ExpertSystem XRF

Wireless signal transmission system for applications with high performance and design requirements

Quick, stable, safe

- Quick setup time – simply press the pressure-sensitive edge twice
- High interference immunity and long battery life of up to 7 years
- Safety level cat. 2, PLc or cat. 3, PLd available

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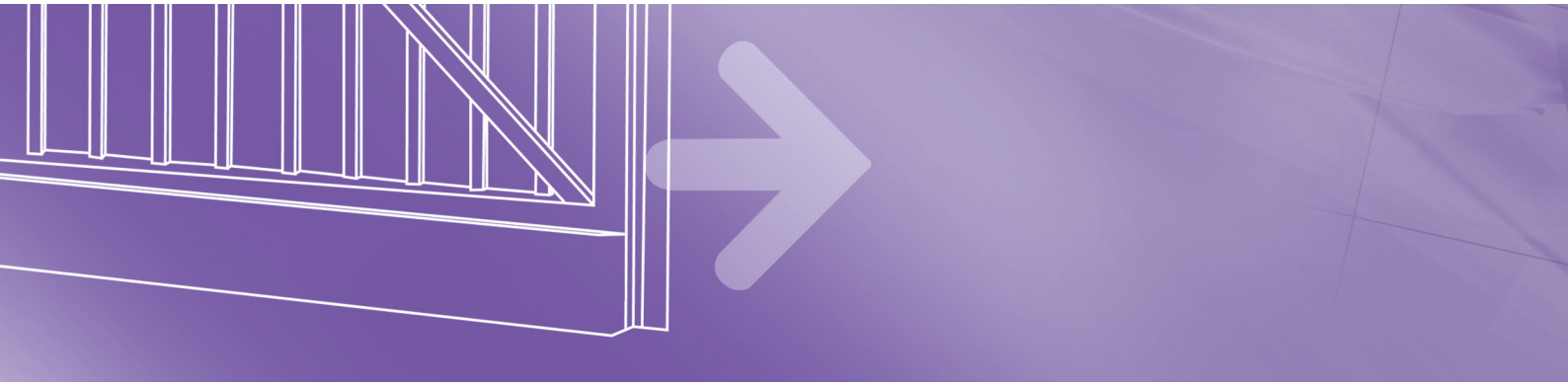
Next level of safety

Ever faster gates paired with a high need for security are placing exacting requirements on the safety equipment for gates and also on the signal transmission of tactile sensors. To achieve the highest possible level of safety automatically and at all times, BBC Bircher Smart Access combines safety category 2 (with test signal from controller) and safety category 3 (no test signal) in one device.

If your controller features integrated testing, the test signal is applied by ExpertSystem and the system is monitored in accordance with safety category 2, PLc. If the controller does not have a test signal or if the test input is not connected, XRF monitors the safety system itself in accordance with safety category 3, PLd, providing the highest possible safety in every situation.



Benefits

Quick

The wireless signal transmission system can be set up in a matter of seconds by pressing the pressure-sensitive edge twice. ExpertSystem XRF also enables signals to be transmitted quickly between transmitter and receiver.

Stable

All devices comply with protection class IP65 (except XRF-RD = IP20). Furthermore, individual components are installed in the pressure-sensitive edge or in the switch cabinet in order to provide protection from the weather. With a battery life of up to 7 years and high interference immunity (EMC), reliable wireless signal transmission is ensured at all times.

Safe

As a hybrid system, ExpertSystem XRF allows you to choose between safety level cat. 2, PLc and cat. 3, PLd. Compatibility with all standard controllers is guaranteed, and seamless integration into ExpertSystem XL results in an attractive appearance for the overall system.

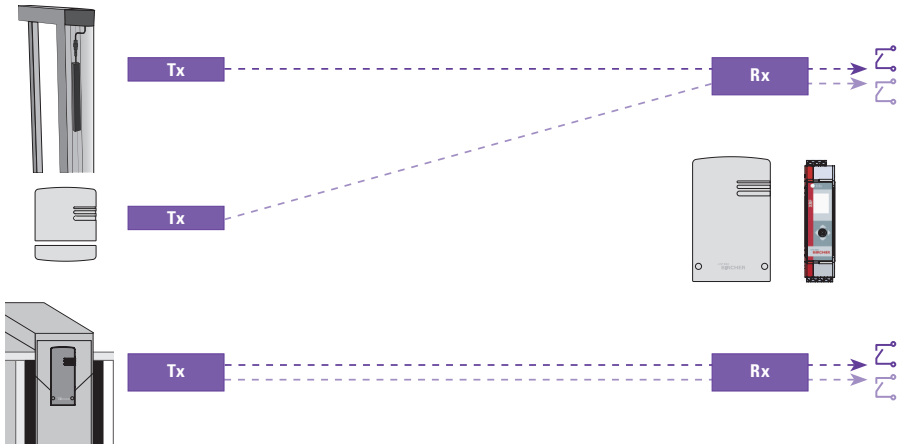
System overview

ExpertSystem XRF – one-channel

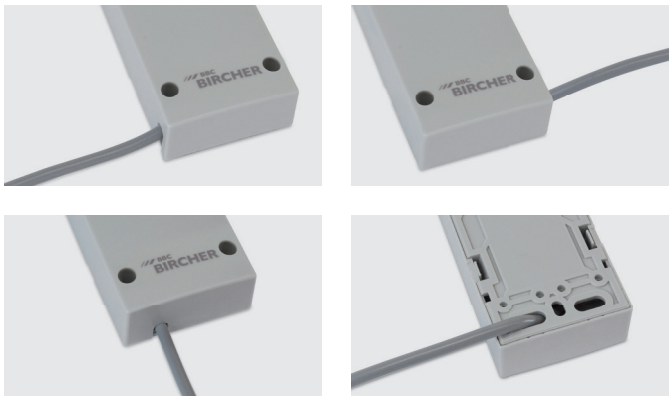
One-channel system: Receiver (Rx) with one output

ExpertSystem XRF – two-channel

Two-channel system: Receiver (Rx) with two outputs



Cabling

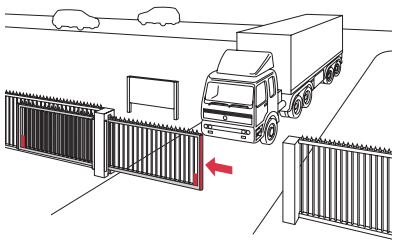


Applications

Situation
Sliding gate at site entrance, telescopic gate

Solution
XRF-RD, 2 x XRF-TI (Set XRF-D.II.2)

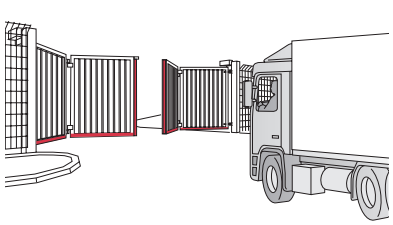
Benefits
- Wireless signal transmission for all pressure-sensitive edges
- Optional safety level: hybrid between cat. 2, PLc or cat. 3, PLd with a range of up to 100 m
- Up to 14 pressure-sensitive edges monitored by one receiver
- Stationary pressure-sensitive edges wired directly with receiver
- Battery life up to 7 years



Situation
Swing gate at site entrance, fast folding door

Solution
XRF-R.2, 2 x XRF-TI (Set XRF-II.2)

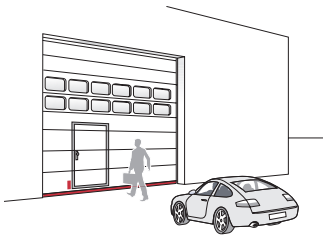
Benefits
- Wear-free signal transmission for all pressure-sensitive edges
- Quick and simple pairing by pressing the pressure-sensitive edges twice
- Slim XRF-TI transmitters, harmonious appearance as they are integrated and concealed in the safety edge
- Distinction between OPEN and CLOSED direction thanks to two transmitters and two-channel receiver



Situation
Sectional or folding door

Solution
XRF-R.2, XRF-T.2, XRF-TW (Set XRF-TW.2)

Benefits
- Wear-free signal transmission for all pressure-sensitive edges
- Receiver with two channels for parallel monitoring of pressure-sensitive edge and wicket door
- Quick reaction time for entire sensor system with a battery life of up to 1.2 years



Technical data

Device dimensions (W × L × D)	
XRF-T.2 (transmitter)	50 × 121 × 23 mm
XRF-TI (transmitter)	18 × 194 × 18 mm
XRF-R.1 (receiver)	50 × 121 × 23 mm
XRF-R.2 (receiver)	75 × 121 × 24 mm
XRF-RD (receiver)	22.5 × 94 × 91 mm
XRF-TW (transmitter)	66 × 58 × 16 mm
XRF-TW (magnet)	66 × 17 × 16 mm

Electrical data	
Frequency	868 MHz
Transmitter	XRF-T.2, XRF-TW
Operating voltage	Lithium battery 3 V (CR2450N)
Battery life	Typ. 1.2 years
Transmitter	XRF-TI
Operating voltage	Inorganic lithium battery 3.6 V
Battery life	Typ. 7 years
Receiver	XRF-R.1, XRF-R.2, XRF-RD
Operating voltage	12–36 V AC / 48–62 Hz 12–36 V DC
Power consumption	Max. 1 W
Outputs (redundant) as option	Relay 24 V ACDC, 1 A with 8.2 kOhm parallel resistor

General data	
Range	100 m under optimum conditions
Protection class	IP65 (except XRF-RD = IP20)
Approvals	EN ISO 13849-1 (PLd, cat. 3) EN 300 220, EN 301 489

The ExpertSystem XRF signal transmission systems have been type-tested in combination with Bircher pressure-sensitive edges.

Note

Technical details and recommendations concerning our products are based on experience and are an aid for the orientation of the user. Details stated in our brochures and data sheets do not guarantee special properties of the products. This does not apply to special product properties confirmed by us in writing or individually. Subject to technical alterations.

Ordering information

Article no.	Components ExpertSystem XRF	
407666 407680	**XRF-T.2** Transmitter **XRF-T.2 bk** Transmitter, anthracite	
407683	**XRF-TI** Transmitter, built-in version	
407688 430311	**XRF-R.1** Receiver, one-channel **XRF-R.1 bk** Receiver, one-channel, anthracite	
407692	**XRF-R.2** Receiver, two-channel	
407684 410957	**XRF-RD** Receiver, two-channel, DIN housing **XRF-RD.A** Receiver, two-channel, DIN-housing, with antenna connector	
407690	**XRF-TW** Transmitter with integrated wicket door switch	
423984	**Antenna** Set (antenna, cable 2 m, ball joint, screws)	
420078	**Spare battery 3.6 V** for integrated transmitter XRF-TI	
401930	**Replacement battery Lithium 3 V CR2450N (Renata)** for XRF-T.2 and XRF-TW transmitters	
411871	**XL-CCTI1 connection cable,** one connecting plug (f), one open cable end, length 1 m	
421222	**ENEH-K05XRF connection cable XRF-TI** to ClickLine/CoverLine/StandardLine	

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Article no.	Sets ExpertSystem XRF
410975 433315	**Set XRF-1** **Set XRF-1 bk bk** (Receiver / Transmitter anthracite) 1 Receiver XRF-R.1, 1 Transmitter XRF-T.2
410976 423558	**Set XRF-2** **Set XRF-2 bk** (Transmitters anthracite) 1 Receiver XRF-R.2, 2 Transmitters XRF-T.2
423567 423570	**Set XRF-2.1** **Set XRF-2.1 bk** (Transmitter anthracite) 1 Receiver XRF-R.2, 1 Transmitter XRF-T.2
410978 433316	**Set XRF-I** **Set XRF-I bk** (Receiver anthracite) 1 Receiver XRF-R.1, 1 Transmitter, built-in version XRF-TI
422991	**Set XRF-II.2** 1 Receiver XRF-R.2, 2 Transmitters, built-in version XRF-TI
424043	**Set XRF-TW.1** 1 Receiver XRF-R.1, 1 Transm. with integr. wicket door switch XRF-TW
410979	**Set XRF-TW.2** 1 Receiver XRF-R.2, 1 Transmitter XRF-T.2, 1 Transmitter with integrated wicket door switch XRF-TW
423579	**Set XRF-IW.2** 1 Receiver XRF-R.2, 1 Transmitter, built-in version XRF-TI, 1 Transmitter with integrated wicket door switch XRF-TW
410977 423895	**Set XRF-D.2** **Set XRF-D.2 bk** (Transmitters anthracite) 1 Receiver XRF-RD, 2 Transmitters XRF-T.2
433318 433317	**Set XRF-D.2.A** **Set XRF-D.2.A bk** (Transmitters anthracite) 1 Receiver XRF-RD.A, 2 Transmitters XRF-T.2, 1 Antenna
423897	**Set XRF-D.II.2** 1 Receiver XRF-RD, 2 Transmitters, built-in version XRF-TI
433319	**Set XRF-D.II.2.A** 1 Receiver XRF-RD.A, 2 Transmitters, built-in version XRF-TI, 1 Antenna