

# FS-100

Transmission system for wireless machine operation



## Product Description

The FS-100 electronic transmission system serves as a wireless alternative to conventional wired remote controllers within a wide range of machine applications. Application examples are amongst other things conveying and lifting equipment in industry or forestry. The radio range of the system is (depending on the visual contact or building development) between 8 and 200 meters.

The system consists of two components:

### Transmitter Module FT-100

The battery powered controller with three (optionally four) transmission channels is located in a fracture and impact resistant industrial housing. Each channel corresponds to a switching application via pushbutton or switch. The battery life is about 4 years. The internal 12 volt battery (Type MN21 23A) can be replaced by loosening the 4 upper Philips screws. Versions with option "L" are also equipped with status LEDs, beeper and battery monitoring.

Functioning: The FT-100 transmitter module sends serial data to the FR-100 receiver and then evaluates the feedback from the receiver.



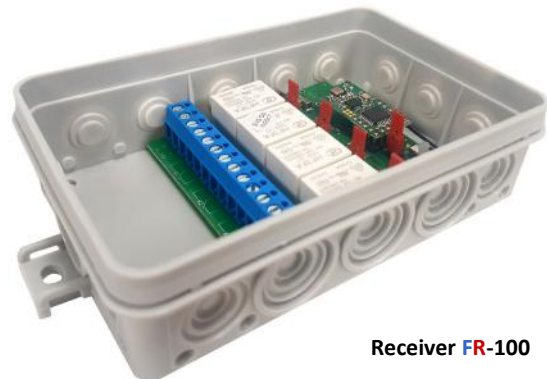
Transmitter FT-100

### Receiver Module FR-100

The FR-100 receiver component has a 12 ... 24 VDC voltage supply input and is equipped with four potential-free changeover relay outputs for switching the respective key (pushbutton or switch).

Functioning: The receiver FR-100 evaluates the radio signals of the FT-100 transmitter module and switches one or more of the four potential-free changeover relays ON and/or OFF.

The switching mode "Key" or "Toggle" can be set individually for each individual relay contact.



Receiver FR-100

### Product Features FT-100

- Sturdy housing with 3 (optionally 4) switches or push-buttons
- Standardly with switching functions UP / DOWN / EMERGENCY STOP
- Bidirectional design for safe operation in industrial applications
- Integrated antenna
- High degree of protection against dust, dirt and water (IP67)
- Mechanical interlock for switches and buttons (option „T“)
- Battery monitoring (option „L“)

### Product Features FR-100

- Easy learning of the transmitter module
- 4 potential free changeover relays
- Switching function key / toggle per relay individually configurable
- Integrated antenna
- DC supply via internal screw terminals
- Dust and splash proof IP54 housing with mounting lug
- Snap-on housing for top hat rail (option „H“)

Beck Kommunikationselektronik

Bodenseeallee 18 | DE 78333 Stockach | Tel.: +49 7771 8068668  
E-Mail: mail@beck-electronics.com | Web: www.beck-electronics.com

## Technical Specifications

### Transmitter Module **FT-100**

Power supply:	12 V battery, type MN21 23A (recommended: Duracell 12 V MN21 Alkaline)
Current consumption:	Normal operation: approx. 6 mA (on average) At standby: 0.1 $\mu$ A
Battery service life:	Up to 4 years (depending on type of loading / application)
Operation frequency:	f1 433.62 MHz; f2 434.22 MHz
Channels for switching functions:	3, optionally 4
Antenna:	50 $\Omega$ (integrated)
Optional indicators:	Battery LED, status LEDs and Beeper (Option „L“)
Temperature range :	-20° C ... + 65° C
Housing:	Plastic, break and impact resistant
Housing dimensions:	L x W x H = 140 x 62 x 46 mm / 5.51 x 2.44 x 1.81" (without keys) L x W x H = 140 x 62 x 70 mm / 5.51 x 2.44 x 2.76" (with keys)
Protection class:	IP67
Conformity	According to the 2014/53/EU (RED) standard Health and safety: EN 60 950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013 Electromagnetic compatibility: EN 301 489-1 : V1.9.2 / EN 301 489-3 : V1.6.1 Use of the radio frequency spectrum: EN 300 220-2 : V2.4.1 Assessment of hazardous substances: EN 50581:2012

### Receiver Module **FR-100**

Power supply:	12.0 ... 24.0 VDC (maximum 26 V)
Current consumption:	At standby: 25 mA All relays energized : ca. 200mA
Operation frequency:	f1 433.62 MHz; f2 434.22 MHz
Antenna:	50 $\Omega$ (integrated)
Relay outputs:	4 potential free changeovers
Relay switching power:	230 VAC / 10 A; 30 VDC / 5 A
Temperature range:	-20° C ...+ 65° C
Connections:	Internal screw terminals
Housing:	Standard: surface-mounted housing, plastic Option „H“: snap-on housing for top hat rail
Housing dimensions:	L x W x H = 130 mm x 85 mm x 37 mm / 5.43 x 3.35 x 1.46"
Protection class:	IP54
Conformity	According to the 2014/53/EU (RED) standard Health and safety: EN 60 950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013 Electromagnetic compatibility: EN 301 489-1 : V1.9.2 / EN 301 489-3 : V1.6.1 Use of the radio frequency spectrum: EN 300 220-2 : V2.4.1 Assessment of hazardous substances: EN 50581:2012