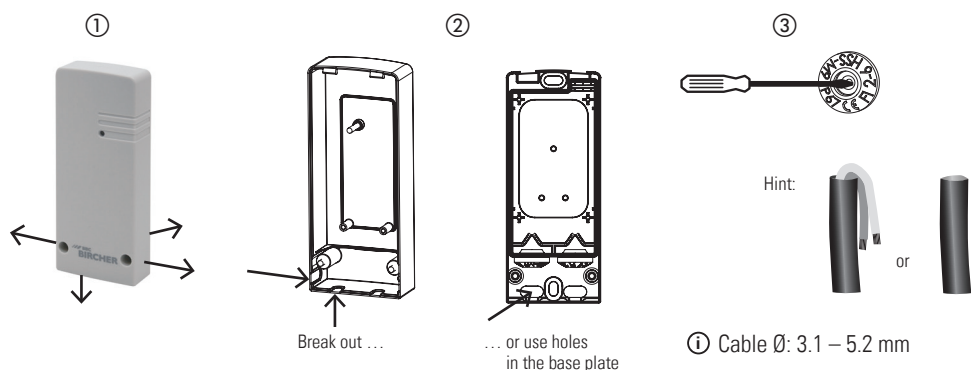
**Transmitter Tx1** (input 1) corresponds to receiver output

**Transmitter Tx2** (input 1) corresponds to receiver output

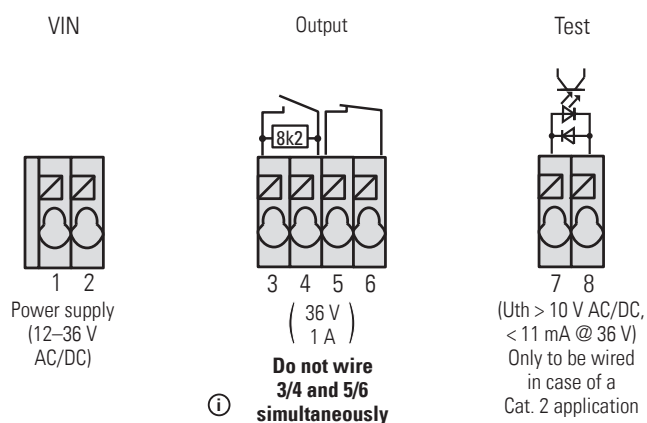


## 3.1 Cable routing, strain relief

- ① Determine the cable routing
- ② Break out the respective part of the cover if necessary
- ③ Punch hole into the grommet



# 4 Wiring



## DIP switch test input

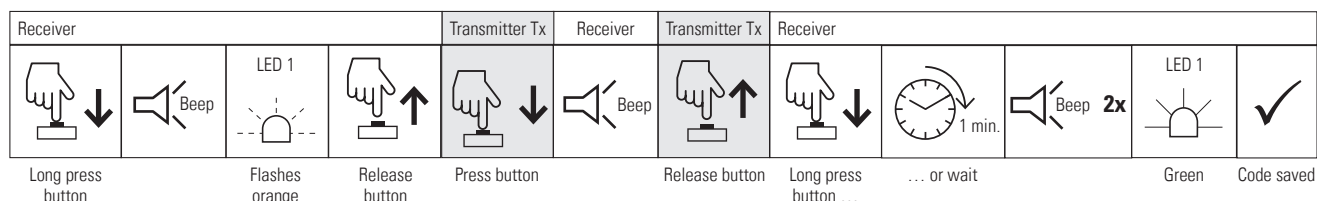
ON 1	Low-active
ON 1	* High-active

\* = factory setting

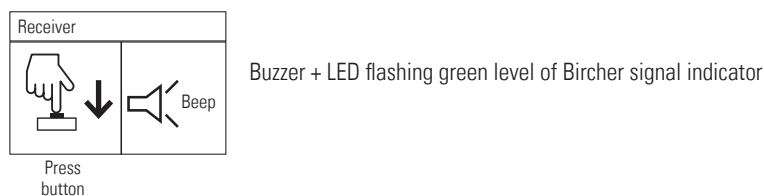
**Note:** When using the NC outputs (5/6) in Cat. 3 set-up, the wiring with the control must be permanently installed and protected against external damage according to EN ISO 13849-2 Tab.D.4 or else Cat. 2 applies and a test signal is needed.

## 5 Configuration

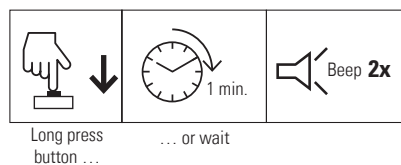
### 5.1 Pairing transmitter with receiver only IN1 of the transmitter(s) will be evaluated (see also manual of transmitter)



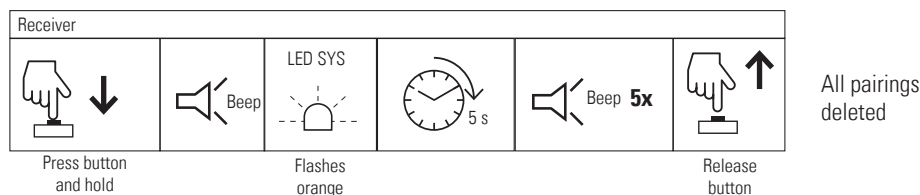
#### 5.1.a Bircher signal indicator (BSI) Details see supplementary sheet



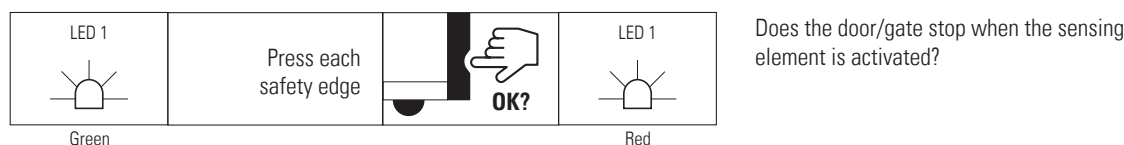
### 5.2 Leave configuration mode (always possible)



### 5.3 Clear pairings



## 6 System test, mandatory after each set-up!



## 7 Receiver

### 7.1 Status output, LED

	LED SYS	LED 1	Output 1 3–4	Output 1 5–6	Buzzer
No power supply	—	—	closed	open	—
Power up	red	red	closed	open	ends with 4x beep
No sensor paired	green	red	closed	open	—
System ready, no sensor pressed	green	green	8k2	closed	—
Sensor pressed (main closing edge)	orange	red	closed	open	—
Wicket door open (XRF-TW)	orange	red	closed	open	—
Configuration (Pairing)	orange flashing	orange flashing	closed	open	upon action
Configuration, memory full	orange flashing	orange flashing	closed	open	10x
Low battery	green flashing	green	8k2	closed	3x every min.
Test input active	green	red	closed	open	—
Error a) Tx lost	flashes 1x red	red	closed	open	—
b) Broken cable between edge and input, resistor out of range	flashes 2x red	red	closed	open	—
c) Empty battery	flashes 3x red	red	closed	open	—
d) System error	flashes red for 30 s	red	closed	open	—

## 8 Troubleshooting

### 8.1 Warning indicator for low battery voltage








To find out which transmitter has low battery voltage: Press each edge.



### 8.2 Error indication

LED SYS lights up red (only visible with open cover)

To find out which transmitter causes error indication:	LED SYS 	 OK?	Beep 	LED SYS 	LED SYS 
	Red			Flashes orange Transmitter good	Stays red Transmitter with error

## 9 Technical data

Receiver	
Supply voltage	12–36 V DC 12–36 V AC, 48–62 Hz
Power consumption	max. 0.6 W
Safety outputs (2 relays)	max. 36 V AC/DC; 1 A (NC with 1 A fuse)
Test input	max. 36 V DC; 36 V AC, 48–62 Hz max. 11 mA U <sub>th</sub> > 10 V AC/DC
Number of supported sensors	max. 14

System	
Operating frequency	868.3 MHz
Reaction time	Typ. 15 ms
Range	100 m (at optimal condition)
According to EN ISO 13849-1	PLd for Cat. 3 applications + test input for Cat. 2 applications
Protection class IEC 60529	IP65
Operation temperature	–20 °C to +60 °C

## 10 EU Declaration of Conformity



See attachment

## 11 WEEE



Devices with this symbol must be treated separately during disposal. This must be done in accordance with the laws of the respective countries for environmentally sound disposal, processing and recycling of electrical and electronic equipment.

## 12 Contact

**BBC Bircher Smart Access**, BBC Bircher AG, Wiesengasse 20, CH-8222 Beringen, [www.bircher.com](http://www.bircher.com)

Designed in Switzerland / Made in China