

Wireless

Wireless Switchgear



// CABLE FREE SWITCH CONTROL

Catalogue





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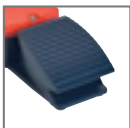
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# // SAFE SWITCHGEAR FOR DEMANDING AND CRITICAL APPLICATIONS

## Wireless



## Automation



## Extreme



## Meditec



»Safe switchgear for demanding and critical applications«. True to this motto, steute has been providing its customers with innovative, practical and durable switchgear solutions – for over 50 years.

When our customers are successful, so are we. Because we always focus on our customers, our company has grown steadily and sustainably over the last decades. Steute is committed to continuing this growth – in close cooperation with our customers.

We are situated in East Westphalia, a key region for machine building and electrical goods manufacturing. It is home to qualified specialists committed to developing and manufacturing innovative products. It is also the location of renowned universities, research and educational institutions to which we maintain healthy contacts.

Markets are no longer restricted by national borders. This is why our products are developed and tested for extreme conditions all over the world. We take care to ensure that our products are always certified according to the latest international standards. In every industrial or emerging nation in the world, steute has access to qualified specialists who can guarantee competent support and a quick service.

As a medium-sized company we are able to react with speed to customer wishes and market trends. We are continually developing innovative products and using new technologies as we consistently open up new fields of application for our switchgear.

steute is currently active in four different business fields, producing switchgear, sensors and control units for use in industry and in medical equipment:

### Wireless

Cable free switchgear and sensors for use in machinery and process plants. These industrial-strength wireless switches communicate with higher level control systems via reliable wireless transmission. »Energy harvesting« can play a major role in these products.

### Automation

Standard and customised switchgear for machinery and process plants. Tried and tested electromechanical and non-contact technologies for classical applications in industrial automation and process control – always with a view to the latest global requirements.

### Extreme

Switchgear and sensors for use in extreme environments or under extreme conditions. Certified products for use in hazardous areas worldwide (e. g. ATEX, IECEx, GOST).

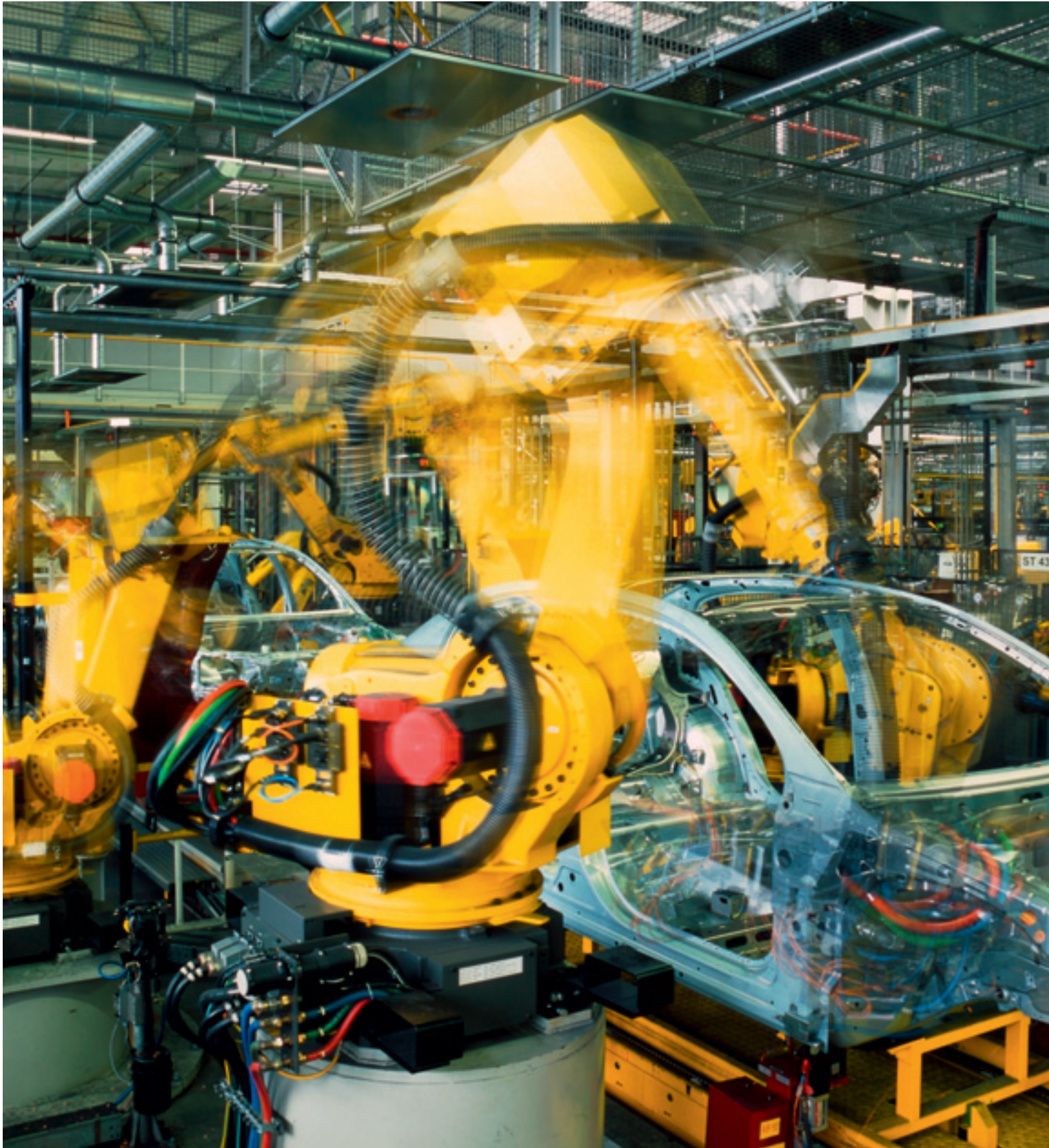
### Meditec

A comprehensive range of standard and customised foot and hand controls for medical devices, meeting the highest ergonomic and availability requirements. Produced in accordance with the certified EN ISO 13485 quality management system for medical products.

The following information provides an overview of our standard range of switchgear for complex and demanding applications. We will be happy to provide you with any additional information you require. If you cannot find the solution for your application: just get in touch. We have already helped numerous customers by developing »tailor-made« switchgear for their individual needs.

**Marc Stanesby**  
Managing Director  
steute Schaltgeräte GmbH & Co. KG

// STEUTE WIRELESS – RELIABLE, MANAGEABLE AND PRACTICE  
ORIENTATED WIRELESS TECHNOLOGY – WORLDWIDE APPLICABLE







#### **A new business field is introduced**

By restructuring its business fields, steute is taking into account the increasingly important share of its product range held by "wireless automation" – and the fact that the enterprise is now in a position to provide a large selection of different wireless technologies for industrial automation and the building services industry. The products included in this new "Wireless" business field are all presented in this brochure.

#### **Industry makes high demands on wireless devices**

Compared to consumer applications, industry and building automation make higher demands on wireless technologies. Wireless interference from other wireless systems affects the wireless links, as do emissions, e.g. from machine enclosures. steute began to tackle this problem early on – first in its business field Medical Technology, where particularly high demands are made on transmission safety. Soon afterwards wireless switchgear began to be developed for industrial automation.

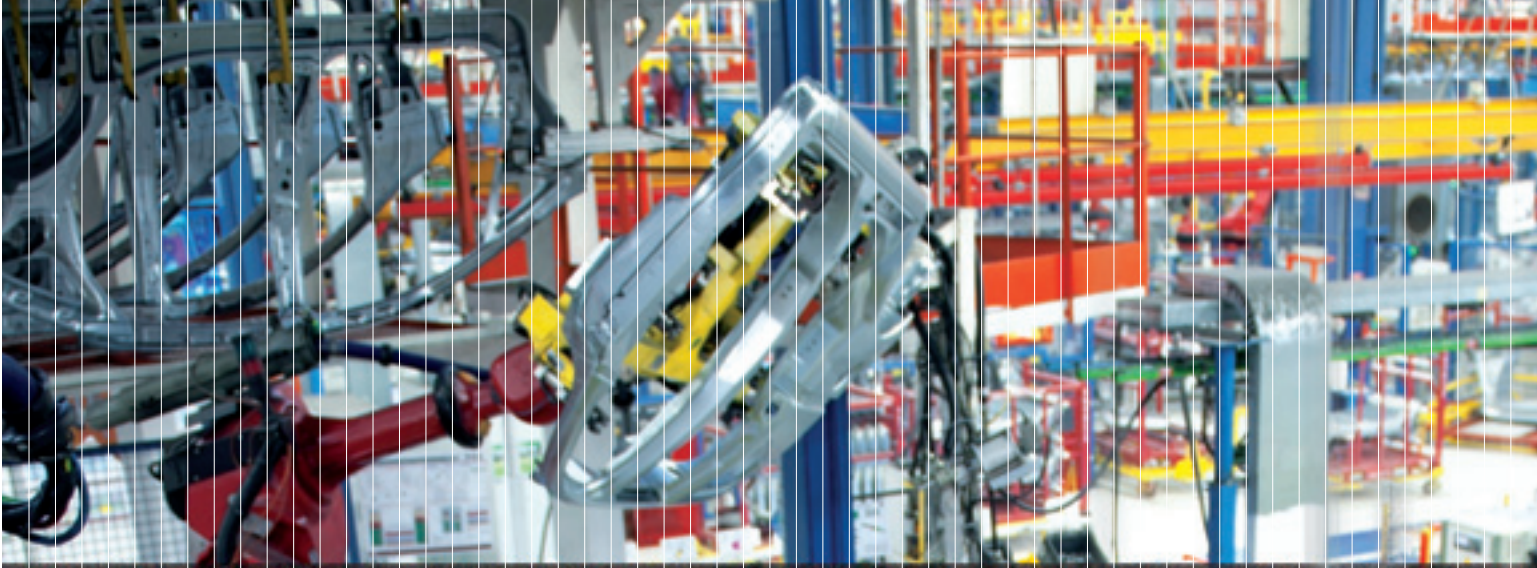
#### **A comprehensive range with different wireless standards**

The rapidly growing demand has led to continual expansion of our range. At the beginning, we used available wireless standards. However, they limited the application of wireless technology in several fields. That is why, in a first step, the steute developers adapted these standards to suit the requirements of its customers. In a second step, steute then developed its own wireless standards, which were fully adapted to the industrial environments and feature profiles of wireless communication in the machinery and process plant industry.

#### **A modular system for wireless switchgear**

The result: today the business field "Wireless" is able to provide the machinery and process plant industry with numerous different designs of wireless switchgear – e.g. position switches, foot switches, pull-wire switches and different types of operating device. Each device can be combined with different wireless technologies. Furthermore, this technology offers a solid platform which meets customer-specific requirements of wireless systems with relatively little effort.

This is why the business field Wireless will continue to expand its range, as well as to open up new applications for wireless switchgear in collaboration with its customers.

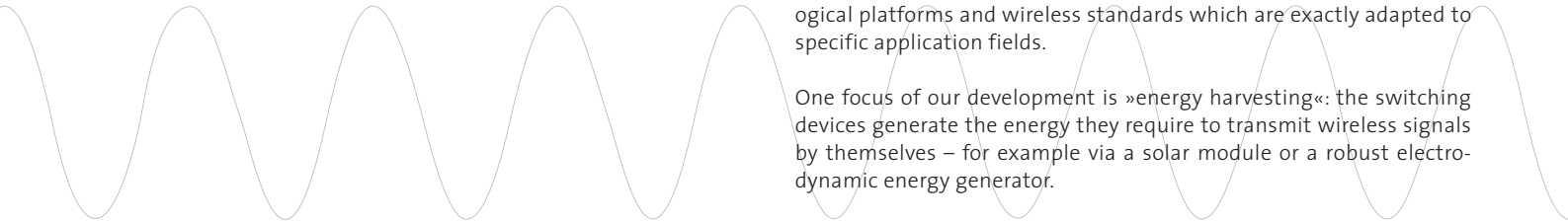


steute Wireless





## steute Wireless



### SW 2.4

### SW 868/915-e

### SW 868/915-b

### EnOcean 868

#### steute Wireless

Wireless communication opens up new possibilities, e.g. in the design of man-machine interfaces. We recognised this early on and are now already able to look back upon nearly ten years of experience in the development of wireless switchgear. We have developed technological platforms and wireless standards which are exactly adapted to specific application fields.

One focus of our development is »energy harvesting«: the switching devices generate the energy they require to transmit wireless signals by themselves – for example via a solar module or a robust electrodynamic energy generator.

Four different wireless technology platforms are available for complex industrial applications:

#### SW 2.4

##### steute Wireless 2.4 GHz (SW2.4)

steute Wireless 2.4 GHz (SW 2.4) is a wireless technology developed especially for industrial applications. Modulation is achieved using the FhSS procedure, which guarantees high anti-interference and good coexistence with other 2.4 GHz systems. This technology was developed especially for communication between one or two foot controls (slave) with one receiver (master).

#### SW 868 / 915-e

##### steute Wireless 868 / 915 MHz self-sufficient

steute Wireless 868/915 MHz (SW868/915) is a wireless technology especially for self-sufficient wireless systems. It enables data to be transmitted extremely robustly and reliably in an industrial environment. Switching devices are equipped with an electrodynamic energy generator which converts the mechanical energy expended on actuation into electrical energy. Then an individual wireless signal protected with a unique ID code is transmitted to one or more receivers. The energy produced by the generator is sufficient to send a wireless protocol, to process confirmation of receipt from the receiver and to re-send the protocol should receipt not be confirmed.

#### SW 868 / 915-b

##### steute Wireless 868 / 915 MHz battery operation

steute Wireless 868/915 MHz battery operation is a bi-directional wireless technology which remains operational using conventional batteries for years, thanks to its extremely low power consumption. This battery-driven wireless technology delivers robust performance even in wireless environments prone to interference. The ranges are up to 60 m indoors and 700 m outdoors.

#### EnOcean 868

##### EnOcean 868 MHz

This non-battery wireless standard for use in industrial and building automation in acc. with ISO/IEC 14543-3-10 is characterised by a low energy consumption and a long range. An additional advantage is its interoperability with switches and sensors from other manufacturers. Different types of self-sufficient energy generation are available, including an electrodynamic energy generator and a solar module.

# // STEUTE WIRELESS TECHNOLOGIES




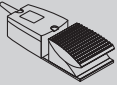







## steute Wireless technologies in comparison

	SW 868-e	SW 868-b	SW 915-e	SW 915-b	SW 2.4-b	EN 868-e	EN 868-b
	Energy generator	Long life battery	Energy generator	Long life battery	Long life battery	Energy generator	Long life battery
Frequency	868.3 MHz	868.3 MHz	915 MHz	915 MHz	2.4 GHz	868.3 MHz	868.3 MHz
Self-sufficient	yes	no	yes	no	no	yes	no
Transmission channels	1	1	1	1	32	1	1
Redundancy	single-channel	single-channel	single-channel	single-channel	multi-channel	single-channel	single-channel
Mode of operation	confirmation	bi-directional	confirmation	bi-directional	bi-directional	uni-directional	uni-directional
Data rate	66 kBit/s	66 kBit/s	66 kBit/s	66 kBit/s	250 kBit/s	125 Kbit/s	125 Kbit/s
Telegram length	4 Byte	7 Byte	4 Byte	7 Byte	16 Byte	14 Byte	14 Byte
Modulation	FSK	FSK	FSK	FSK	FSK	ASK	ASK
Transmission method	1 x redundant	1 x redundant	1 x redundant	1 x redundant	4 x redundant	3 x redundant	3 x redundant
Range outdoors	max. 700 m	max. 700 m	max. 700 m	max. 700 m	30 m	max. 300 m	max. 300 m
Range indoors	60 m	60 m	60 m	60 m	30 m	30 m	30 m
Power consumption in active mode	low / irrelevant	low	low / irrelevant	low	low	low / irrelevant	low
Wake-up time	6 ms	4 ms	6 ms	4 ms	< 200 ms	30 ms	40 ms
Interference liability	very low	very low	very low	very low	low	very low	very low
Transmission path availability	medium	medium	medium	medium	high	medium	medium
No. of transmitters per receiver	max. 40	max. 40	max. 40	max. 40	2	max. 40	max. 40

### Approvals

FCC / IC	●	●	●	●	●	-	-
Gost	-	-	-	-	●	●	●
Anatel	-	-	-	-	-	●	●
CSA	●	●	●	●	●	-	-

## Selection chart wireless switchgear

		SW 868-e	SW 868-b	SW 915-e	SW 915-b	SW 2.4-b	EN 868-e	EN 868-b
		Energy generator	Long life battery	Energy generator	Long life battery	Long life battery	Energy generator	Long life battery
RF 95		●	-	●	-	-	●	-
RF 96		-	●	-	●	-	-	●
RF 98		●	-	●	-	-	●	-
RF GF(S)I		●	-	●	-	●	●	-
RF RC 10		-	●	-	●	-	-	●
RF GS M25		-	●	-	●	-	-	●
RF GS M30		-	●	-	●	-	-	●
RF TG(M)		-	●	-	●	●	-	●
RF BF 72		●	●	●	●	-	●	●
RF BF 74		●	●	●	●	-	●	●
RF IS		-	●	-	●	-	●	●

# // STEUTE WIRELESS / THE WIRELESS TECHNOLOGIES IN DETAIL AND THEIR APPLICATIONS

## The user has got the choice

Users interested in wireless switchgear can choose between four different wireless standards. steute thus covers a wide range of applications in pursuit of its goal to provide the appropriate wireless technology for each different requirement and use – without compromise.

Thanks to a modular design, there are different series of electromechanical switchgear, non-contact sensors and control units for the man-machine interface for all four wireless standards. Here are the features of the four technologies in detail:

### SW 2.4 GHz

- energy-saving 2.4 GHz wireless technology
- bi-directional permanent wireless operation when switch is actuated
- battery life up to 1 year depending on application
- short connection times after »power on« (wake-up time max. 200 ms in sleep mode)
- very good coexistence with other 2.4 GHz systems; interference-free operation parallel to WLAN 802.11 and Bluetooth systems
- easy-to-set-up transmission paths
- certifiable worldwide
- no limits to period of use with regard to legal stipulations regulating the duty cycle
- point-to-point connection (two transmitters per receiver)
- interference-free parallel operation of several transmitter and receiver units with special »pairing« procedure
- good diagnosis
- comprehensive experience with complex applications in industry and medical equipment.

### Using this wireless technology

Foot controls without cables are advantageous for machine and plant engineering – for more than one reason. Firstly, cables can be dangerous tripping hazards and, secondly, they can restrict ergonomic comfort because users cannot position their foot controls freely. This technology uses the license-free 2.4 GHz frequency band and is both extremely reliable and extremely robust. Further features include good interference and coexistence characteristics.

### SW 868 / 915 MHz self-sufficient

- self-sufficient bi-directional transmission path
- optional long-range and ultra-long-range transmission path
- extensive range: up to 60 m indoors and 700 m outdoors
- no interference with DECT, WLAN, PMR systems, etc.
- system design verified in industrial environment
- short telegrams (small duty cycle) lead to low risk of collision
- good integration in automation systems
- battery operation possible.

### Using this wireless technology

Wherever moveable machine and plant parts have to be positioned, controlled and monitored, cables are often undesirable or defect, reducing efficiency. The solution: wireless, self-sufficient controls which are used to release solenoid interlocks on protective fencing and guard doors. Wireless position switches which position, control and monitor machine and plant parts. When selecting applications and wireless switches, always remember: no switch actuation, no energy available to send signals.

### SW 868 / 915 MHz battery operation, bi-directional

- long range in industrial halls
- high transmission reliability
- long battery life (up to 10 years depending on the application)
- bi-directional transmission path
- monitoring of battery voltage
- optional non-contact wireless sensors
- no interference with DECT, WLAN, PMR systems, etc.
- system design verified in industrial environment
- short telegrams (approx. 1 ms) lead to low risk of collision
- extensive range: up to 60 m indoors and 700 m outdoors

### Using this wireless technology

Industrial sensors, such as wireless inductive sensors, GMR sensors or optical wireless sensors require additional energy in order to function. This energy is taken from a high-performance long-life battery integrated within the sensor. (Examples: position switches, control units, non-contact wireless sensors.)

### EnOcean 868 MHz

- wireless standard conforming to ISO/IEC 14543-3-10
- interoperability with switches and sensor from other manufacturers
- low energy requirement
- range: up to 30 m indoors and 300 m outdoors
- use of regulated frequency bands with the highest availability of the frequency channel (enabled only for pulse signals) – 868 MHz acc. to R & TTE specification EN 300220

### Using this wireless technology

Application fields in industrial and building automation which make very high demands on switching frequency and which do not require bi-directional signals (i.e. signal confirmation), (e.g. control units at the man-machine interface, door-handle switches, pull-wire switches for industrial gates, etc.).





steute



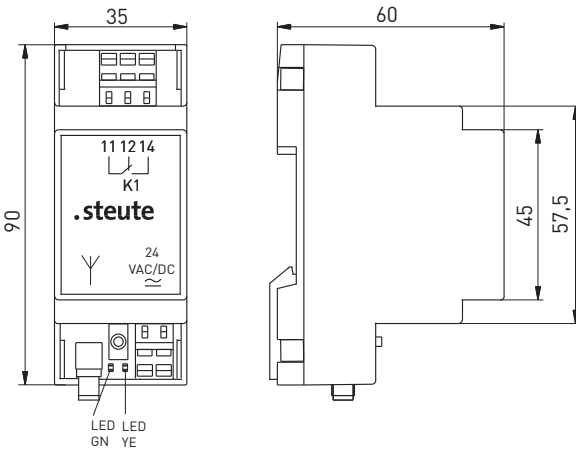
## Wireless technology 868 MHz

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# Wireless receivers

## // Series RF Rx EN868-1

### // RF RX EN868



- Wireless receiver**  
 RF Rx EN868-1W 24 VDC  
 RF Rx EN868-PNP 24 VDC  
 RF Rx EN868-NPN 24 VDC  
 RF Rx EN868-1W 24 VAC/DC

- Order Number**  
 90590001  
 90590003  
 90590002  
 90590007

#### Features/options

- EnOcean standard
- 1-channel: potential-free relay outputs
- DC version: 1 change-over contact, NPN- or PNP output  
 AC version: 1 change-over contact
- Transmitter/receiver assignment by teaching mode
- LEDs for indication of switching state
- SMA plug-in connector for external antenna

### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 61000-6-3; EN 60068-2-6; EN 60068-2-27; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Number of channels</b>	1
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Inputs</b>	1 wireless channel, max. 10 transmitters per channel
<b>Outputs</b>	1 change-over contact (Relay), NPN or PNP (transistor)
<b>Rated operating current I<sub>e</sub></b>	max. 0.22A AC, 0.08A DC
<b>Rated operating voltage U<sub>e</sub></b>	24 VAC/DC -15% ... +10%
<b>I<sub>e</sub>/U<sub>e</sub> of output contacts</b>	6A / 250 VAC; 2A / 24 VDC
<b>Utilisation category</b>	AC-15; DC-13
<b>U<sub>i</sub></b>	250 VAC
<b>U<sub>imp</sub></b>	2.5 kV
<b>Frequency</b>	868.3 MHz
<b>Display</b>	green LED for supply voltage, orange LED for switching conditions
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Vibration resistance</b>	NO contact 20g, NC contact 5g
<b>Shock resistance</b>	max. 100g
<b>Note</b>	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.

#### Approvals



#### Type code

**RF Rx EN868-1W**

- Change-over contact (NPN, PNP transistor output)
- Wireless frequency 868 MHz
- EnOcean
- Wireless receiver
- Wireless technology

RF magnet antenna with SMA plug-in connector available as accessory, order No. 01.08.0386 required for optimum sensing range.

Mobile field strength indicator EPM 300 for wireless field planning is available, order No. 90598005.

# Wireless receivers

## // Series RF Rx SW868/SW915-1W

### Features/options

- steute wireless technology
- 1-channel: potential-free relay outputs
- 1 change-over contact, max. 6 A
- Transmitter/receiver assignment by teaching mode
- LEDs for indication of switching state
- SMA plug-in connector for external antenna

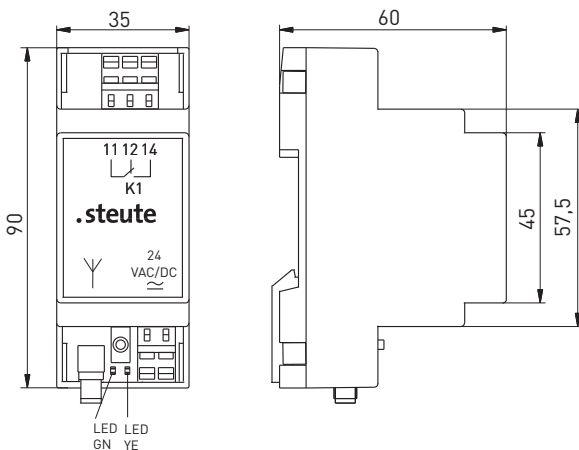
## // RF RX SW868/SW915



### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 61000-6-3; EN 60068-2-6; EN 60068-2-27; EN 301 489-1; EN 301 489-3; EN 300 220-2
<b>Number of channels</b>	1
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Inputs</b>	1 wireless channel, max. 10 transmitters per channel
<b>Outputs</b>	1 change-over contact (Relay)
<b>Rated operating current I<sub>e</sub></b>	24 VDC: max. 0.1 A; 24 VAC: max. 0.25 A
<b>Rated operating voltage U<sub>e</sub></b>	24 VAC/DC -15% ... +10%
<b>I<sub>e</sub>/U<sub>e</sub> outputs</b>	6A / 250 VAC; 2A / 24 VDC
<b>Utilisation category</b>	AC-15; DC-13
<b>U<sub>i</sub></b>	250 VAC
<b>U<sub>imp</sub></b>	2.5 kV
<b>Frequency</b>	868.3 MHz or 915 MHz (USA, Canada)
<b>Display</b>	green LED for supply voltage, orange LED for switching conditions
<b>Switching frequency</b>	approx. 12000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Vibration resistance</b>	NO contact 20g, NC contact 5g
<b>Shock resistance</b>	max. 100g
<b>Note</b>	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.
<b>Approvals</b>	SW915 c <sub>UL</sub> <b>FC</b> <b>IC</b>

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### Wireless receiver

RF Rx SW868-1W 24 VAC/DC  
RF Rx SW915-1W 24 VAC/DC

### Order Number

90590023  
90590024

### Type code

**RF Rx SW868-1W**

1 change-over contacts  
868 MHz wireless frequency  
(SW915 915 MHz)  
SW  
Wireless receiver  
Wireless technology

RF magnet antenna with SMA plug-in connector available as accessory, for SW868 order No. 90598013 and for SW915 order No. 90598014 required for optimum sensing range.

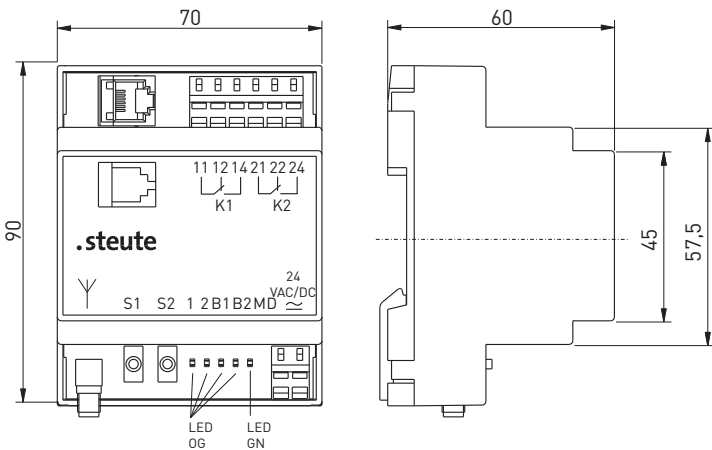
# Wireless receivers

## // Series RF Rx EN868-2W-RS232

### // RF RX EN868-2W-RS232



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#### Wireless receiver

RF Rx EN868-2W-RS232 24 VAC/DC  
 RF Rx EN868-2W-s-RS232 24 VAC/DC  
 RF Rx EN868-2W 24 VAC/DC

#### Order Number

90590008  
 90590021  
 90590012

#### Note for RF Rx EN868-2W-s-RS232

The current switching status of the device is stored when the power supply is turned off. When the supply voltage returns, the last switching status is restored. When the device is voltage-free, any switching operations are lost. A maximum of 100,000 memory operations are possible.

#### Features/options

- EnOcean standard
- 2-channel: potential-free relay outputs
- 2 change-over contacts, max. 6 A
- Version with Power-down function available
- RS 232 interface
- Transmitter/receiver assignment by teaching mode
- LEDs for indication of switching state
- SMA plug-in connector for external antenna

### Technical Data

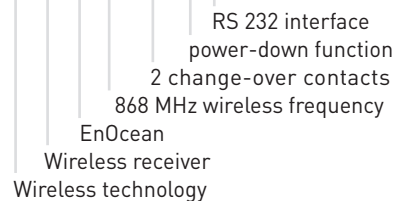
Standards	EN 60947-5-1; EN 61000-6-2, -3; EN 60068-2-6, -27; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3; RS 232: ANSI/EIA/TIA-232-F-1997
Number of channels	2
Connection	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
Degree of protection	IP 20 per IEC/EN 60529
Inputs	2 channels, max. 10 transmitters/channel
Outputs	2 change-over contacts (Relays), RS 232 interface
Rated op. current I <sub>e</sub>	max. 0,25A AC, 0,1A DC
Rated op. voltage U <sub>e</sub>	24 VAC/DC -15% ... +10%
I <sub>e</sub> /U <sub>e</sub> output	6A / 250 VAC; 2A / 24 VDC
Utilisation category	AC-15; DC-13
U <sub>i</sub>	250 VAC
U <sub>imp</sub>	2.5 kV
Frequency	868.3 MHz
Display	green LED for supply voltage, orange LED for switching conditions and baud rate setting
Switching frequency	approx. 9000 telegrams at repetitions/h
Degree of pollution	2 per DIN VDE 0110
Ambient temperature	0 °C ... +55 °C
Vibration resistance	NO contact 20g, NC contact 5g
Shock resistance	max. 100g
Baudrate	9600 Bd to 57600 Bd
Data bits	8
Stop bit	1
Parity	none
Flow control	none
Note	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.

#### Approvals



#### Type code

RF Rx EN868-2W-s-RS232



RS 232 cable provided with receiver.

RF magnet antenna with SMA plug-in connector available as accessory, order No. 01.08.0386, required for optimum sensing range.

Mobile field strength indicator EPM 300 for wireless field planning is available, order No. 90598005.

## Wireless receivers

### // Series RF RxT EN868 USB

#### Features/options

- Thermoplastic enclosure
- EnOcean standard
- USB 2.0 transmitter and receiver unit
- Multi-network capable
- Power supply via USB interface
- Support of up to 128 actors and an indefinite number of transmitters

### // RF RXT EN868 USB



#### Technical Data

<b>Standards</b>	EN 301 489-1, EN 301 489-3, EN 300 220-2, -3
<b>Number of channels</b>	max. 128 actors, indefinite number of transmitters
<b>Connection</b>	USB 2.0, cable length 0.6 m (without plug-in connector)
<b>Degree of protection</b>	IP 30 per IEC/EN 60529
<b>Inputs</b>	indefinite number of EnOcean transmitters
<b>Outputs</b>	max. 128 actors
<b>Power supply</b>	via USB interface
<b>Frequency</b>	868.3 MHz
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>EMC rating</b>	acc. to EMC directive
<b>Weight</b>	80 g
<b>Dimensions</b>	25 x 125 x 65 mm (H x W x D)
<b>Note</b>	no external antenna required.

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Wireless receiver  
RF RxT EN868 USB

Order Number  
90590017

#### Type code

**RF Rx EN868 USB**

USB connector  
868 MHz wireless frequency  
EnOcean  
Wireless receiver  
Wireless technology

# Wireless receivers

## // Series RF Rx EN868-4W

### Features/options

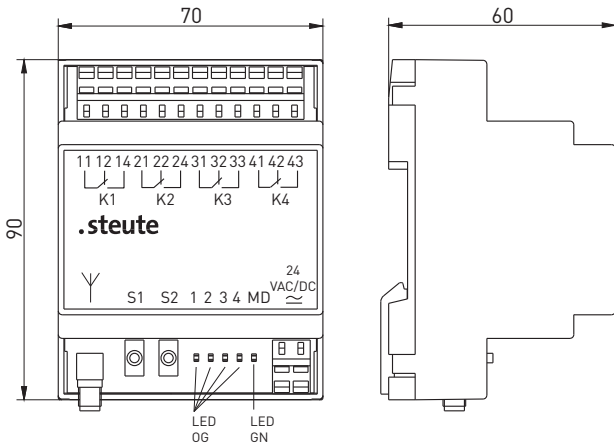
- EnOcean standard
- 4-channel: potential-free relay outputs
- 4 change-over contacts, max. 6 A
- Transmitter/receiver assignment by teaching mode
- LEDs for indication of switching state
- SMA plug-in connector for external antenna

## // RF RX EN868-4W



## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2,-6,3; EN 60068-2-6; EN 60068-2-27; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Number of channels</b>	4
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Inputs</b>	4 wireless channels, max. 10 transmitters per channel
<b>Outputs</b>	4 change-over contacts (Relays)
<b>Rated operating current I<sub>e</sub></b>	max. 0.25A AC, 0.1A DC
<b>Rated operating voltage U<sub>e</sub></b>	24 VAC/DC -15% ... +10%
<b>I<sub>e</sub>/U<sub>e</sub> of output contacts</b>	6A / 250 VAC; 2A / 24 VDC
<b>Utilisation category</b>	AC-15; DC-13
<b>U<sub>i</sub></b>	250 VAC
<b>U<sub>imp</sub></b>	2.5 kV
<b>Frequency</b>	868.3 MHz
<b>Display</b>	green LED for supply voltage, orange LED for switching conditions
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Vibration resistance</b>	NO contact 20g, NC contact 5g
<b>Shock resistance</b>	max. 100g
<b>Note</b>	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.
<b>Approvals</b>	



Wireless receiver  
RF Rx EN868-4W 24 VAC/DC

Order Number  
90590006

<b>Type code</b>	<b>RF Rx EN868-4W</b>
	4 change-over contacts
	Wireless frequency 868 MHz
	EnOcean
	Wireless receiver
	Wireless technology

RF magnet antenna with SMA plug-in connector available as accessory, order No. 01.08.0386 required for optimum sensing range.

Mobile field strength indicator EPM 300 for wireless field planning is available, order No. 90598005.

# Wireless receivers

## // Series RF Rx SW868/SW915-4W

### Features/options

- steute wireless technology
- 4-channel: potential-free relay outputs
- 4 change-over contacts, max. 6 A
- Transmitter/receiver assignment by teaching mode
- LEDs for indication of switching state
- SMA plug-in connector for external antenna

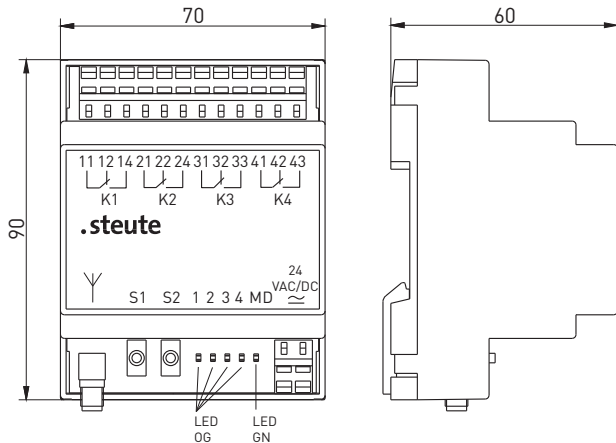
## // RF RX SW868/SW915-4W



### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 61000-6-3; EN 60068-2-6; EN 60068-2-27; EN 301 489-1; EN 301 489-3; EN 300 220-2
<b>Number of channels</b>	4
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Inputs</b>	4 wireless channels, max. 10 transmitters per channel
<b>Outputs</b>	4 change-over contacts (Relays)
<b>Rated operating current I<sub>e</sub></b>	24 VDC: max. 0.1 A; 24 VAC: max. 0.25 A
<b>Rated operating voltage U<sub>e</sub></b>	24 VAC/DC -15% ... +10%
<b>I<sub>e</sub>/U<sub>e</sub> outputs</b>	6A / 250 VAC; 2A / 24 VDC
<b>Utilisation category</b>	AC-15; DC-13
<b>U<sub>i</sub></b>	250 VAC
<b>U<sub>imp</sub></b>	2.5 kV
<b>Frequency</b>	868.3 MHz or 915 MHz (USA, Canada)
<b>Display</b>	green LED for supply voltage, orange LED for switching conditions
<b>Switching frequency</b>	approx. 12000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Vibration resistance</b>	NO contact 20g, NC contact 5g
<b>Shock resistance</b>	max. 100g
<b>Note</b>	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.
<b>Approvals</b>	SW915 c <sub>UL</sub> <b>FC</b> <b>IC</b>

23



### Wireless receiver

RF Rx SW868-4W 24 VAC/DC  
RF Rx SW915-4W 24 VAC/DC

### Order Number

90590019  
90590022

### Type code

**RF Rx SW868-4W**

4 change-over contacts  
868 MHz wireless frequency  
(SW915 915 MHz)  
SW  
Wireless receiver  
Wireless technology

RF magnet antenna with SMA plug-in connector available as accessory, for SW868 order No. 90598013 and for SW915 order No. 90598014 required for optimum sensing range.

# Wireless repeater

## // Series RF RxT EN868-1K

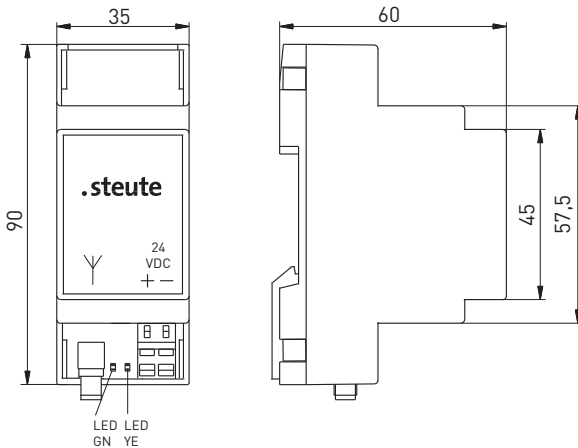
### Features/options

- EnOcean standard
- LEDs for receipt telegram
- SMA plug-in connector for external antenna

## // RF RXT EN868-1K



24



Wireless repeater  
RF RxT EN868-1K

Order Number  
90590004

## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 61000-6-3; EN 60068-2-6; EN 60068-2-27; EN 301 489-1; EN 301 489-3, EN 300 220-2, -3
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236: 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Rated operating current I<sub>e</sub></b>	max. 0.08 A DC
<b>Rated operating voltage U<sub>e</sub></b>	24 VDC -15 % ... +10 %
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Display</b>	green LED for supply voltage, orange LED: confirmation of telegram
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Shock resistance</b>	max. 100g

### Approvals



### Type code

**RF RxT EN868-1K**

1-channel,  
simple cascading  
Wireless frequency 868 MHz  
EnOcean  
Wireless repeater  
Wireless technology

RF magnet antenna with SMA plug-in connector available as accessory, order No. 01.08.0386 required for optimum sensing range.

Mobile field strength indicator EPM 300 for wireless field planning is available, order No. 90598005.



# Wireless repeater

// Series RF RxT EN868-230VAC

## Features/options

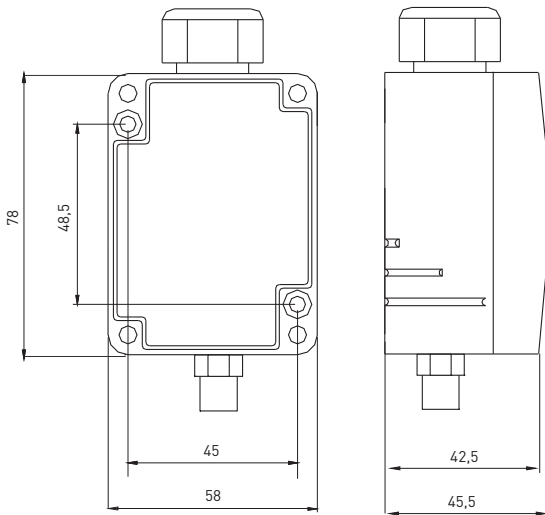
- EnOcean standard
- On-wall mounting
- SMA plug-in connector for external antenna

// RF RXT EN868-230VAC



## Technical Data

Standards	EN 61000-3-2, -3-3, -6-2, 6-3; EN 301 489-1; EN 301 489-3; EN 300 220-2,-3; EN 60590-1, EN 60730-1
Enclosure	PA6, colour: white
Mounting	on-wall mounting
Connection	screw clamps max. 1.5 mm <sup>2</sup> (incl. conductor ferrules)
Degree of protection	IP 42 per IEC/EN 60529
Power consumption	max. 2 VA
Rated operating voltage U <sub>e</sub>	230 VAC
Mains frequency	50/60 Hz
Frequency	868.3 MHz
Ambient temperature	-20 °C ... +60 °C
Weight	130 g



Wireless repeater  
RF RxT EN868-230VAC

Order Number  
90590020

## Type code

RF RxT EN868-230VAC

230 VAC power supply  
Wireless frequency 868 MHz  
EnOcean  
Wireless repeater  
Wireless technology

RF magnet antenna with SMA plug-in connector is provided, required for optimum sensing range.

Mobile field strength indicator EPM 300 for wireless field planning is available, order No.90598005.



# Wireless position switches

## // Series RF 10 EN868

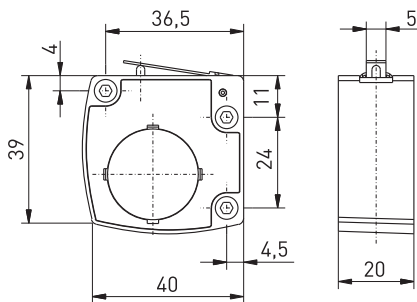
### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	thermoplastic, Polyamid PA 66
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Lithium-battery CR 2032 (replaceable)
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 150 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 800,000 operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available
<b>Approvals</b>	 

// RF 10 EN868



Wireless position switch  
RF 10 H EN868

Order Number  
10120101

Type code

**RF 10 H EN868**

Wireless frequency 868 MHz  
EnOcean  
Actuator H  
Series  
Wireless technology

# Wireless position switches

## // Series RF 10 SW868/SW915

### Features/options

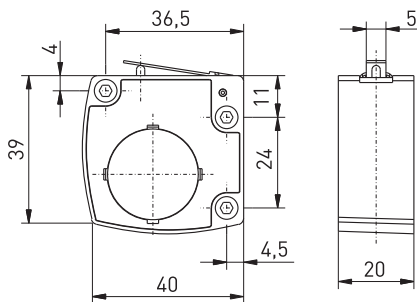
- Thermoplastic enclosure
- steute wireless technology
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Output signal can be individually configured at the receiver

## // RF 10 SW868/SW915



### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1, EN 301 489-3; EN 300 220-1, EN 300 220-2
<b>Enclosure</b>	thermoplastic, Polyamid PA 66
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	SW
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching frequency</b>	approx. 12000 telegrams at repetitions/h
<b>Voltage supply</b>	Lithium-battery CR 2032 (replaceable)
<b>Frequency</b>	868.3 MHz or 915 MHz (USA, Canada)
<b>Transmission power</b>	SW868: <25 mW, SW915: <10 mW
<b>Data rate</b>	66 kbps
<b>Channel bandwidth</b>	266 kHz
<b>Sensing range</b>	max. 400 m outside, max. 50 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 800,000 operations
<b>Actuating time</b>	min. 80 ms
<b>Approvals</b>	SW915 <b>FC IC</b>



### Wireless position switch

RF 10 H SW868  
RF 10 H SW915

### Order Number

10120601  
10120701

### Type code

**RF 10 H SW868**

868 MHz wireless frequency  
(SW915 915 MHz)

SW  
Actuator H  
Series

Wireless technology

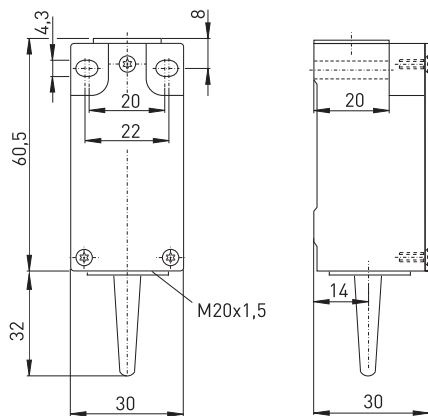
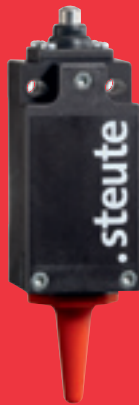
# Wireless position switches

## // Series RF 95 EN868



### Features/options

- Thermoplastic enclosure
- Design according to EN 50 047
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver
- Ex version for zones 1 and 21 available

## // RF 95 EN868



### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Cover</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available
<b>Approvals</b>	 

### Type code

**RF 95 WR EN868**

Wireless frequency 868 MHz  
 EnOcean  
 Actuator R (H, D, DS, etc. ...)  
 Watertight collar  
 Series  
 Wireless technology

# Wireless position switches

## // Series RF 95 SW868/SW915

### Features/options

- Thermoplastic enclosure
- Design according to EN 50 047
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

## // RF 95 SW868/SW915

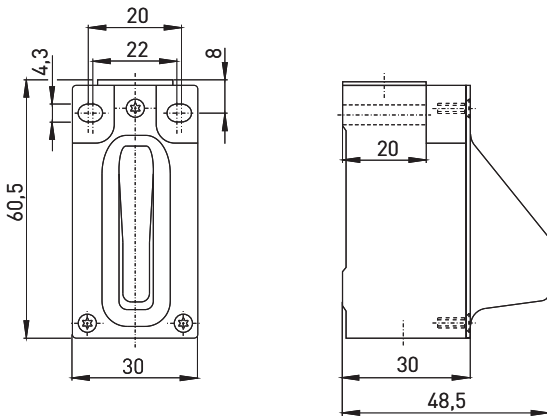


### Technical Data

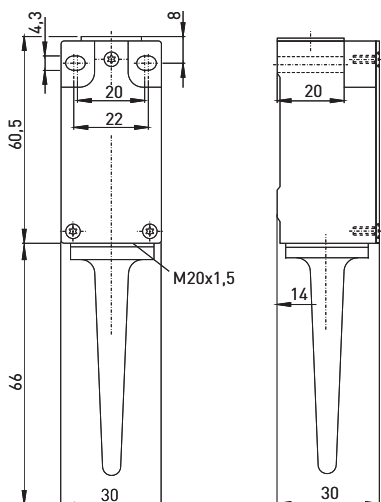
Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3 EN 300 220-1, -2
Enclosure	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Cover	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	SW
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 12000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz or 915 MHz (USA, Canada)
Transmission power	SW868: <25 mW, SW915: <10 mW
Data rate	66 kbps
Channel bandwidth	266 kHz
Sensing range	LR: max. 450 m outside, max. 40 m inside ULR: max. 700 m outside, max. 50 m inside
Mechanical life	> 1 million operations
Actuating time	min. 80 ms
Approvals	SW915 <b>FC IC</b>

29

RF 95 LR



RF 95 ULR



### Type code

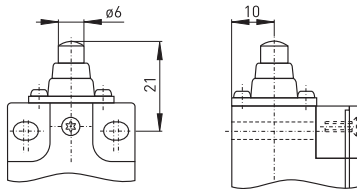
RF 95 WR LR SW868

868 MHz wireless frequency  
(SW915 915 MHz)  
SW  
Long Range (ULR Ultra Long  
Range)  
Actuator R (H, D, DS, etc. ...)  
Watertight collar  
Series  
Wireless technology

# Wireless position switches

## // Series RF 95, actuators

### // Plunger with collar W



#### Features/options

- Actuator type B to EN 50 047
- Watertight collar for protection against penetration of dirt

#### EnOcean

RF 95 W EN 868

#### Order number

95902901

#### SW

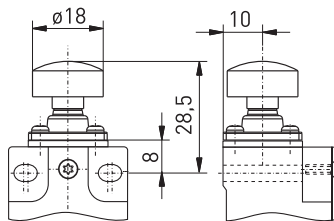
RF 95 W LR SW 868  
 RF 95 W ULR SW 868  
 RF 95 W LR SW 915  
 RF 95 W ULR SW 915

#### Order number

95902001  
 95902004  
 95902005  
 95902007

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### // Cap with collar WK



#### Features/options

- Large actuating surface
- Safe switching also with imprecise actuation
- Suitable for manual actuation
- Watertight collar for protection against penetration of dirt

#### EnOcean

RF 95 WK EN 868

#### Order number

95902902

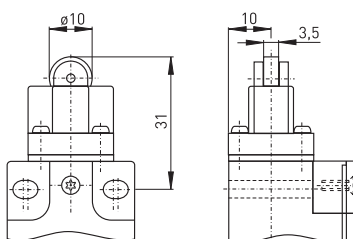
#### SW

RF 95 WK LR SW 868  
 RF 95 WK ULR SW 868  
 RF 95 WK LR SW 915  
 RF 95 WK ULR SW 915

#### Order number

95902003  
 95902002  
 95902006  
 95902008

### // Roller plunger R



#### Features/options

- Actuator type C to EN 50 047
- Actuator can be repositioned by 4 x 90°
- Wear-resistant plastic roller
- Metal roller available on request

#### EnOcean

RF 95 R EN 868

#### Order number

95909901

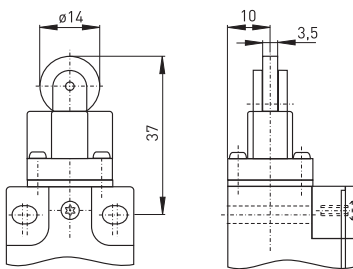
#### SW

RF 95 R LR SW 868  
 RF 95 R ULR SW 868  
 RF 95 R LR SW 915  
 RF 95 R ULR SW 915

#### Order number

95909001  
 95909002  
 95909003  
 95909004

## // Long roller plunger RL



### Features/options

- Wear-resistant plastic roller
- Metal roller available on request
- Actuator can be repositioned by 90°

### EnOcean

RF 95 RL EN 868

### Order Number

95911001

### SW

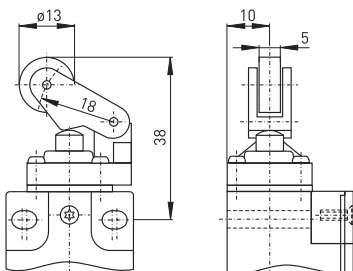
RF 95 RL LR SW 868  
 RF 95 RL ULR SW 868  
 RF 95 RL LR SW 915  
 RF 95 RL ULR SW 915

### Order Number

95911002  
 95911003  
 95911004  
 95911005

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## // Roller lever with collar WH



### Features/options

- Actuator type E to EN 50 047
- Actuating speed max . 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 25^\circ$
- Watertight collar for protection against penetration of dirt
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

### EnOcean

RF 95 WH EN 868

### Order Number

95914001

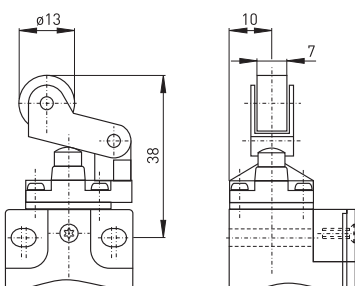
### SW

RF 95 WH LR SW 868  
 RF 95 WH ULR SW 868  
 RF 95 WH LR SW 915  
 RF 95 WH ULR SW 915

### Order Number

95914002  
 95914004  
 95914006  
 95914008

## // Metal roller lever with collar WHM



### Features/options

- Actuating speed max . 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 25^\circ$
- Watertight collar for protection against penetration of dirt
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

### EnOcean

RF 95 WHM EN 868

### Order Number

95914902

### SW

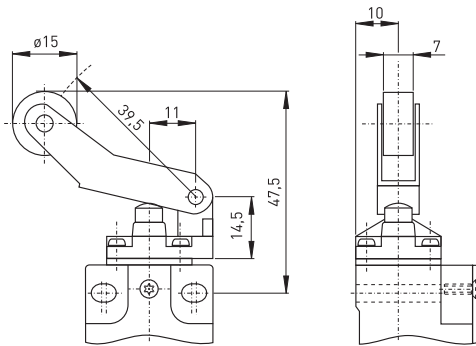
RF 95 WHM LR SW 868  
 RF 95 WHM ULR SW 868  
 RF 95 WHM LR SW 915  
 RF 95 WHM ULR SW 915

### Order Number

95914003  
 95914005  
 95914007  
 95914009

Wireless position switches  
 // Series RF 95, actuators

// Long metal roller lever with collar WHLM



Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean

RF 95 WHLM EN 868

Order Number

95916001

SW

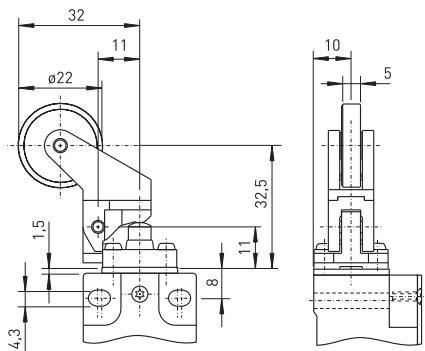
RF 95 WHLM LR SW 868  
 RF 95 WHLM ULR SW 868  
 RF 95 WHLM LR SW 915  
 RF 95 WHLM ULR SW 915

Order Number

95916002  
 95916003  
 95916004  
 95916005

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// Plastic roller lever with collar 4K



Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean

RF 95 4K EN 868

Order Number

95964001

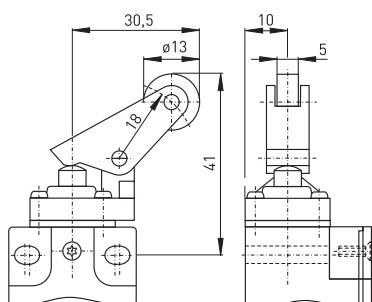
SW

RF 95 4K LR SW 868  
 RF 95 4K ULR SW 868  
 RF 95 4K LR SW 915  
 RF 95 4K ULR SW 915

Order Number

95964002  
 95964003  
 95964004  
 95964005

// Parallel roller lever with collar WPH



Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Watertight collar for protection against penetration of dirt
- Actuator can be repositioned by 4 x 90°
- Actuation parallel to switch from below

EnOcean

RF 95 WPH EN 868

Order Number

95920002

SW

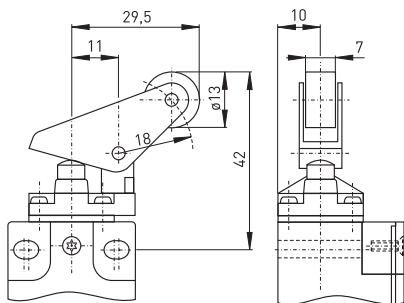
RF 95 WPH LR SW 868  
 RF 95 WPH ULR SW 868  
 RF 95 WPH LR SW 915  
 RF 95 WPH ULR SW 915

Order Number

95920005  
 95920002  
 95920007  
 95920008



## // Parallel metal roller lever with collar WPHM



### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Actuation parallel to switch from below
- Metal roller available on request

### EnOcean

RF 95 WPHM EN 868

### Order Number

95920001

### SW

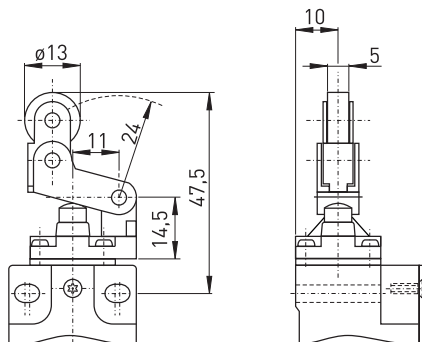
RF 95 WPHM LR SW 868  
RF 95 WPHM ULR SW 868  
RF 95 WPHM LR SW 915  
RF 95 WPHM ULR SW 915

### Order Number

95920006  
95920003  
95920008  
95920009

33

## // Offset roller lever with collar WHKM



### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Actuation only possible from right-hand side
- Free movement of actuator from left-hand side
- Metal roller available on request

### EnOcean

RF 95 WHKM EN 868

### Order Number

95918001

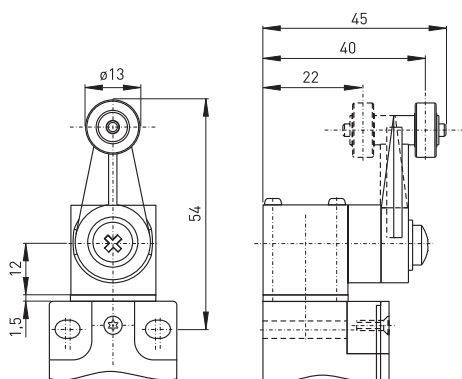
### SW

RF 95 WHKM LR SW 868  
RF 95 WHKM ULR SW 868  
RF 95 WHKM LR SW 915  
RF 95 WHKM ULR SW 915

### Order Number

95918002  
95918003  
95918004  
95918005

## // Rocking lever D



### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

### EnOcean

RF 95 D EN 868

### Order Number

95921901

### SW

RF 95 D LR SW 868  
RF 95 D ULR SW 868  
RF 95 D LR SW 915  
RF 95 D ULR SW 915

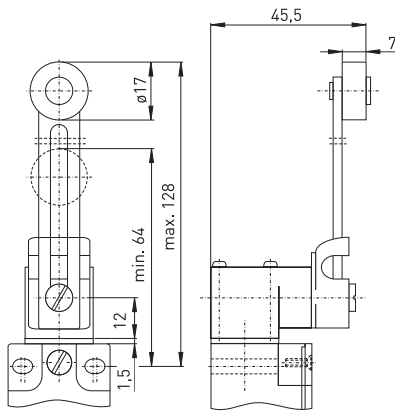
### Order Number

95921002  
95921001  
95921003  
95921004

# Wireless position switches

## // Series RF 95

### // Adjustable rocking lever DS



#### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Position of roller can be adjusted
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

#### EnOcean

RF 95 DS EN 868

#### Order Number

95929001

#### SW

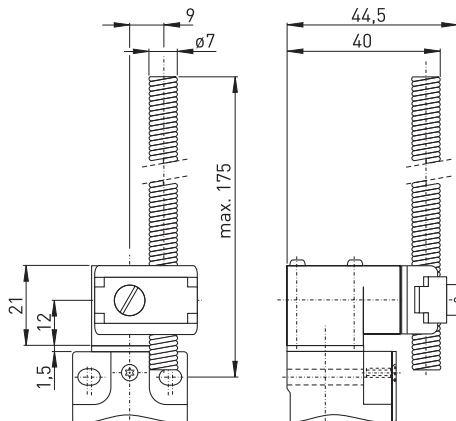
RF 95 DS LR SW 868  
RF 95 DS ULR SW 868  
RF 95 DS LR SW 915  
RF 95 DS ULR SW 915

#### Order Number

95929003  
95929002  
95929004  
95929005

34

### // Spring-rod lever DF



#### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 4 x 90°

#### EnOcean

RF 95 DF EN 868

#### Order Number

95927901

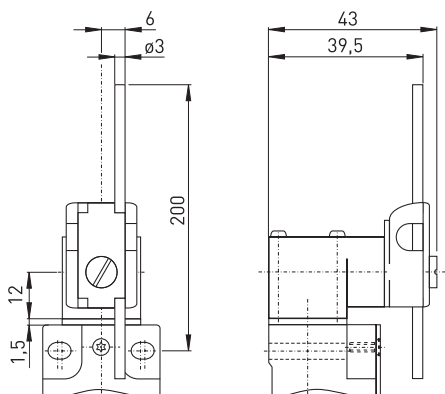
#### SW

RF 95 DF LR SW 868  
RF 95 DF ULR SW 868  
RF 95 DF LR SW 915  
RF 95 DF ULR SW 915

#### Order Number

95927001  
95927003  
95927004  
95927005

### // Rod lever DD



#### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 4 x 90°

#### EnOcean

RF 95 DD EN 868

#### Order Number

95925001

#### SW

RF 95 DD LR SW 868  
RF 95 DD ULR SW 868  
RF 95 DD LR SW 915  
RF 95 DD ULR SW 915

#### Order Number

95925002  
95925003  
95925004  
95925005

PRODUCTION PROCESS  
SMD ASSEMBLY OF CIRCUIT BOARDS



# Wireless position switches

## // Series RF 96 EN868

### Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Cover</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching frequency</b>	max. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Lithium battery (replaceable)
<b>Capacity</b>	approx. 8.5 Ah
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Modulation principle</b>	ASK
<b>Telegram type</b>	RPS type 2
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m im inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	approx. 10 years unused, approx. 2000 days with 1 actuation per s, approx. 93800 days with 1 actuation per min.
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	status signal configurable ex works, transmission of battery voltage

### Approvals

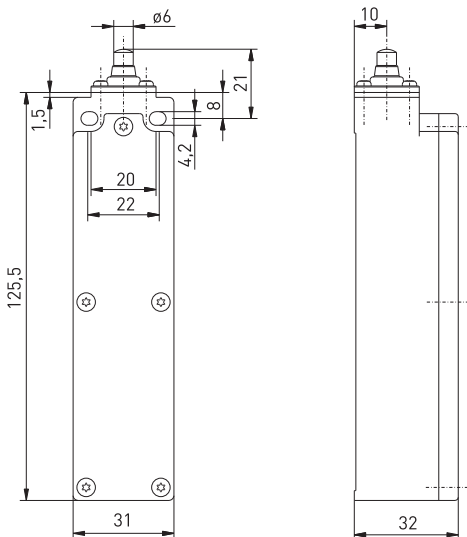
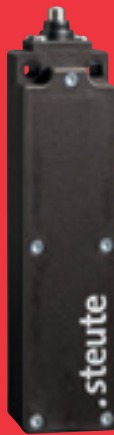


### Type code

**RF 96 WH EN868**

| 868 MHz wireless frequency  
 | EnOcean  
 | Actuator H (R, D, DS, etc. ...)  
 | Watertight collar  
 | Series  
 | Wireless technology

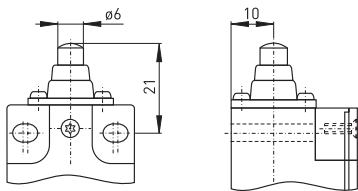
## // RF 96 EN868



# Wireless position switches

## // Series RF 96 EN868, actuators

### // Plunger with collar W



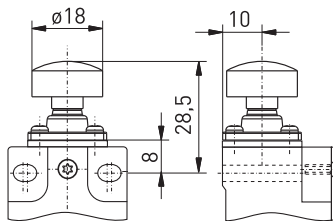
#### Features/options

- Actuator type B to EN 50 047
- Watertight collar for protection against penetration of dirt

EnOcean  
RF 96 W EN868

Order number  
66020201

### // Cap with collar WK



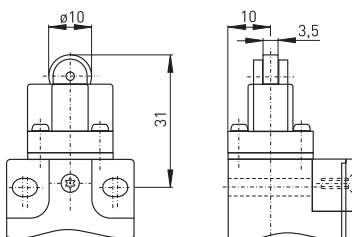
#### Features/options

- Large actuating surface
- Safe switching also with imprecise actuation
- Suitable for manual actuation
- Watertight collar for protection against penetration of dirt

EnOcean  
RF 96 WK EN868

Order number  
66080201

### // Roller plunger R



#### Features/options

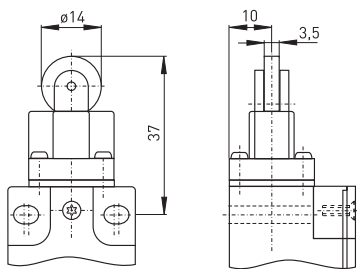
- Actuator type C to EN 50 047
- Wear-resistant plastic roller
- Metal roller available on request
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 96 R EN868

Order number  
66090201

Wireless position switches  
 // Series RF 96 EN868, actuators

// Long roller plunger RL



Features/options

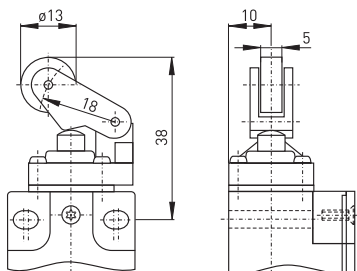
- Wear-resistant plastic roller
- Metal roller available on request
- Actuator can be repositioned by 4 x 90°

EnOcean  
 RF 96 RL EN868

Order number  
 66110201

38

// Roller lever with collar WH



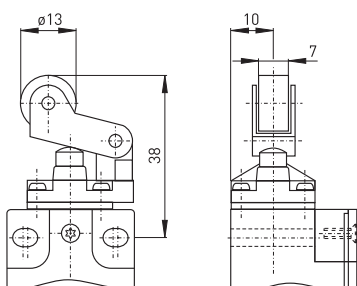
Features/options

- Actuator type E to EN 50 047
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40° and  $\beta = 25^\circ$
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
 RF 96 WH EN868

Order number  
 66140203

// Metal roller lever with collar WHM



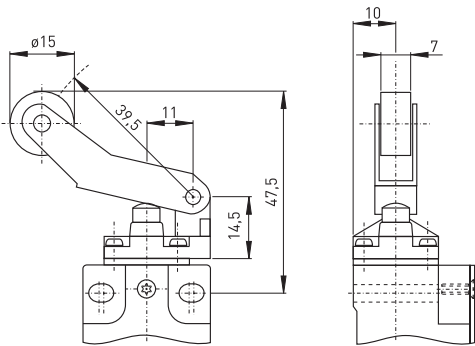
Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 25^\circ$
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
 RF 96 WHM EN 868 EN868

Order number  
 66140202

## // Long metal roller lever with collar WHLM



### Features/options

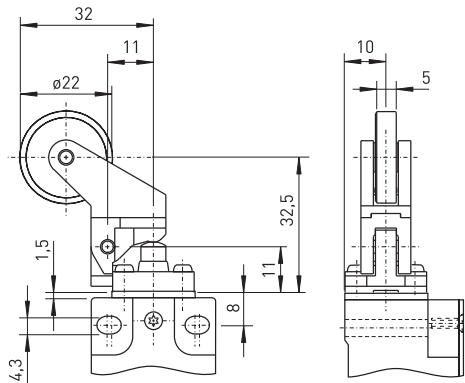
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
RF 96 WHLM EN868

Order number  
66160201

39

## // Plastic roller lever with collar 4K



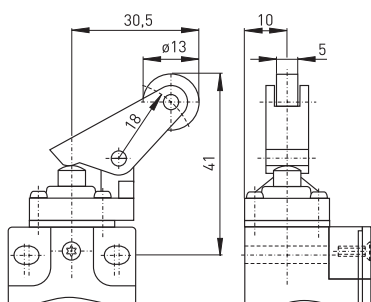
### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
RF 96 4K EN868

Order number  
66640201

## // Parallel roller lever with collar WPH



### Features/options

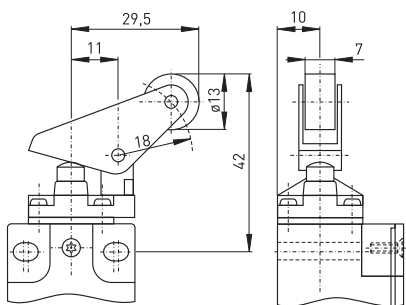
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Actuation parallel to switch from below
- Metal roller available on request

EnOcean  
RF 96 WPH EN868

Order number  
66200201

Wireless position switches  
 // Series RF 96 EN868, actuators

// Parallel metal roller lever with collar WPHM



Features/options

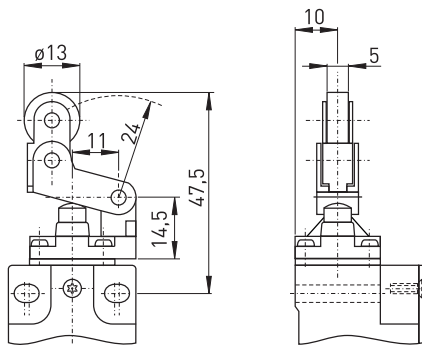
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Actuation parallel to switch from below
- Metal roller available on request

EnOcean  
 RF 96 WPHM EN868

Order number  
 66200202

40

// Offset roller lever with collar WHKM



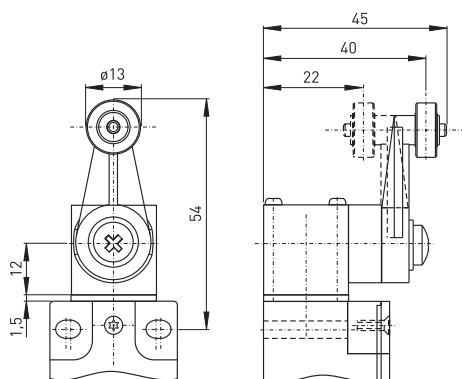
Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Watertight collar for protection against penetration of dirt
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Actuation only possible from right-hand side
- Free movement of actuator from left-hand side
- Metal roller available on request

EnOcean  
 RF 96 WHKM EN868

Order number  
 66180201

// Rocking lever D



Features/options

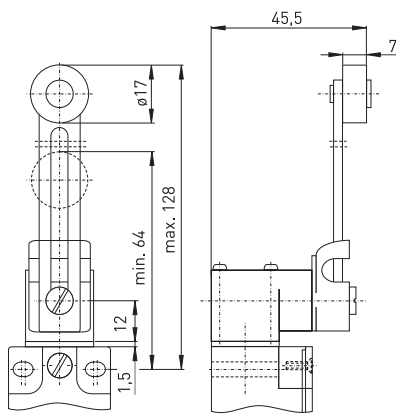
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
 RF 96 D EN868

Order number  
 66210201



## // Adjustable rocking lever DS



### Features/options

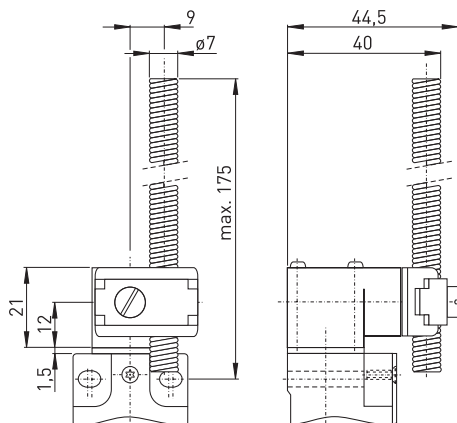
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Position of roller can be adjusted
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request

EnOcean  
RF 96 DS EN868

Order number  
66290201

41

## // Spring-rod lever DF



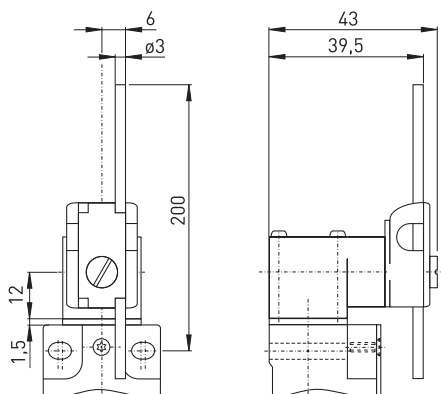
### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 96 DF EN868

Order number  
66270201

## // Rod lever DD



### Features/options

- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 96 DD EN868

Order number  
66250201

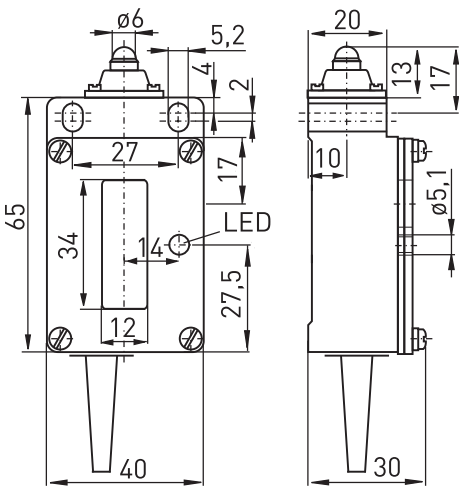
# Wireless position switches

## // Series RF 41 EN868



### Features/options

- Metal enclosure with plastic cover
- EnOcean standard
- No wiring and pipe laying required
- Integrated solar cell, no battery/rechargeable battery required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF 41 EN868



## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Aluminium die-cast, enamelled
<b>Cover</b>	Glassfibre reinforced thermoplastic
<b>Degree of protection</b>	IP 65 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Solar cell
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Power consumption in sleep mode</b>	approx. 25 nA
<b>Switching on with empty energy supply</b>	< 10 min at 400 lx
<b>Charging time with empty energy supply</b>	approx. 6 h at 400 lx, approx. 1.5 h at 1000 lx
<b>Charging time at operation limit</b>	1 h at 400 lx, approx. 15 min at 1000 lx
<b>Operation time in darkness</b>	approx. 48 h, with status signal every 3h, when the goldcap is totally charged at 1000 lx
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	status signal configurable ex works
<b>Approvals</b>	 

### Type code

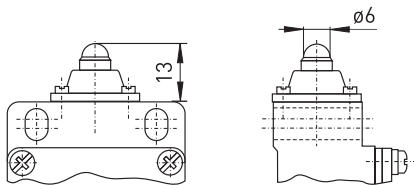
**RF 41 WH EN868**

RF 41 WH EN868  
 868 MHz wireless frequency  
 EnOcean  
 Actuator H (R, TK, D, etc. ...)  
 Watertight collar  
 Series 41  
 Wireless technology

# Wireless position switches

## // Series RF 41 EN868, actuators

### // Plunger



#### Features/options

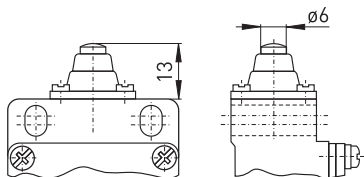
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 20°
- Vertical actuation or actuation from side possible
- Actuator with captive stainless steel ball
- Exact repeatability of switching point

EnOcean  
RF 41 EN868

Order number  
41901908

43

### // Plunger with collar W



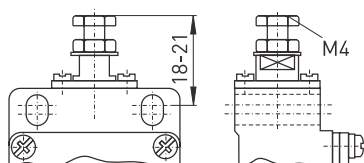
#### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 0°
- Watertight collar for protection against penetration of dirt
- Exact repeatability of switching point

EnOcean  
RF 41 W EN868

Order number  
41902902

### // Adjustable plunger ST



#### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 0°
- Length of metal plunger adjustable by means of M4 screw for fine adjustment of switching travel

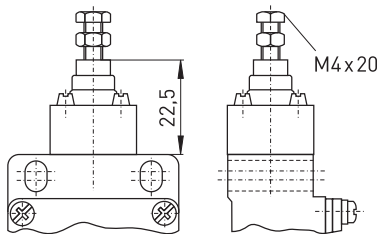
EnOcean  
RF 41 ST EN868

Order number  
41905901

## Wireless position switches

### // Series RF 41 EN868, actuators

#### // Adjustable plunger with collar WST



##### Features/options

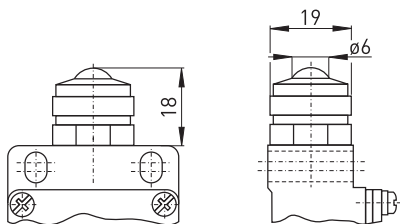
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 0°
- Length of metal plunger adjustable by means of M4 screw for fine adjustment of switching travel
- Watertight collar for protection against penetration of dirt

EnOcean  
RF 41 WST EN868

Order number  
41906901

44

#### // Ball plunger KU



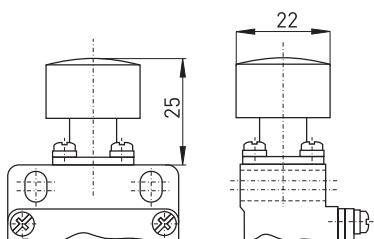
##### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 20°
- Vertical actuation or actuation from side possible
- Actuator with captive stainless steel ball
- Exact repeatability of switching point

EnOcean  
RF 41 KU EN868

Order number  
41903901

#### // Cap with collar WK



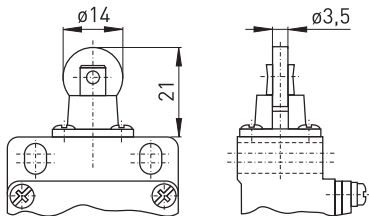
##### Features/options

- Large actuating surface
- Safe switching also with imprecise actuation
- Suitable for manual actuation
- Watertight collar for protection against penetration of dirt

EnOcean  
RF 41 WK EN868

Order number  
41908901

## // Roller plunger R



### Features/options

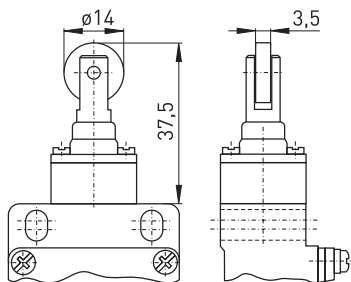
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Metal roller
- Actuator can be repositioned by 90°

EnOcean  
RF 41 R EN868

Order number  
41909903

45

## // Roller plunger with collar WR



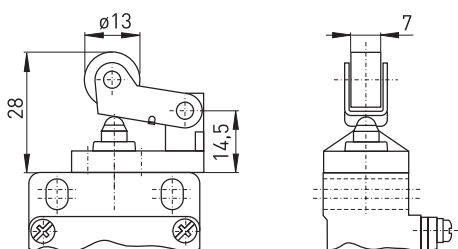
### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 25°
- Wear-resistant plastic roller
- Actuator can be repositioned by 90°
- Watertight collar for protection against penetration of dirt
- Metal roller available on request

EnOcean  
RF 41 WR EN868

Order number  
41910902

## // Roller lever H



### Features/options

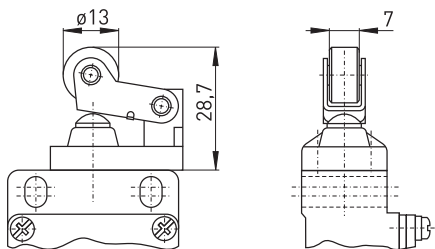
- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 25^\circ$
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Metal roller available on request
- Actuation of switch from right
- Actuation from the left should be avoided, since this reduces the mechanical life of the position switch.

EnOcean  
RF 41 H EN868

Order number  
41913907

Wireless position switches  
 // Series RF 41 EN868, actuators

// Roller lever with collar WH



Features/options

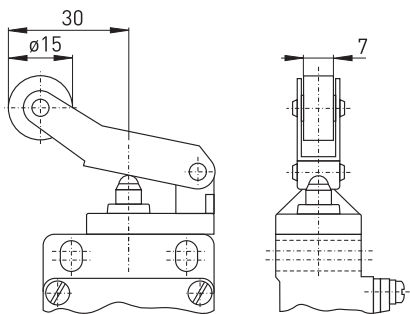
- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 25^\circ$
- Wear-resistant plastic roller
- Actuator can be repositioned by  $4 \times 90^\circ$
- Watertight collar for protection against penetration of dirt
- Metal roller available on request
- Actuation of switch from right
- Actuation from the left should be avoided, since this reduces the mechanical life of the position switch.

EnOcean  
 RF 41 WH EN868

Order number  
 41914908

46

// Long roller lever HL



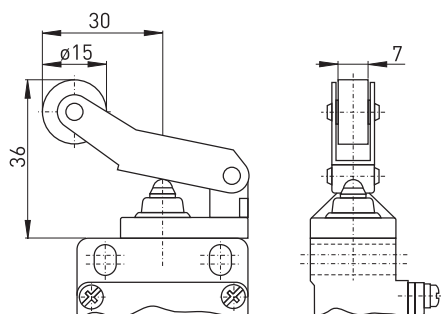
Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 30^\circ$
- Wear-resistant plastic roller
- Actuator can be repositioned by  $4 \times 90^\circ$
- Metal roller available on request
- Actuation from the left should be avoided, since this reduces the mechanical life of the position switch.

EnOcean  
 RF 41 HL EN868

Order number  
 41915901

// Long roller lever with collar WHL



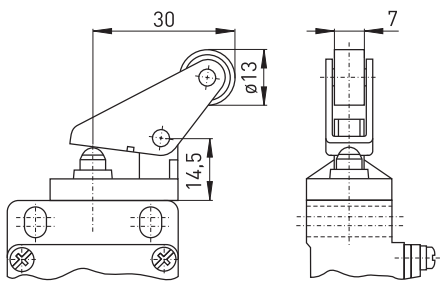
Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 30^\circ$
- Wear-resistant plastic roller
- Actuator can be repositioned by  $4 \times 90^\circ$
- Watertight collar for protection against penetration of dirt
- Metal roller available on request
- Actuation from the left should be avoided, since this reduces the mechanical life of the position switch.

EnOcean  
 RF 41 WHL EN868

Order number  
 41916901

## // Parallel roller lever PH



### Features/options

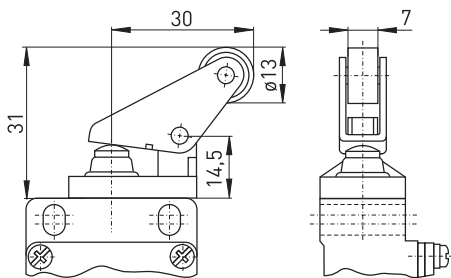
- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 30^\circ$
- Actuation parallel to switch from below
- Wear-resistant plastic roller
- Actuator can be repositioned by  $4 \times 90^\circ$
- Metal roller available on request

EnOcean  
RF 41 PH EN868

Order number  
41919901

47

## // Parallel roller lever with collar WPH



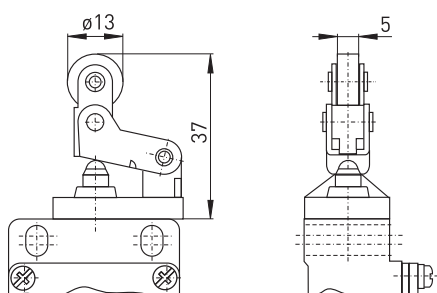
### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 30^\circ$
- Actuation parallel to switch from below
- Wear-resistant plastic roller
- Actuator can be repositioned by  $4 \times 90^\circ$
- Watertight collar for protection against penetration of dirt
- Metal roller available on request

EnOcean  
RF 41 WPH EN868

Order number  
41920901

## // Offset roller lever HK



### Features/options

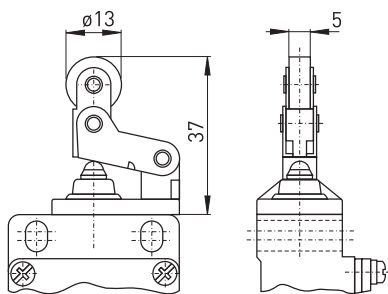
- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $40^\circ$
- Wear-resistant plastic roller
- Actuation only possible from right-hand side
- Free movement of actuator from left-hand side
- Actuator can be repositioned by  $4 \times 90^\circ$
- Metal roller available on request

EnOcean  
RF 41 HK EN868

Order number  
41917901

Wireless position switches  
 // Series RF 41 EN868, actuators

// Offset roller lever with collar WHK



Features/options

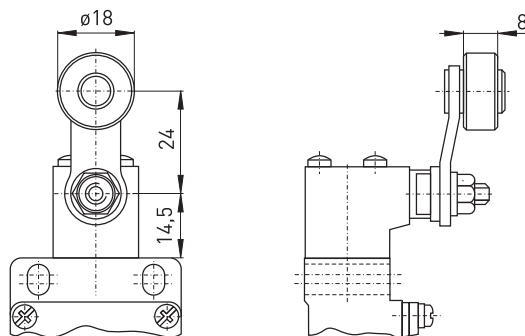
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 40°
- Actuation only possible from right-hand side
- Free movement of actuator from left-hand side
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Watertight collar for protection against penetration of dirt
- Metal roller available on request

EnOcean  
 RF 41 WHK EN868

Order number  
 41918901

48

// Rocking lever D



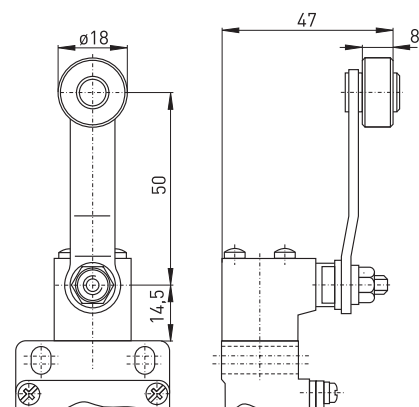
Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 45°
- Wear-resistant plastic roller
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- Metal roller available on request

EnOcean  
 RF 41 D EN868

Order number  
 41921901

// Long rocking lever DL



Features/options

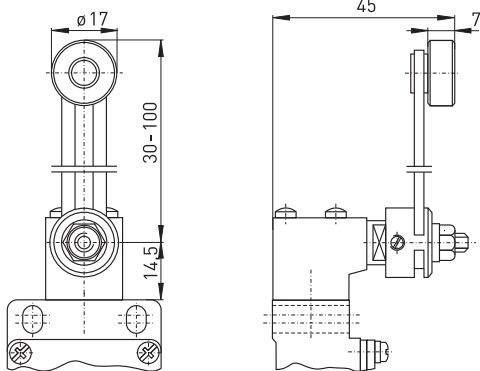
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 45°
- Wear-resistant plastic roller
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- Metal roller available on request

EnOcean  
 RF 41 DL EN868

Order number  
 41923901



## // Adjustable rocking lever DS



### Features/options

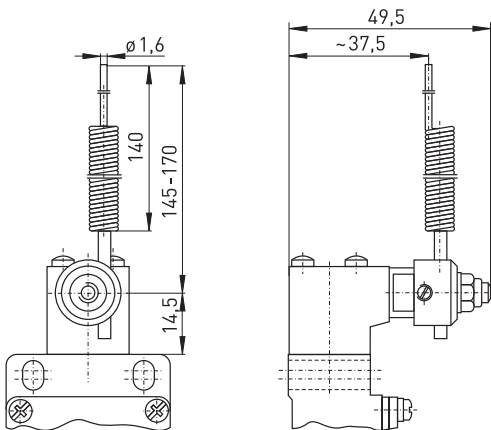
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 45°
- Wear-resistant plastic roller
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- Metal roller available on request

EnOcean  
RF 41 DS EN868

Order number  
41929901

49

## // Spring-rod lever DF



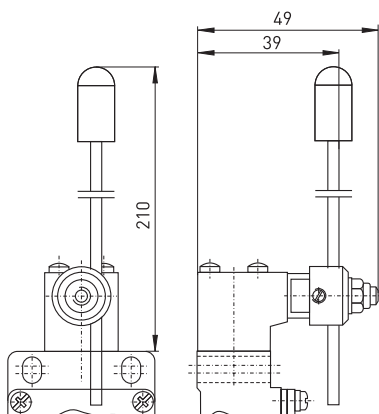
### Features/options

- Actuating speed max. 0.5 m/s
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°

EnOcean  
RF 41 DF EN868

Order number  
41927901

## // Rod lever DD



### Features/options

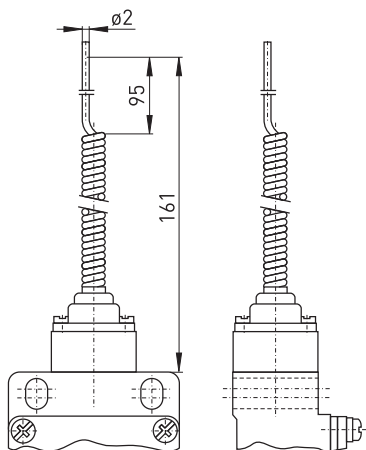
- Actuating speed max. 0.5 m/s
- Wear-resistant plastic tip
- Lever angle adjustable in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°

EnOcean  
RF 41 DD EN868

Order number  
41925901

Wireless position switches  
 // Series RF 41 EN868, actuators

// Long spring rod TL



Features/options

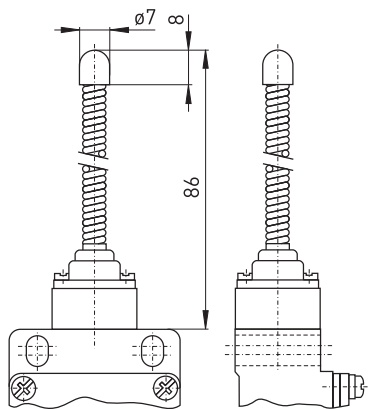
- Spring rod can be actuated from any direction
- Spring rod can be shortened 30 mm in actuating area
- Exact linear actuation not necessary
- Elasticity of the spring allows for deflection above the max. switching angle

EnOcean  
 RF 41 TL EN868

Order number  
 41932901

50

// Spring rod with steel tip TF



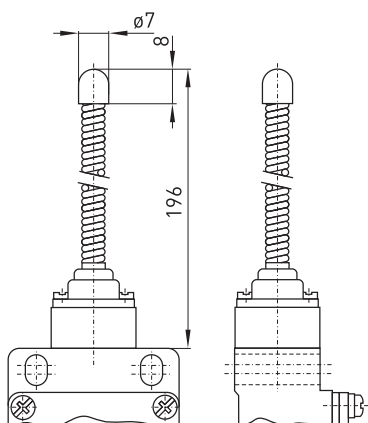
Features/options

- With rounded steel tip
- Spring rod can be actuated from any direction
- Elasticity of the spring allows for deflection above the max. switching angle

EnOcean  
 RF 41 TF EN868

Order number  
 41934902

// Long spring rod with steel tip TFL



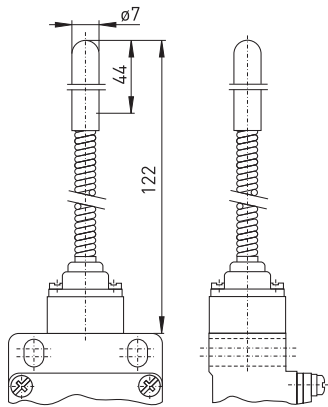
Features/options

- With rounded steel tip
- Spring rod can be actuated from any direction
- Elasticity of the spring allows for deflection above the max. switching angle

EnOcean  
 RF 41 TFL EN868

Order number  
 41938901

## // Spring rod with plastic tip TK



### Features/options

- Wear-resistant plastic tip
- Spring rod can be actuated from any direction
- Elasticity of the spring allows for deflection above the max. switching angle

**EnOcean**  
RF 41 TK EN868

**Order number**  
41936901

# Wireless position switches

## // Series RF 98 EN868

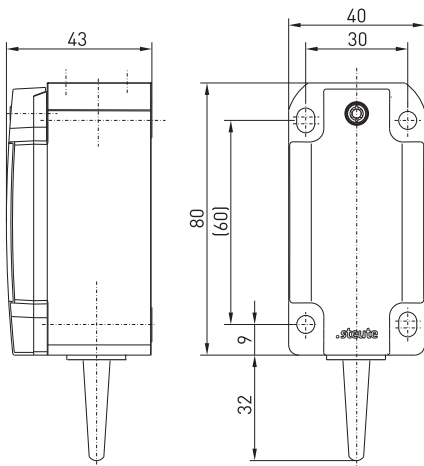
### Features/options

- Metal enclosure
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver
- Available on request with steute wireless technology

## // RF 98 EN868



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## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Zinc die-cast, enamelled
<b>Cover</b>	Zinc die-cast, enamelled
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available

### Approvals



### Type code

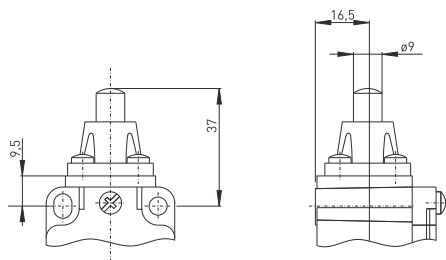
**RF 98 R EN868**

Wireless frequency 868 MHz  
EnOcean  
Actuator R (W, R, D ...)  
Series  
Wireless technology

# Wireless position switches

## // Series RF 98 EN868, actuators

### // Plunger



#### Features/options

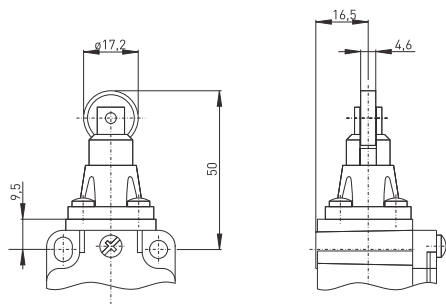
- Actuator type B to EN 50 041
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 0°

EnOcean  
RF 98 W EN868

Order number  
9109011101

53

### // Roller plunger R



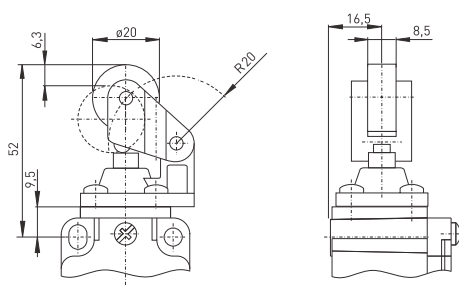
#### Features/options

- Actuator type C to EN 50 041
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Actuator can be repositioned by 90°

EnOcean  
RF 98 R EN868

Order number  
9109091101

### // Roller lever H



#### Features/options

- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Actuation parallel to switch from below
- Actuation from the left should be avoided, since this reduces the mechanical life of the position switch.
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°

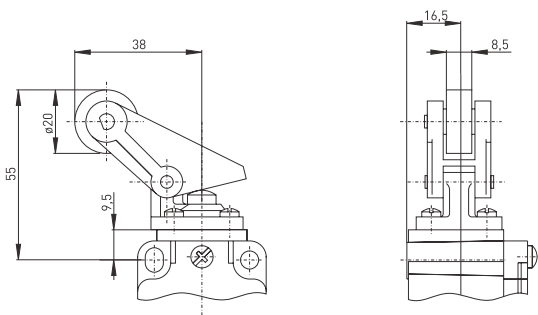
EnOcean  
RF 98 H EN868

Order number  
9109131101

# Wireless position switches

## // Series RF 98 EN868, actuators

### // Parallel roller lever PH



#### Features/options

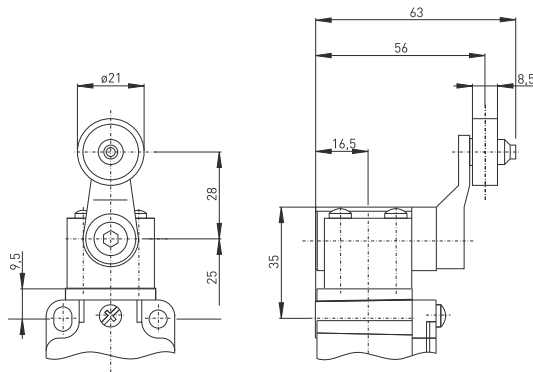
- Actuating speed max. 0.5 m/s with a vertical actuating angle of 30°
- Actuation parallel to switch from below
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 98 PH EN868

Order number  
9109191101

54

### // Rocking lever D



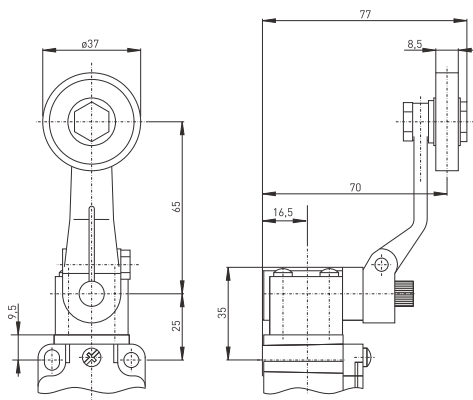
#### Features/options

- Actuator type A to EN 50 041
- Actuating speed max. 2.5 m/s with a vertical actuating angle of 30°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 98 D EN868

Order number  
9109211101

### // Long rocking lever DL



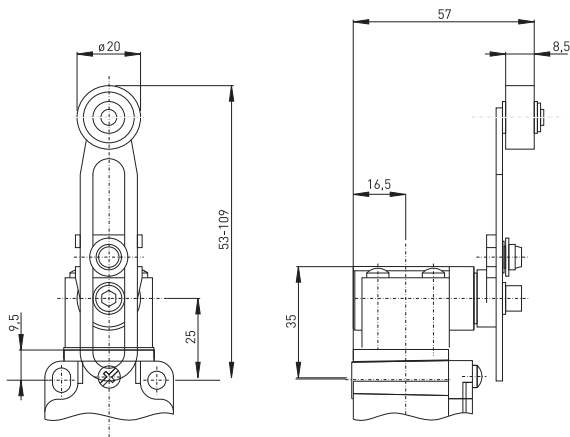
#### Features/options

- Actuating speed max. 2.5 m/s with a vertical actuating angle of 30°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 98 DL EN868

Order number  
9109231101

## // Adjustable rocking lever DS



### Features/options

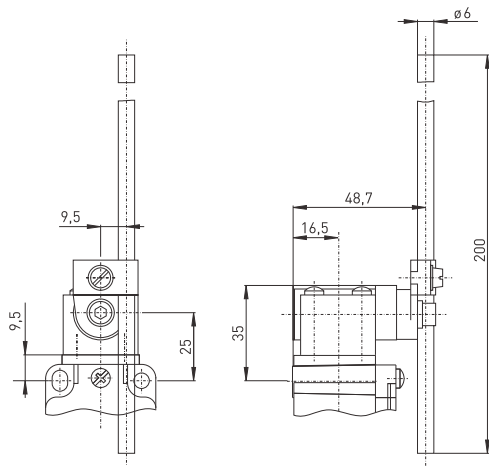
- Actuating speed max. 2.5 m/s with a vertical actuating angle of 30°
- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°

EnOcean  
RF 98 DS EN868

Order number  
9109291101

55

## // Rod lever DD



### Features/options

- Actuator type D to EN 50041
- Actuating speed max. 2.5 m/s with a vertical actuating angle of 30°

EnOcean  
RF 98 DD EN868

Order number  
9109251101

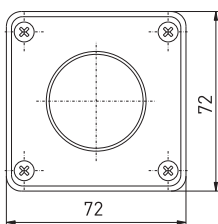
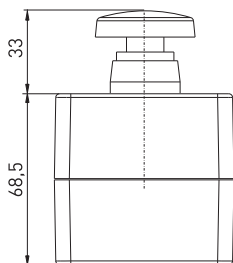
# Wireless command devices

## // Series RF BF 72 EN868

### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF BF 72 EN868



### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Thermoplastic, Polyamid PA 66
<b>Degree of protection</b>	IP 65 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mech. life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	No status signal

<b>Alternative voltage supply</b>	Lithium battery approx. 2.2 Ah
<b>Note</b>	status signal configurable ex works

### Approvals



### Type code

RF BF 72 RS SW EN868

Wireless frequency  
868 MHz  
EnOcean  
Actuator RS SW  
(different push-buttons  
available)  
Series  
Command device  
Wireless technology



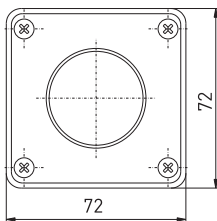
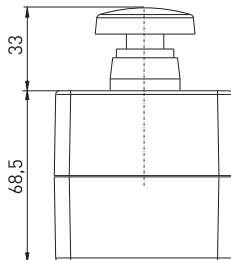
# Wireless position switches

## // Series RF BF 72 SW868/SW915

### Features/options

- Thermoplastic enclosure
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

## // RF BF 72 SW868/SW915



### Technical Data

Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-1, -2
Enclosure	Thermoplastic, Polyamid PA 66
Degree of protection	IP 65 per IEC/EN 60529
Wireless protocol	SW
Ambient temperature	- 20 °C ... + 65 °C
Switching frequency	approx. 12000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz or 915 MHz (USA, Canada)
Transmission power	SW868: <25 mW, SW915: <10 mW
Data rate	66 kbps
Channel bandwidth	266 kHz
Sensing range	max. 450 m outside, max. 40 m inside
Mech. life	> 1 million operations
Actuating time	min. 80 ms
Approvals	SW915 <b>FC IC</b>

57

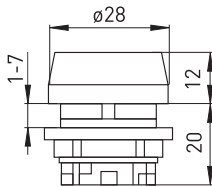
### Type code

RF BF 72 RS SW SW868

RF	BF	72	RS	SW	SW868
					Wireless frequency 868 MHz (SW915 915 MHz)
				SW	Actuator RS SW (different push-buttons available)
					Series
					Command device
					Wireless technology

Wireless command devices  
 // Series RF BF 72, actuators

// Push-button RT



Features/options

- IP 65 for actuator RT
- IP 67 for actuator with diaphragm M
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean/black push-button

RF BF 72 RT SW EN868

Order number

69955101

EnOcean/yellow push-button

RF BF 72 RT GE EN868

Order number

69955103

SW/black push-button

RF BF 72 RT SW SW868

Order number

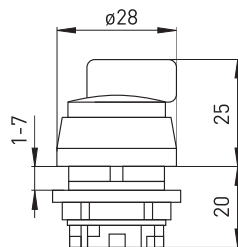
69955601

RF BF 72 RT SW SW915

69955701

58

// Control switch RST



Features/options

- IP 65
- RST with spring return
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean

RF BF 72 RSTA 0 <- I EN868

Order number

69957102

SW

RF BF 72 RSTA 0 <- I SW868

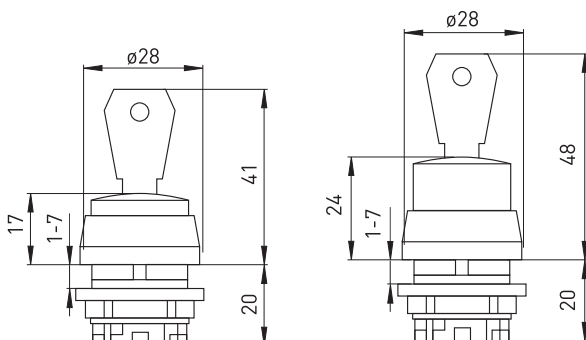
Order number

69957601

RF BF 72 RSTA 0 <- I SW915

69957701

// Key switch RSSA



Features/options

- IP 65
- RSSA key switch with safety cylinder lock (locks against turning)
- Standard version always has same key number
- Available on request in different versions
- Available on request with actuator made of stainless steel

EnOcean

RF BF 72 RSSA 14 EN868

Order number

69958101

SW

RF BF 72 RSSA 14 SW868

Order number

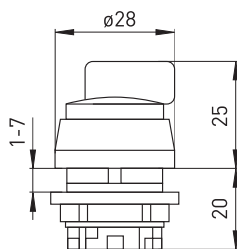
69958601

RF BF 72 RSSA 14 SW915

69958701

Wireless command devices  
// Series RF BF 72, actuators

// Selector switch RW



Features/options

- IP 65
- Selector with rest positions
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean

RF BF 72 RWA 0<-I EN868

Order number

69957101

SW

RF BF 72 RWA 0<-I SW868

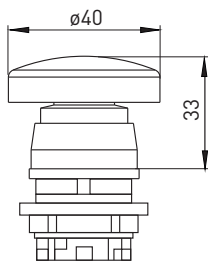
RF BF 72 RWA 0<-I SW915

Order number

69957602

69957702

// Push-button RS



Features/options

- IP 65
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean/black push-button

RF BF 72 RS SW EN868

Order number

69969101

EnOcean/battery/black push-button

RF BF 72 RS SW EN868-Li

Order number

69969201

SW

RF BF 72 RS SW SW868

RF BF 72 RS SW SW915

Order number

69969602

69969701

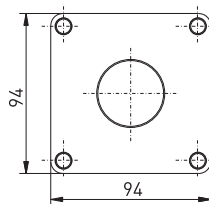
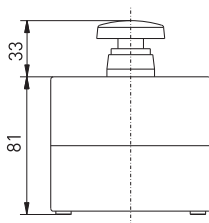
# Wireless command devices

## // Series RF BF 94 EN868



### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF BF 94 EN868



### Technical data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-3
<b>Enclosure</b>	Thermoplastic, Polyamid PA 66
<b>Degree of protection</b>	IP 65 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mech. life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available
<b>Approvals</b>	 

### Type code

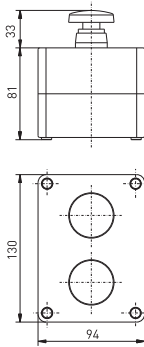
RF BF 94 RS SW EN868

868 MHz wireless frequency  
EnOcean  
Actuator RS SW (different push-buttons available)  
Series  
Command device  
Wireless technology

## Wireless command devices

### // Series RF BF 94 EN868, actuators

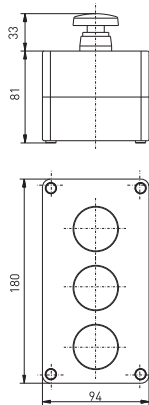
#### // 2 Push-buttons



##### Features/options

- Available with two actuators
- Available in different versions

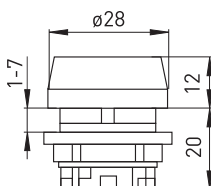
#### // 3 Push-buttons



##### Features/options

- Available with three actuators
- Available in different versions

#### // Push-button RT



##### Features/options

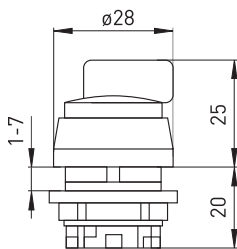
- IP 65 for actuator RT
- IP 67 for actuator with diaphragm M
- Actuator made of plastic
- Available with actuator made of stainless steel

EnOcean  
RF BF 94 RT EN868

Order number  
69155101

Wireless command devices  
// Series RF BF 94 EN868, actuators

// Control switch RST



Features/options

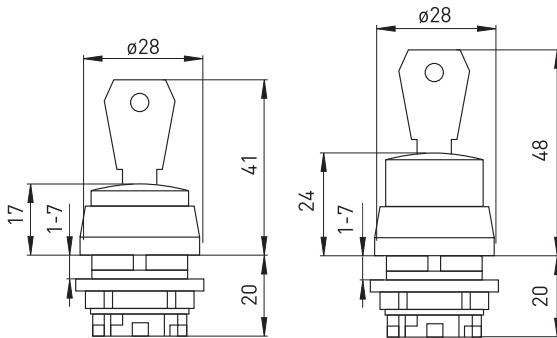
- IP 65
- RST with spring return
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean  
RF BF 94 RSTA 0<-I EN868

Order number  
69157101

62

// Key switch RSSA



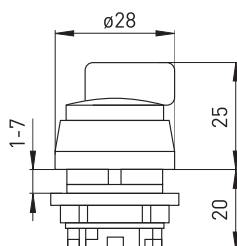
Features/options

- IP 65
- RSSA key switch with safety cylinder lock (locks against turning)
- Standard version always with the same key number
- Available on request in different versions
- Available on request with actuator made of stainless steel

EnOcean  
RF BF 94 RSSA 14 EN868

Order number  
69158101

// Selector switch RW



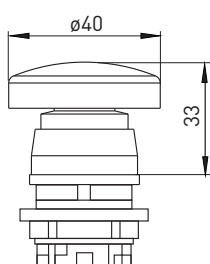
Features/options

- IP 65
- Selector with rest positions
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean  
RF BF 94 RWA 0<-I EN868

Order number  
69157102

## // Push-button RS



### Features/options

- IP 65
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean  
RF BF 94 RS SW EN868

Order number  
69169101

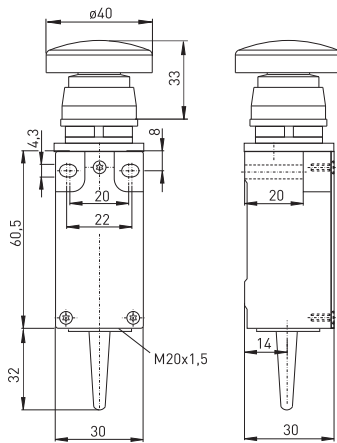
# Wireless command devices

## // Series RF 95 EN868



### Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF 95 RS SW EN868



### Technical Data

Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
Enclosure	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Cover	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	EnOcean
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 9000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz
Transmission power	max. 10 mW
Data rate	120 kbps
Channel bandwidth	280 kHz
Sensing range	max. 300 m outside, max. 30 m inside
Mechanical life	> 1 million operations
Actuating time	min. 80 ms
Note	no status signal available
Approvals	 

### Type code

RF 95 RS SW EN868

868 MHz wireless frequency  
 EnOcean  
 Actuator RS SW (different push-buttons available)  
 Series  
 Wireless technology



Wireless command devices  
 // Series RF 95 SW868/SW915

Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

// RF 95 RS SW SW868/SW915

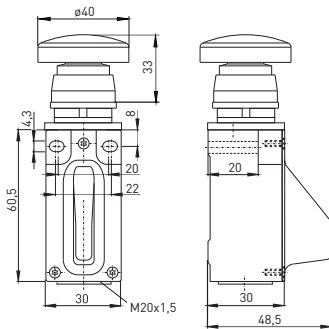


Technical Data

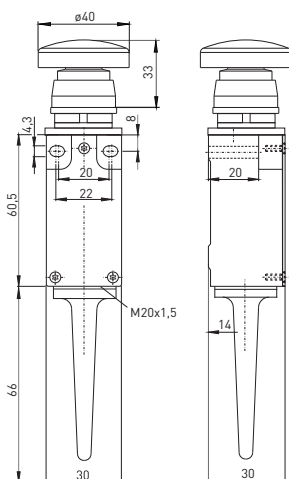
Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-1, -2
Enclosure	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Cover	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	SW
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 12000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz or 915 MHz (USA, Canada)
Transmission power	SW868: <25 mW, SW915: <10 mW
Data rate	66 kbps
Channel bandwidth	266 kHz
Sensing range	LR: max. 450 m outside, max. 40 m inside ULR: max. 700 m outside, max. 50 m inside
Mechanical life	> 1 million operations
Actuating time	min. 80 ms
Approvals	SW915 <b>FC</b> <b>IC</b>

65

RF 95 LR



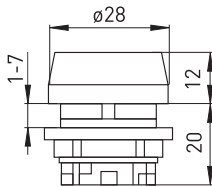
RF 95 ULR



Type code

Type code	RF 95	RS	SW	LR	SW868
					868 MHz wireless frequency (SW915 915 MHz)
			SW		
				Long Range (ULR Ultra Long Range)	
				Actuator RS SW (different push buttons available)	
				Series	
				Wireless technology	

// Push-button RT



Features/options

- IP 65 for actuator RT, IP 67 for actuator with diaphragm M
- Available on request with actuator made of stainless steel

EnOcean

RF 95 RT EN868

RF 95 RTM EN868

SW

RF 95 RT LR SW868

RF 95 RTM LR SW868

RF 95 RT ULR SW868

RF 95 RTM ULR SW868

RF 95 RT LR SW915

RF 95 RTM LR SW915

RF 95 RT ULR SW915

RF 95 RTM ULR SW915

Order number

95955002

95955003

Order number

95955005

95955006

95955008

95955009

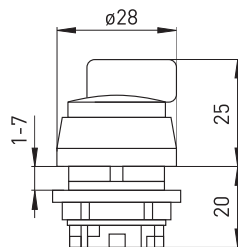
95955011

95955012

95955014

95955015

// Control switch RST



Features/options

- IP 65
- Control switch RST with spring return
- Actuator made of plastic
- Available on request with actuator made of stainless steel

EnOcean

RF 95 RSTA 0 <- I EN868

Order number

95957901

SW

RF 95 RSTA 0 <- I LR SW868

RF 95 RSTA 0 <- I ULR SW868

RF 95 RSTA 0 <- I LR SW915

RF 95 RSTA 0 <- I ULR SW915

Order number

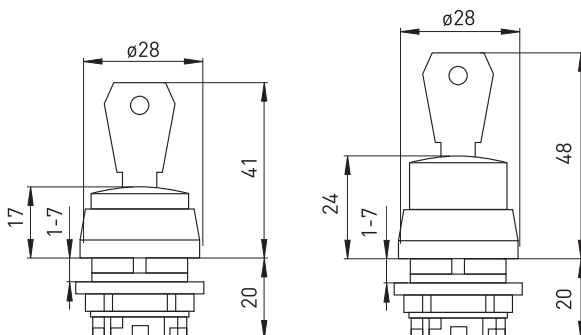
95957002

95957004

95957006

95957008

// Key switch RSSA



Features/options

- IP 65
- RSSA key switch with safety cylinder lock (locks against turning)
- Standard version always has same key number
- Available on request with actuator made of stainless steel

EnOcean

RF 95 RSSA 14 EN868

Order number

95958901

SW

RF 95 RSSA 14 LR SW868

RF 95 RSSA 14 ULR SW868

RF 95 RSSA 14 LR SW915

RF 95 RSSA 14 ULR SW915

Order number

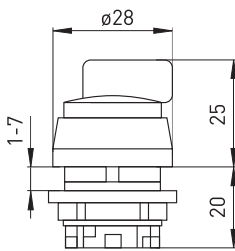
95958002

95958003

95958004

95958005

## // Selector switch RW



### Features/options

- IP 65
- Selector with rest positions
- Actuator made of plastic
- Available on request with actuator made of stainless steel

### EnOcean

RF 95 RWA 0<-I EN868

### Order number

95957001

### SW

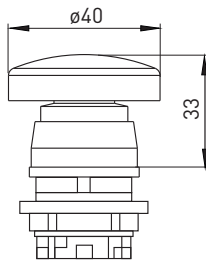
RF 95 RWA 0<-I LR SW868  
 RF 95 RWA 0<-I ULR SW868  
 RF 95 RWA 0<-I LR SW915  
 RF 95 RWA 0<-I ULR SW915

### Order number

95957003  
 95957005  
 95957007  
 95957009

67

## // Push-button RS



### Features/options

- IP 65
- Actuator made of plastic

### Black push button

RF 95 RS SW EN868

### Order Number

95955001

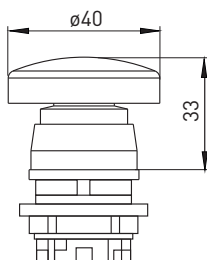
### SW

RF 95 RS SW LR SW868  
 RF 95 RS SW ULR SW868  
 RF 95 RS SW LR SW915  
 RF 95 RS SW ULR SW915

### Order number

95955007  
 95955010  
 95955013  
 95955016

## // Push-button with latching RV



### Features/options

- IP 65
- Actuator made of plastic

### EnOcean/black push button

RF 95 RV SW EN868

### Order Number

95956001

### EnOcean/yellow push button

RF 95 RV GE EN868

### Order Number

95956002

### SW/black push button

RF 95 RV SW LR SW868  
 RF 95 RV SW ULR SW868  
 RF 95 RV SW LR SW915  
 RF 95 RV SW ULR SW915

### Order number

95956002  
 95956003  
 95956004  
 95956005



# Wireless multifunction handles

## // Series RF TG

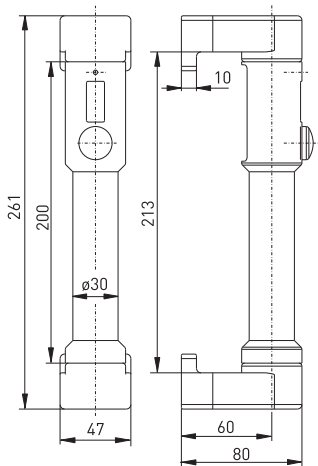
### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No wiring and pipe laying required
- Integrated solar cell, no battery/rechargeable battery required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	glass-fibre reinforced shock-proof thermoplastic POM
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Switching system</b>	push button
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Solar cell
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Switching on with empty energy supply</b>	< 10 min at 400 lx
<b>Charging time with empty energy supply</b>	approx. 6 h at 400 lx, approx. 1.5 h at 1000 lx
<b>Charging time at operation limit</b>	1 h at 400 lx, approx. 15 min at 1000 lx
<b>Operation time in darkness</b>	approx. 48 h, with status signal every 3h, when the goldcap is totally charged at 1000 lx
<b>Approvals</b>	 

// RF TG



Wireless multifunction handle  
RF TG-S EN868

Order Number  
97955914

Type code

RF TG EN868

Wireless frequency 868 MHz  
EnOcean  
Multifunction handle  
Wireless technology

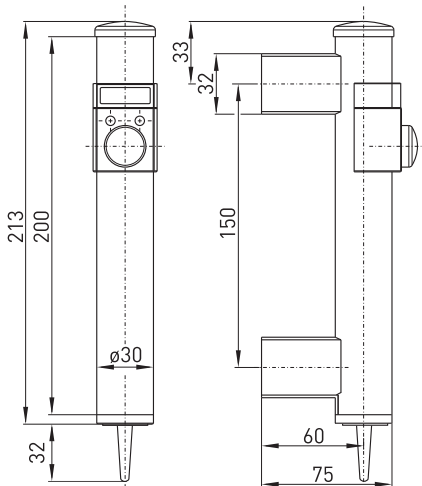
# Wireless multifunction handles

## // Series RF TGM

### Features/options

- Metal enclosure
- EnOcean standard
- No wiring and pipe laying required
- Integrated solar cell, no battery/rechargeable battery required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver



## // RF TGM



Wireless multifunction handle  
RF TGM-S EN868

Order Number  
97955001

## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	stainless steel V2A (1.4301) or Aluminium anodised, aluminium black anodised
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Switching system</b>	push button
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Solar cell
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Switching on with empty energy supply</b>	< 10 min at 400 lx
<b>Charging time with empty energy supply</b>	approx. 6 h at 400 lx, approx. 1.5 h at 1000 lx
<b>Charging time at operation limit</b>	1 h at 400 lx, approx. 15 min at 1000 lx
<b>Operation time in darkness</b>	approx. 48 h, with status signal every 3h, when the goldcap is totally charged at 1000 lx
<b>Approvals</b>	 

69

### Type code

**RF TGM EN868**

Wireless frequency 868 MHz  
EnOcean  
Multifunction handle  
Wireless technology

Other handle lengths and several push buttons available on request.

# Wireless foot switches

## // Series RF KF EN868

### Features/options



- Metal console, thermoplastic pedal
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Output signal can be individually configured at the receiver

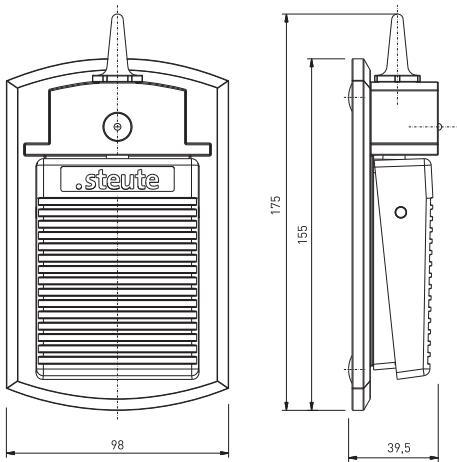
## // RF KF EN868



70

## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	zinc die cast console, RAL 9005
<b>Pedal</b>	glass-fibre reinforced thermoplastic (PA 66)
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	lithium battery
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 800,000 operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	status signal configurable ex works
<b>Approvals</b>	 



Wireless foot switch  
RF KF EN868

Order Number  
88191901

Type code

RF KF EN868

868 MHz wireless frequency  
EnOcean  
Series  
Wireless technology

PRODUCTION PROCESS  
COLOUR COATING OF PROTECTIVE SHIELDS



# Wireless foot switches

## // Series RF GFI EN868



### Features/options

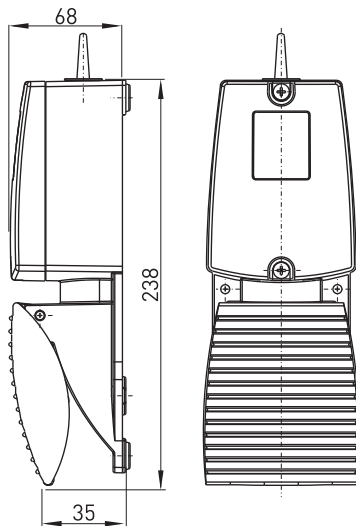
- Metal enclosure
- Available on request with special finish in RAL colour tones
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

### // RF GFI EN868



### Technical data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-3
<b>Enclosure</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Cover</b>	aluminium die-cast, enamel finish, RAL 2004
<b>Pedal</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available
<b>Approvals</b>	 



Wireless foot switch  
RF GFI EN868

Order Number  
53191001

<b>Type code</b>	<b>RF GFI EN868</b>
	868 MHz wireless frequency
	EnOcean
	Series
	Wireless technology



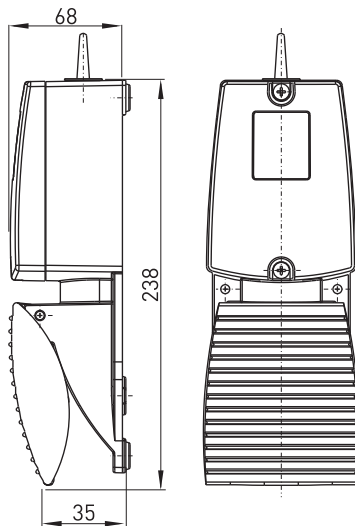
# Wireless foot switches

## // Series RF GFI SW868/SW915

### Features/options

- Metal enclosure
- Available on request with special finish in RAL colour tones
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

## // RF GFI SW868/SW915



### Wireless foot switch

RF GFI SW868  
RF GFI SW915

### Order Number

53191003  
53191004

## Technical Data

Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-1, -2
Enclosure	aluminium die-cast, enamel finish, RAL 5011
Cover	aluminium die-cast, enamel finish, RAL 2004
Pedal	aluminium die-cast, enamel finish, RAL 5011
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	SW
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 12000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz or 915 MHz (USA, Canada)
Transmission power	SW868: <25 mW, SW915: <10 mW
Data rate	66 kbps
Channel bandwidth	266 kHz
Sensing range	max. 700 m outside, max. 50 m inside
Mechanical life	> 1 million operations
Actuating time	min. 80 ms
Approvals	SW915 <b>FC IC</b>

73

### Type code

RF GFI SW868

868 MHz wireless frequency  
(SW915 915 MHz)

SW

Series

Wireless technology

# Wireless foot switches

## // Series RF GFSI EN868

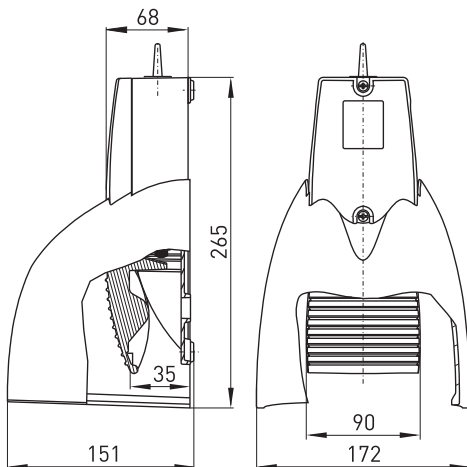
### Features/options

- Metal enclosure
- Available on request with special finish in RAL colour tones
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

## // RF GFSI EN868





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Wireless foot switch  
RF GFSI EN868

Order Number  
53291001

## Technical data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-3
<b>Enclosure</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Pedal</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Protective shield</b>	aluminium die-cast, enamel finish, RAL 2004
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available
<b>Approvals</b>	 

### Type code

**RF GFSI EN868**

868 MHz wireless frequency  
EnOcean  
Series  
Wireless technology

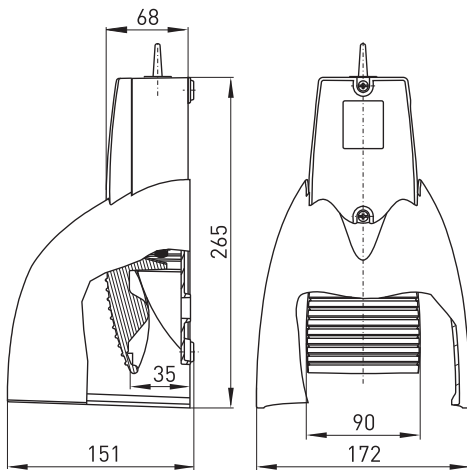
# Wireless foot switches

// Series RF GFSI SW868/SW915

## Features/options

- Metal enclosure
- Available on request with special finish in RAL colour tones
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

// RF GFSI SW868/SW915



## Wireless foot switch

RF GFSI SW868  
RF GFSI SW915

## Order Number

53291003  
53291004

## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-1, -2
<b>Enclosure</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Pedal</b>	aluminium die-cast, enamel finish, RAL 5011
<b>Protective shield</b>	aluminium die-cast, enamel finish, RAL 2004
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	SW
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 12000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz or 915 MHz (USA, Canada)
<b>Transmission power</b>	SW868: <25 mW, SW915: <10 mW
<b>Data rate</b>	66 kbps
<b>Channel bandwidth</b>	266 kHz
<b>Sensing range</b>	max. 700 m outside, max. 50 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Approvals</b>	SW915 <b>FC IC</b>

75

## Type code

RF GFSI SW868

868 MHz wireless frequency  
(SW915 915 MHz)

SW  
Series

Wireless technology



# Wireless pull-wire switches

## // Series RF 95 WH/90° EN868

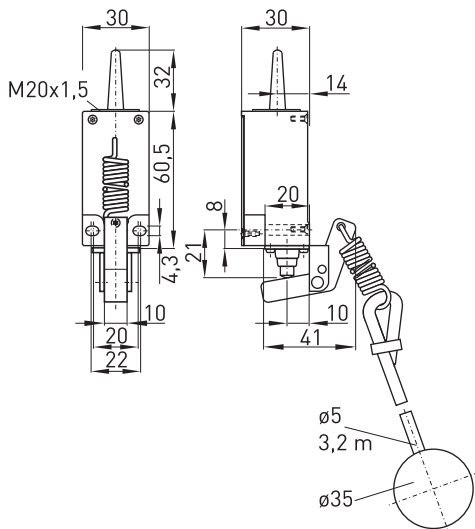
### Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- Including 3.2 m long pull-wire and ball
- EnOcean standard
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### Technical Data

Standards	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
Enclosure	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Cover	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	EnOcean
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 9000 telegrams at repetitions/h
Voltage supply	Electrodynamic energy generator
Frequency	868.3 MHz
Transmission power	max. 10 mW
Data rate	120 kbps
Channel bandwidth	280 kHz
Sensing range	max. 300 m outside, max. 30 m inside
Mechanical life	> 1 million operations
Actuating time	min. 80 ms
Note	no status signal available
Approvals	 

## // RF 95 WH/90° EN868



Wireless pull-wire switch  
RF 95 WH/90° EN868

Order Number  
95914901

Type code	RF 95 WH/90° EN868
	868 MHz wireless frequency
	EnOcean
	Actuator H/90°
	Watertight collar
	Series
	Wireless technology

# Wireless pull-wire switches

// Series RF 95 WH/90° SW868/SW915

## Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- Including 3.2 m long pull-wire and ball
- steute wireless technology
- No power supply, no wiring and pipe laying required
- Easy programming of receiver
- Output signal can be individually configured at the receiver

// RF 95 WH/90° SW868/SW915

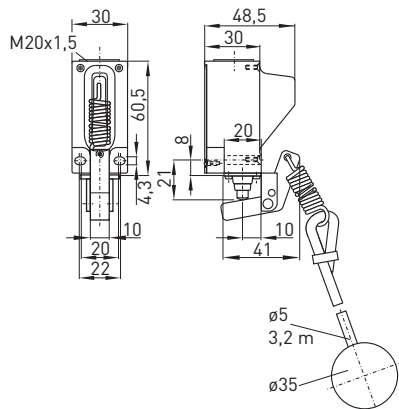


## Technical Data

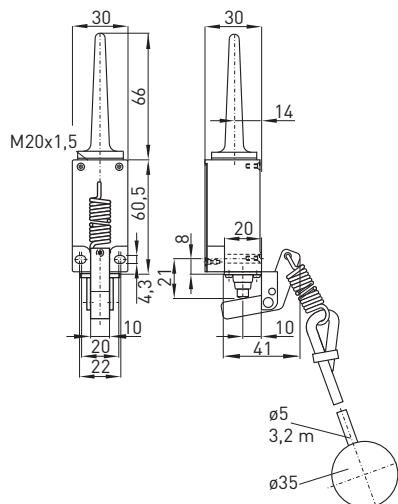
<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-1, -2
<b>Enclosure</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Cover</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	SW
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	approx. 12000 telegrams at repetitions/h
<b>Voltage supply</b>	Electrodynamic energy generator
<b>Frequency</b>	868.3 MHz or 915 MHz (USA, Canada)
<b>Transmission power</b>	SW868: <25 mW, SW915: <10 mW
<b>Data rate</b>	66 kbps
<b>Channel bandwidth</b>	266 kHz
<b>Sensing range</b>	LR: max. 450 m outside, max. 40 m inside ULR: max. 700 m outside, max. 50 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Approvals</b>	SW915 <b>FC IC</b>

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RF 95 LR



RF 95 ULR



<b>Wireless pull-wire switch</b>	<b>Order Number</b>
RF 95 WH/90° LR SW868	95914010
RF 95 WH/90° LR SW915	95914011
RF 95 WH/90° ULR SW868	95914012
RF 95 WH/90° ULR SW915	95914013

## Type code

<b>RF 95 WH/90° LR SW868</b>
868 MHz wireless frequency (SW 915 915 MHz)
SW
Long Range (ULR Ultra Long Range)
Actuator H/90°
Watertight collar
Series
Wireless technology

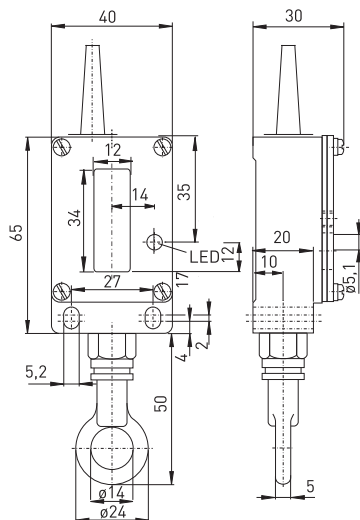
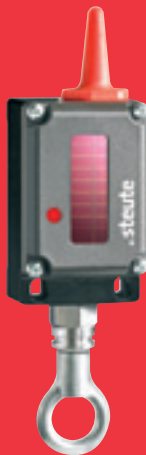
# Wireless pull-wire switches

## // Series RF 41 Z EN868

### Features/options

- Metal enclosure
- EnOcean standard
- No wiring and pipe laying required
- Integrated solar cell, no battery/rechargeable battery required
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF 41 Z EN868





### Wireless pull-wire switch

RF 41 Z EN868  
RF 41 WZ EN868

### Order Number

41941901  
41942901

## Technical Data

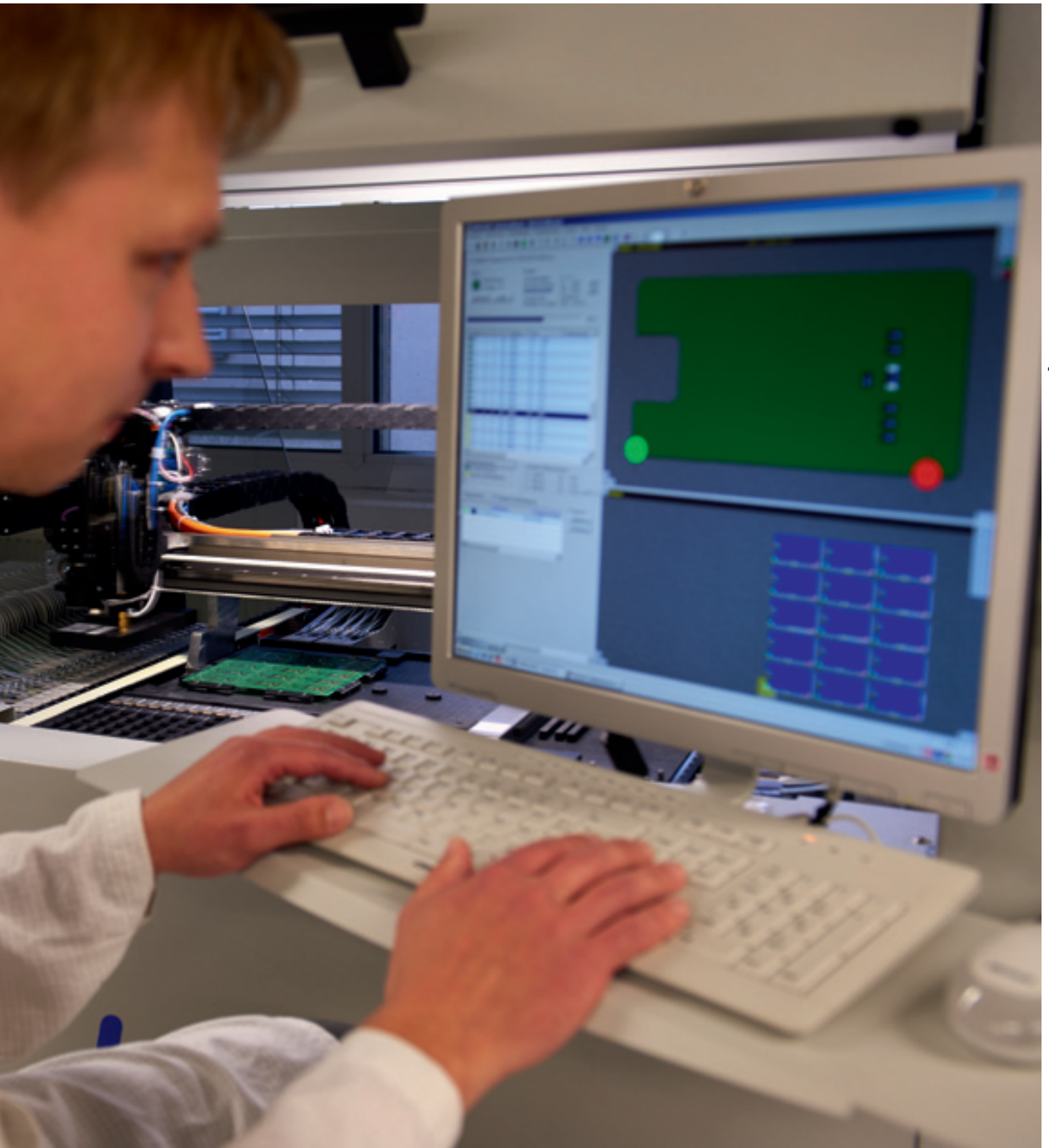
Standards	EN 60947-5-1, EN 61000-6-2; EN 301 489-1, EN 301 489-3, EN 300 220-2, -3
Enclosure	Aluminium die-cast, enamelled
Cover	Glassfibre reinforced thermoplastic
Degree of protection	IP 65 per IEC/EN 60529
Wireless protocol	EnOcean
Ambient temperature	-20 °C ... +65 °C
Switching frequency	approx. 9000 telegrams at repetitions/h
Voltage supply	Solar cell
Frequency	868.3 MHz
Transmission power	max. 10 mW
Data rate	120 kbps
Channel bandwidth	280 kHz
Sensing range	max. 300 m outside, max. 30 m inside
Mechanical life	> 1 million operations
Switching on with empty energy supply	< 10 min at 400 lx
Charging time with empty energy supply	approx. 6 h at 400 lx, approx. 1.5 h at 1000 lx
Charging time at operation limit	1 h at 400 lx, approx. 15 min at 1000 lx
Operation time in darkness	approx. 48 h, with status signal every 3h, when the goldcap is totally charged at 1000 lx
Approvals	 

### Type code

RF 41 WZ EN868

RF 41 WZ EN868  
 868 MHz wireless frequency  
 EnOcean  
 Actuator Z  
 Watertight collar  
 Series 41  
 Wireless technology

PRODUCTION PROCESS  
ASSEMBLY OF COMPONENTS



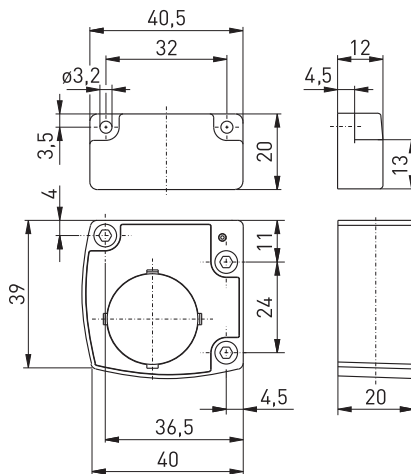
# Wireless magnetic sensors

## // Series RF RC 10 EN868

### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF RC 10 EN868



Wireless magnetic sensor  
RF RC 10 EN868  
Actuator M 4

Order Number  
10720101  
05.00.8225

## Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	thermoplastic, Polyamid PA 66
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching element</b>	Reed contact
<b>Switching distance</b>	> 10 mm
<b>Hysteresis</b>	< 1 mm
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Voltage supply</b>	Lithium-battery CR 2032 (replaceable)
<b>Capacity</b>	210 mAh
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 150 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 800,000 operations
<b>Actuating time</b>	min. 80 ms
<b>Mounting actuator</b>	min. 8 mm distance to ferromagnetic material
<b>Note</b>	no status signal available; actuator required as accessory

### Approvals



### Type code

RF RC 10 EN868

Wireless frequency 868 MHz  
EnOcean  
Series  
Magnetic sensor  
Wireless technology



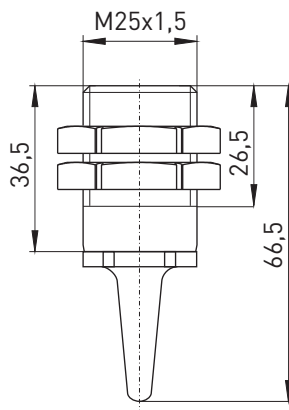
# Wireless magnetic sensors

## // Series RF GS M25 EN868



### Features/options

- Magnetic sensor based on GMR effect
- Thermoplastic enclosure
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### // RF GS M25 EN868



### Technical Data

<b>Standards</b>	EN 60947-5-1, EN 61000-6-2, EN 301 489-1, EN 301 489-3, EN 300 220-2, -3
<b>Enclosure</b>	Thermoplastic
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching distance</b>	> 20 mm
<b>Hysteresis</b>	< 1 mm
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Standby current</b>	1.5 µA
<b>Voltage supply</b>	Battery CR 1632 (not replaceable)
<b>Capacity</b>	140 mAh
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 1million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available; actuator required as accessory
<b>Approvals</b>	 

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Wireless magnetive sensor  
RF GS M25 EN868  
Actuator M 100 N

Order Number  
22580101  
05.00.8201

<b>Type code</b>	<b>RF GS M25 EN868</b>
	868 MHz wireless frequency
	EnOcean
	M25 thread
	Magnetic sensor with GMR effect
	Wireless technology

Two mounting nuts are provided.

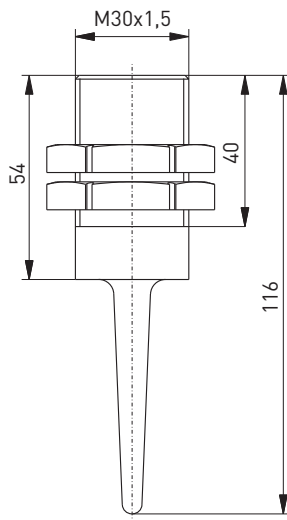
# Wireless magnetic sensors

## // Series RF GS M30 EN868

### Features/options

- Magnetic sensor based on GMR effect
- Metal enclosure
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

### // RF GS M30 EN868



Wireless magnetic sensor  
RF GS M30 EN868  
Actuator M 30 Niro

Order Number  
23080101  
05.00.8226

### Technical Data

<b>Standards</b>	EN 60947-5-1, EN 61000-6-2, EN 301 489-1, EN 301 489-3, EN 300 220-3
<b>Enclosure</b>	Stainless steel 1.4571
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Switching distance</b>	> 20 mm
<b>Hysteresis</b>	< 1 mm
<b>Switching frequency</b>	approx. 9000 telegrams at repetitions/h
<b>Standby current</b>	1.5 µA
<b>Voltage supply</b>	Battery CR 1632 (not replaceable)
<b>Capacity</b>	140 mAh
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Mechanical life</b>	> 1 million operations
<b>Battery life</b>	> 1 million operations
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	no status signal available; actuator required as accessory

### Approvals



### Type code

**RF GS M30 EN868**

868 MHz wireless frequency  
EnOcean  
M30 thread  
Magnetic sensor with GMR effect  
Wireless technology

Two mounting nuts are provided.

PRODUCTION PROCESS  
SMD PARTS READY FOR ASSEMBLY



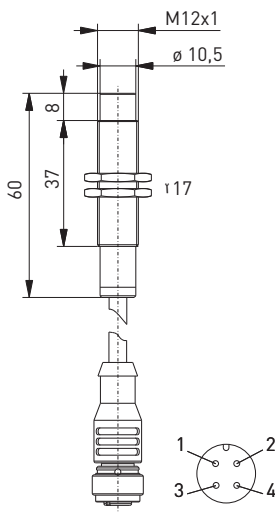
# Wireless inductive sensors

## // Series RF IS Mxx nb-ST

### Features/options

- Metal enclosure
- Non-flush mounting
- To be connected to RF 96 ST EN868 universal transmitter
- With M12 coupling, 4-pole

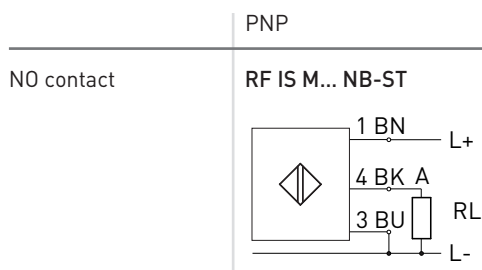
### // RF IS M12 NB-ST



### Technical Data

Standards	EN 60947-5-1
Enclosure	Brass nickeled
Cap	PVC black
Connection	Coupling M12x1, 4-pole
Cable length	0.5, 1 or 2 m
Degree of protection	IP 67 per IEC/EN 60529
Ambient temperature	-25 °C ... +70 °C
Rated isolation voltage $U_i$	75 VDC
Rated operating current $I_a$	0,2 mA
Rated operating voltage $U_e$	3 ... 5 VDC
Switching distance	RF IS M12: $s_n$ 4 mm, $s_a$ 0 ... 3.24 mm, $s_r$ 3.6 mm ... 4.4 mm RF IS M18: $s_n$ 8 mm, $s_a$ 0 ... 6.48 mm, $s_r$ 7.2 mm ... 8.8 mm RF IS M30: $s_n$ 15 mm, $s_a$ 0 ... 12.15 mm, $s_r$ 13.5 mm ... 16.5 mm
Hysteresis	approx. 10 %
Repeat accuracy	< 5 %
Mounting	non-flush
Switching frequency	see RF 96 ST
Correction factors	Steel (St37) = 1; V2A approx. 0.7; Brass approx. 0.5; Al approx. 0.5; Cu approx. 0.4
Target	M12: 12 x 12 mm x 1 mm; M18: 24 x 24 mm x 1 mm; M30: 45 x 45 mm x 1 mm material: Steel (FE 360)
Note	The sensors can only be used in conjunction with RF 96 ST

### Contact variants: switch travel/contacts



### Type code

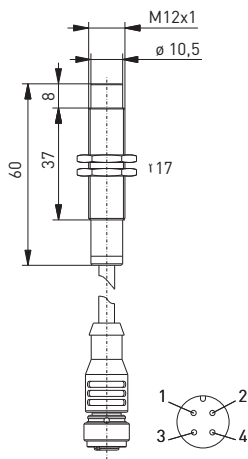
RF IS M30 nb-ST

M12 coupling  
non-flush mounting  
M30 thread (M12 or M18)  
Inductive sensor  
Wireless technology

Two mounting nuts are provided.

Wireless inductive sensors  
 // Series RF IS Mxx nb-ST

// RF IS M12 nb-ST



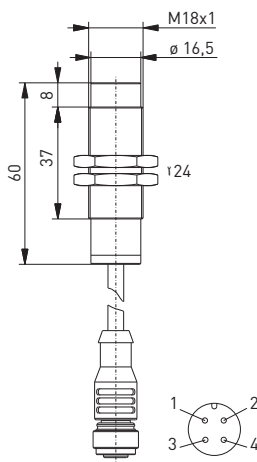
**Features/options**  
 - non-flush mounting  
 - M12 thread

**EnOcean**  
 RF IS M12 nb-ST 0,5m  
 RF IS M12 nb-ST 1m  
 RF IS M12 nb-ST 2m

**Order number**  
 90211005  
 90211008  
 90211002

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// RF IS M18 nb-ST

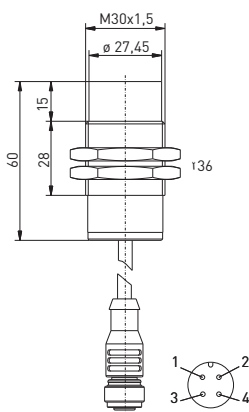


**Features/options**  
 - non-flush mounting  
 - M18 thread

**EnOcean**  
 RF IS M18 nb-ST 0,5m  
 RF IS M18 nb-ST 1m  
 RF IS M18 nb-ST 2m

**Order number**  
 90211006  
 90211009  
 90211003

// RF IS M30 nb-ST



**Features/options**  
 - non-flush mounting  
 - M30 thread

**EnOcean**  
 RF IS M30 nb-ST 0,5m  
 RF IS M30 nb-ST 1m  
 RF IS M30 nb-ST 2m

**Order number**  
 90211007  
 90211010  
 90211004

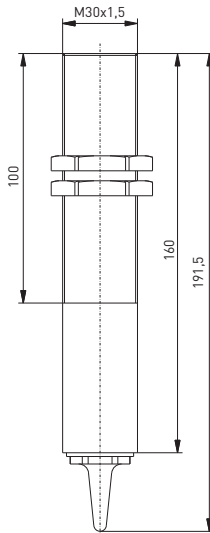
# Wireless inductive sensors

## // Series RF IS M30 EN868

### Features/options

- Thermoplastic enclosure
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF IS M30 EN868



Wireless inductive sensor  
RF IS M30 EN868

Order Number  
90211001

## Technical Data

Standards	EN 60947-5-1, EN 61000-6-2, EN 301 489-1, EN 301 489-3, EN 300 220-2, -3
Enclosure	Thermoplastic
Degree of protection	IP 67 per IEC/EN 60529
Wireless protocol	EnOcean
Ambient temperature	- 20 °C ... + 65 °C
Switching distance	10 mm
Hysteresis	ca. 1 mm
Switching frequency	5 Hz
Standby current	1.5 µA
Voltage supply	Lithium battery SL-760/S type AA (replaceable)
Capacity	2.2 Ah
Frequency	868.3 MHz
Transmission power	max. 10 mW
Data rate	120 kbps
Channel bandwidth	280 kHz
Sensing range	max. 300 m outside, max. 30 m inside
Mechanical life	> 1 million operations
Battery life	approx. 10 years unused, approx. 200 days with 1 actuation per s, approx. 360 days with 1 actuation per min.
Actuating time	min. 80 ms
Correction factors	Steel (St37) = 1; V2A approx. 0.7; Brass approx. 0.5; Al approx. 0.5; Cu approx. 0.4
Target	M30: 30 x 30 mm x 1 mm
Note	no status signal available
Approvals	ANATEL

### Type code

**RF IS M30 EN868**

868 MHz wireless frequency  
EnOcean  
M30 thread  
Inductive sensor  
Wireless technology

Two mounting nuts are provided.

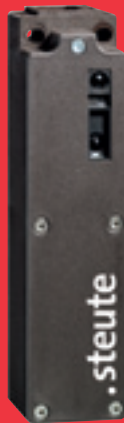
# Wireless optical sensors

## // Series RF 96 LT EN868

### Features/options

- Light sensor: actuated by light reflection
- Thermoplastic enclosure
- Mounting details to EN 50 047
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

// RF 96 LT EN868

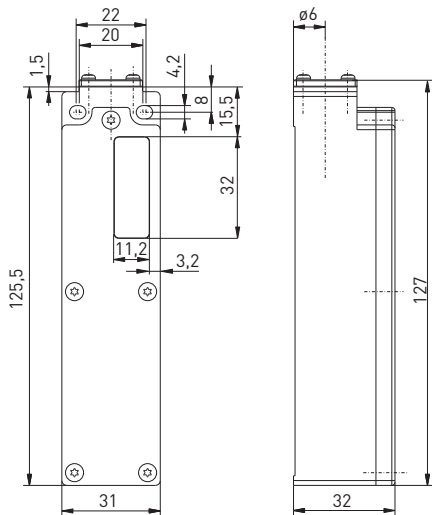


### Technical data

<b>Standards</b>	EN 60947-5-1, EN 61000-6-2, EN 301 489-1, EN 301 489-3, EN 300 220-2, -3
<b>Enclosure</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Degree of protection</b>	IP 50 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	0 °C ... + 65 °C
<b>Sensing range</b>	40 ... 300 mm
<b>Switching frequency</b>	max. 20 telegrams/h
<b>Voltage supply</b>	Lithium battery (replaceable)
<b>Capacity</b>	8.5 Ah
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Actuating time</b>	min. 80 ms
<b>Note</b>	status signal configurable ex works, transmission of battery voltage

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### Approvals



Wireless optical sensor  
RF 96 LT EN868

Order Number  
66760201

### Type code

**RF 96 LT EN868**

868 MHz wireless frequency  
EnOcean  
Optical sensor  
Series  
Wireless technology

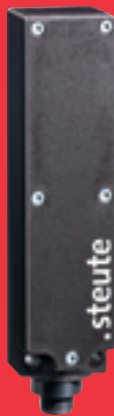
# Wireless universal transmitters

## // Series RF 96 ST EN868

### Features/options

- Thermoplastic enclosure
- Mounting details to EN 50 047
- M12 coupling
- EnOcean standard
- No wiring and pipe laying required
- Power supply by Lithium battery
- Easy programming of receiver
- Multi-network capable
- Output signal can be individually configured at the receiver

## // RF 96 ST EN868

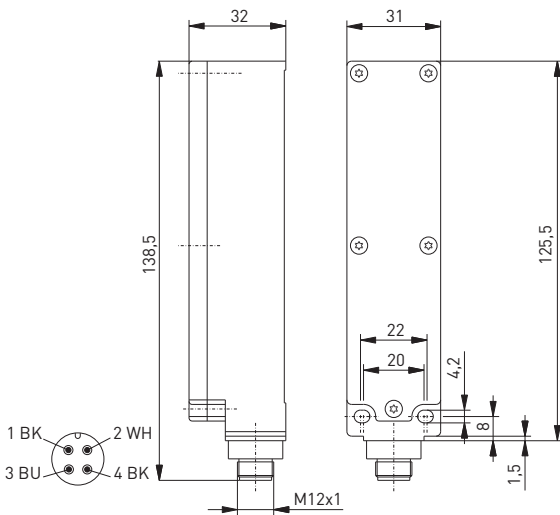


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### Technical Data

<b>Standards</b>	EN 60947-5-1; EN 61000-6-2; EN 301 489-1; EN 301 489-3; EN 300 220-2, -3
<b>Enclosure</b>	Glassfibre reinforced thermoplastic, self-extinguishing UL 94-V0
<b>Connection</b>	Plug-in connector M12x1, 4 poles
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Wireless protocol</b>	EnOcean
<b>Ambient temperature</b>	-20 °C ... +65 °C
<b>Switching frequency</b>	5 Hz
<b>Standby current</b>	1.5 µA
<b>Voltage supply</b>	Lithium battery (replaceable)
<b>Capacity</b>	8.5 Ah
<b>Frequency</b>	868.3 MHz
<b>Transmission power</b>	max. 10 mW
<b>Modulation process</b>	ASK
<b>Telegram type</b>	RPS type 2
<b>Data rate</b>	120 kbps
<b>Channel bandwidth</b>	280 kHz
<b>Sensing range</b>	max. 300 m outside, max. 30 m inside
<b>Battery life</b>	according to switch frequency, 1 s approx. 780 days, 10 s approx. 1300 days, 100 s approx. 1400 days
<b>Actuating time</b>	min. 80 ms
<b>Switching frequency input</b>	max. 5 Hz
<b>Note</b>	status signal configurable ex works, transmission of battery voltage

### Approvals



Wireless universal transmitter  
RF 96 ST EN868

Order Number  
66800201

### Type code

**RF 96 ST EN868**

868 MHz wireless frequency  
EnOcean  
Plug-in connector M12 x 1  
Series  
Wireless technology



PRODUCTION PROCESS

WIRELESS SENSORS READY FOR BATTERY ASSEMBLY



// Remote transmitter R 101 EN868



**Features/options**

- Thermoplastic enclosure
- EnOcean standard
- Energy supply: electrodynamic energy generator (induction principle), battery-free and maintenance-free
- Easy programming of receiver
- 4 push-buttons with 4 different functions

**Remote transmitters**  
R 101 EN868

**Order Number**  
01.08.0282

// Field strength indicator EPM 300



**Features/options**

- Only suitable for EnOcean standard
- Mobile field strength indicator EPM 300 for link range testing
- To measure and indicate the electrical field strength
- Battery not included, requires AA/LR91 Lithium battery
- Repeater mode can be selected

**Field strength indicators**  
EPM 300

**Order Number**  
90598005

// 24 VDC power supply



**Features/options**

- 24 VDC power supply for wireless receivers RF Rx ...

**Power supplies**  
Power supply 24 VDC

**Order Number**  
90598012

// RF Magnet antenna 868 MHz



**Features/options**

- RF magnet antenna with straight SMA plug-in connector without ferrite core
- Cable length 2.5 m

**Antennas**

RF Magnet antenna EN868

**Order Number**

01.08.0386

**Note**

The antenna must be mounted on a metal plate of min. 250 x 250 mm size.

// RF High gain antenna EN868



**Features/options**

- Only suitable for EnOcean standard
- RF high gain antenna suitable for mast mounting up to max. 41 mm diameter
- 260 mm length
- N-connector socket
- 5 dbi gain
- internally grounded as lightning protection

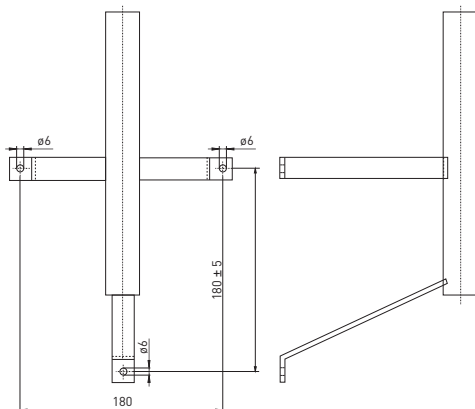
**Antennas**

RF high gain antenna  
 RF SMA N antenna connecting cable 5 m  
 RF SMA N antenna connecting cable 10 m

**Order Number**

90598003  
 90598004  
 90598008

// RF Mounting bracket for high gain antenna



**Features/options**

- Mounting bracket for wall mounting

**Mounting bracket for wall mounting**

Mounting bracket for high gain antenna

**Order Number**

90598006

// RF Magnet antenna 868 MHz



**Features/options**

- RF magnet antenna with straight SMA plug-in connector without ferrite core
- Cable length 1.5 m

**Antennas**

RF Magnet antenna SW868 5 dB

**Order Number**

90598013

**Note**

The antenna must be mounted on a metal plate of min. 250 x 250 mm size.

// RF Magnet antenna 915 MHz



**Features/options**

- RF magnet antenna with straight RSMA plug-in connector without ferrite core
- Cable length 3.6 m

**Antennas**

RF Magnet antenna SW915 5 dB

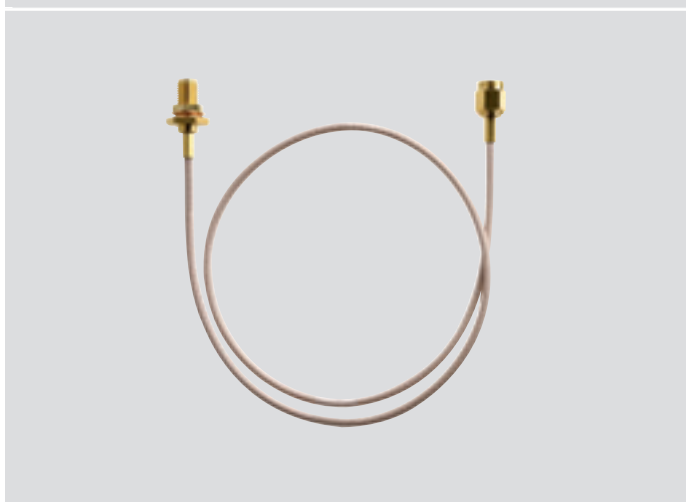
**Order Number**

90598014

**Note**

The antenna must be mounted on a metal plate of min. 250 x 250 mm size.

// RF SMA antenna socket



**Features/options**

- Suitable for the antennas order number 01.08.386 and order number 90598013
- Cable length 0.5 m

**Antenna sockets**

RF Magnet antenna socket

**Order Number**

90598001

## // RF SMA antenna extension



### Features/options

- RF SMA cable suitable for EnOcean as well as steute wireless technology
- Antenna extension cable with straight SMA plug-in connector

### Antenna extensions

RF SMA antenna extension cable 3 m

### Order Number

90598002

## // RF SMA N antenna extension for high gain antenna



### Features/options

- RF SMA N cable only suitable for EnOcean standard with high gain antenna
- Antenna extension cable with straight SMA plug-in connector

### Antenna extensions

RF SMA N antenna extension cable 5 m

RF SMA N antenna extension cable 10 m

### Order Number

90598004

90598008

## // RS 232 cable



### Features/options

- RS 232 cable for receiver RF Rx EN868-2W-RS232
- Provided with receiver

### Cable

RS 232 cable

### Order Number

## // Antenna arrangement

### Arrangement of receiver and switch antenna

Optimum mounting



Possible mounting

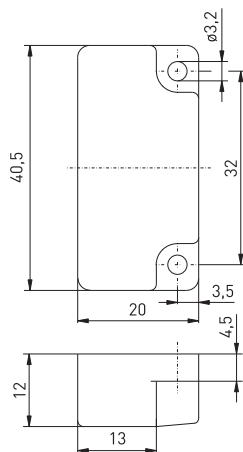


Unsuitable mounting



94

## // M 4 actuating magnet



### Features/options

- M 4 actuator for wireless magnetic sensor RF RC 10
- Order unit: 1 piece

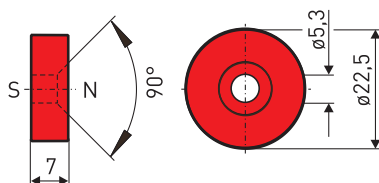
### Actuators

M 4

### Order Number

05.00.8225

## // M100 N actuating magnet



### Features/options

- M 100 N actuator for wireless magnetic sensor RF GS M25
- Order unit: 1 piece

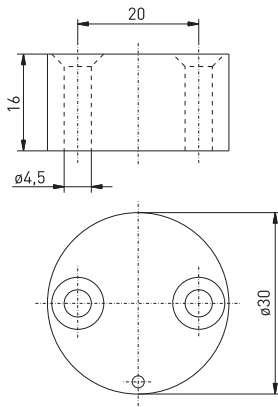
### Actuators

M 100 N

### Order Number

05.00.8201

## // M 30 Niro actuating magnet



### Features/options

- M 30 Niro actuator for wireless magnetic sensor RF GS M30
- Order unit: 1 piece

### Actuators

M 30 Niro

### Order Number

05.00.8226

A close-up photograph of an orange textured surface, likely a car seat or interior panel. The surface has a fine, pebbled texture. At the top, there is a black plastic component with a silver screw. Below it, a rectangular recessed area contains another silver screw. The word ".steute" is printed in white, lowercase letters on the right side of the orange surface. The bottom part of the image shows a large, curved, textured orange shape, possibly a seat cushion or backrest, which is also attached with a silver screw.

.steute



## Wireless technology 2.4 GHz

### Wireless receivers

// Series RF RxT SW2.4

from page 98

### Wireless foot switches

// Series RF GFI SW2.4

from page 100

// Series RF GFSI SW2.4

from page 101

### Accessories

from page 102

Wireless technology 2.4 GHz  
 // Series RF RxT SW2.4-4W

Features/options

- steute wireless technology
- 4 channel: potential free relay outputs
- 4 change-over contacts, max. 6 A
- LEDs for indication of switching state
- SMA-plug-in connector for external antenna

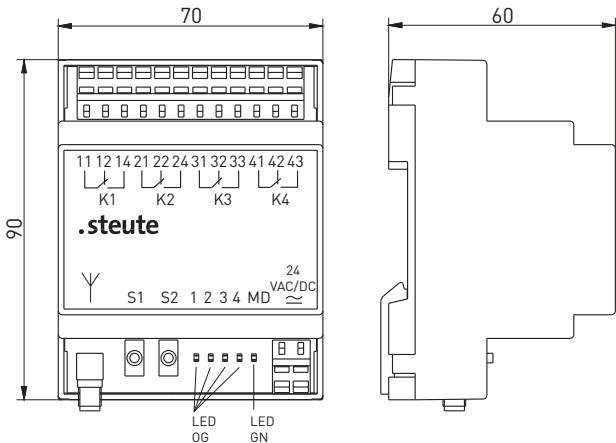
// RF RXT SW2.4



Technical data

<b>Standards</b>	EN 300 440 -1 V1.3.1; EN 300 440 -2 V1.1.2; EN 301 489 -1 V1.6.1; EN 301 489 -3 V1.4.1; EN 60950; EN 50371
<b>Mounting</b>	DIN rail mounting
<b>Connection</b>	terminals with CAGE CLAMP WAGO Series 236; 0.08 ... 2.5 mm <sup>2</sup> AWG 28-12, AWG 12: THHN, THWN, stripping length 5 ... 6 mm/ 0.22 in
<b>Degree of protection</b>	IP 20 per IEC/EN 60529
<b>Rated operating current I<sub>e</sub></b>	max. 0.21 A
<b>Rated operating voltage U<sub>e</sub></b>	24 VDC -15 % ... +10 %
<b>Inputs</b>	2 transmitters per receiver
<b>Outputs</b>	4 change-over contacts (Relays)
<b>I<sub>e</sub>/U<sub>e</sub> of output contacts</b>	6A / 250 VAC; 2A / 24 VDC
<b>Utilisation category</b>	AC-15; DC 13
<b>Frequency</b>	2.4 ... 2.4835 GHz
<b>Display</b>	green LED for supply voltage, yellow LED for switching conditions acc. to EMC directive
<b>EMC rating</b>	2 per DIN VDE 0110
<b>Degree of pollution</b>	2 per DIN VDE 0110
<b>Ambient temperature</b>	0 °C ... +55 °C
<b>Storage and transport-temperature</b>	-25 °C ... +85 °C
<b>Vibration resistance</b>	NO contact 20g, NC contact 5g
<b>Shock resistance</b>	max. 100g
<b>Note</b>	inductive loads (contactors, relays etc.) are to be suppressed by suitable circuitry.

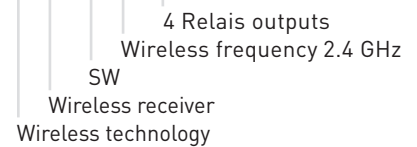
Approvals



Wireless receiver  
 RF RxT SW 2.4-4W 24 VAC/DC

Order Number  
 90590011

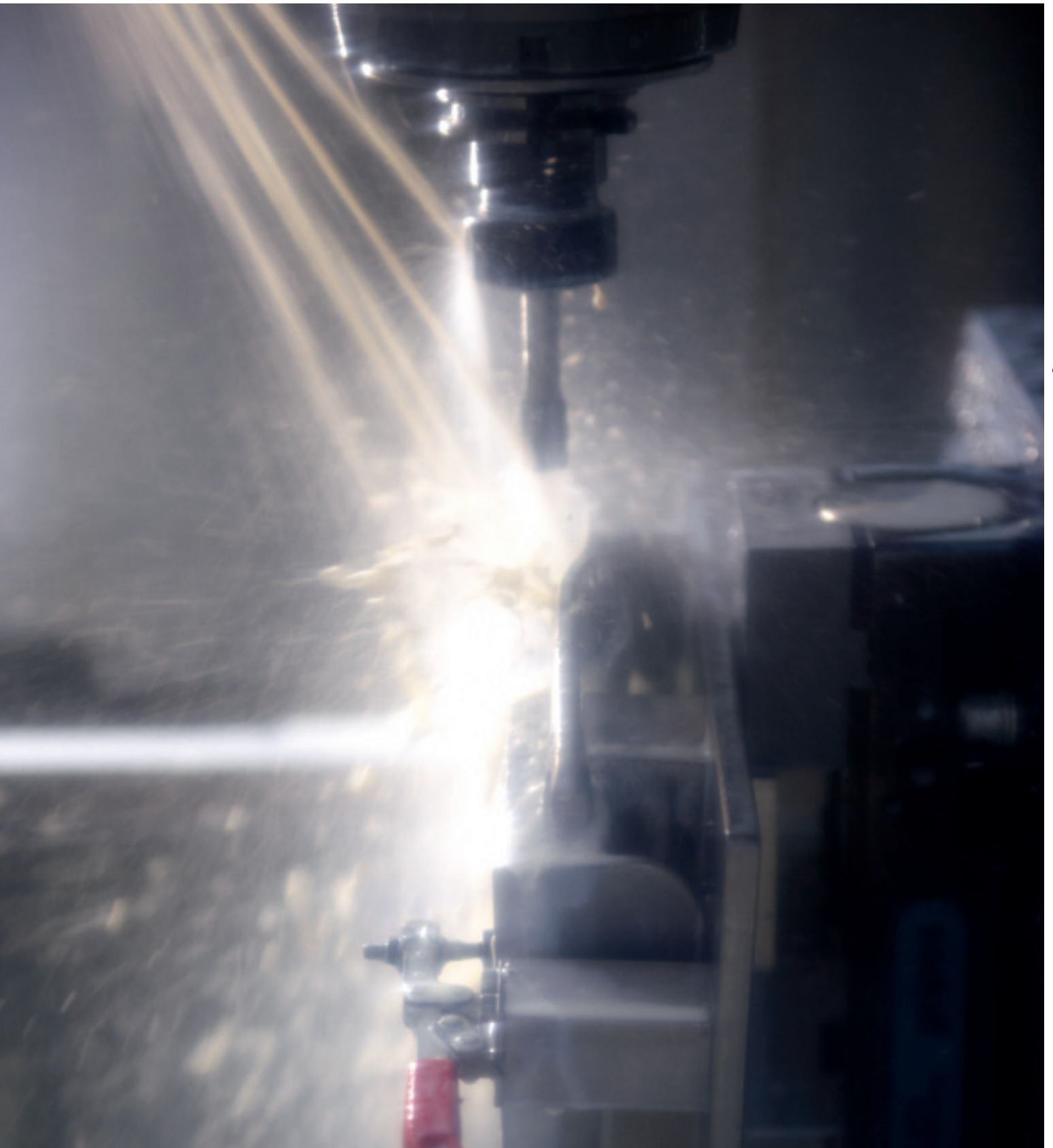
Type code **RF RxT SW2.4-4W**



RF magnet antenna with SMA plug-in connector available as accessory oder-No. 01.08.0409

PRODUCTION PROCESS

MECHANICAL MACHINING OF FOOT SWITCH ENCLOURES



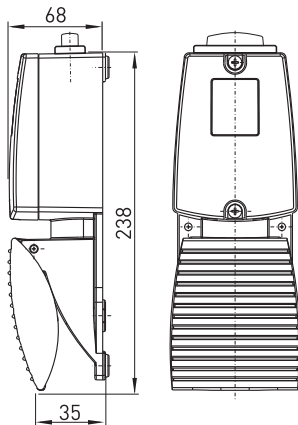
# Wireless technology 2.4 GHz

## // Series RF GFI SW2.4




### Features/options

- Metal enclosure
- Available on request with special finish in RAL colour tones
- steute wireless technology
- Point-to-Point connection
- Pairing via internal push-button
- Frequency hopping: 32 frequencies (200 hops/s)
- Easy programming of receiver
- Transmission of battery power

### // RF GFI SW2.4



### Technical data

<b>Standards</b>	EN 300 440 -1 V1.3.1; EN 300 440 -2 V1.1.2; EN 301 489 -1 V1.6.1; EN 301 489 -3 V1.4.1; EN 60950; EN 50371
<b>Enclosure</b>	Aluminium diecast, enamel finish, RAL 5011
<b>Cover</b>	Aluminium diecast, enamel finish, RAL 2004
<b>Pedal</b>	Aluminium diecast, enamel finish, RAL 5011
<b>Protective shield</b>	-
<b>Degree of protection</b>	IP 67 per IEC/EN 60529
<b>Transmission incl. frequency change</b>	max. 20 ms
<b>Synchronisation after sleep mode</b>	max. 200 ms
<b>Power consumption</b>	21 ... 25 mA
<b>Power consumption sleep mode</b>	approx. 56 µA
<b>Voltage supply</b>	Lithium battery type SL 2770
<b>Capacity</b>	8.5 Ah / 3.6 V
<b>Battery life</b>	approx. 10 years unused, 240 days at 10 min actuations per h (8 h/d)
<b>Sensing range</b>	max. 20 m
<b>Frequency</b>	2.4 ... 2.4835 GHz
<b>Transmission power</b>	1 mW
<b>Ambient temperature</b>	- 20 °C ... + 65 °C
<b>Mech. life</b>	> 1 million operations
<b>Approvals</b>	  

Wireless foot switch  
RF GFI SW 2.4

Order Number  
53191002

Type code

**RF GFI SW2.4**

Wireless frequency 2.4 GHz  
SW  
Series  
Wireless technology

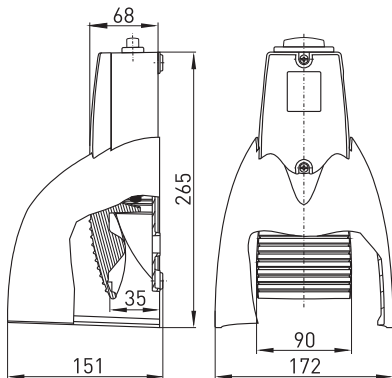
# Wireless technology 2.4 GHz

## // Series RF GFSI SW2.4

### Features/options

- Metal enclosure
- Available on request with special finish in RAL colour tones
- steute wireless technology
- Point-to-Point connection
- Pairing via internal push-button
- Frequency hopping: 32 frequencies (200 hops/s)
- Easy programming of receiver
- Transmission of battery power

## // RF GFSI SW2.4



### Technical data

Standards	EN 300 440 -1 V1.3.1; EN 300 440 -2 V1.1.2; EN 301 489 -1 V1.6.1; EN 301 489 -3 V1.4.1; EN 60950; EN 50371
Enclosure	Aluminium diecast, enamel finish, RAL 5011
Pedal	Aluminium diecast, enamel finish, RAL 5011
Protective shield	Aluminium diecast, enamel finish, RAL 2004
Degree of protection	IP 67 per IEC/EN 60529
Transmission incl. frequency change	max. 20 ms
Synchronisation after sleep mode	max. 200 ms
Power consumption	21 ... 25 mA
Power consumption sleep mode	approx. 56 µA
Voltage supply	Lithium battery type SL 2770
Capacity	8.5 Ah / 3.6 V
Battery life	approx. 10 years unused, 240 days at 10 min actuations per h (8 h/d)
Sensing range	max. 20 m
Frequency	2.4 ... 2.4835 GHz
Transmission power	1 mW
Ambient temperature	- 20 °C ... + 65 °C
Mech. life	> 1 million operations
Approvals	

101

Wireless foot switch  
RF GFSI SW 2.4

Order Number  
53291002

Type code

RF GFSI SW2.4

Wireless frequency 2.4 GHz  
SW  
Series  
Wireless technology

// RF magnet antenna 2.4 GHz



**Features/options**

- RF magnet antenna with straight SMA plug-in connector without ferrite core
- Cable length 1 m
- Order unit: 1 piece

**Antennas**

RF Magnet antenna 2.4 GHz

**Order Number**

01.08.0409

**Note**

The antenna must be mounted on a metal plate of min. 250 x 250 mm size.

// RF SMA antenna socket



**Features/options**

- RF SMA antenna socket with straight SMA plug-in connector
- Cable length 0.5 m
- Order unit: 1 piece

**Antenna sockets**

RF Magnet antenna

**Order Number**

90598001

// RF SMA antenna extension



**Features/options**

- RF SMA antenna extension cable with straight SMA plug-in connector
- Cable length 3 m
- Order unit: 1 piece

**Antenna extensions**

RF SMA antenna extension cable 3 m

**Order Number**

90598002

## // Antenna arrangement

### Arrangement of receiver and switch antenna

Optimum mounting



Possible mounting



Unsuitable mounting



103

## // 24 VDC power supply



### Features/options

- 24 VDC power supply for wireless receivers RF Rx ...

### Power supplies

Power supply 24 VDC

Order Number

90598012









steute develops and manufactures safe switchgear for demanding and critical application. Besides a comprehensive standard range of products for »Wireless, Automation, Extreme and Meditec« applications, we also and increasingly develop customised switchgear for extreme conditions in all four business fields. Some examples: emergency pullwire

switches for the mining industry, position switches for industrial automation and control panels for laser surgery. Our head office is in Löhne, Westphalia, Germany; worldwide sales are conducted through steute's subsidiaries and trading partners.

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