KNX RF push-button 1-gang
Art. no.: ..10911STRF..
KNX RF push-button 2-gang
Art. no.: ..10921STRF..

Operating instructions

1   Safety instructions

Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.

The radio communication takes place via a non-exclusively available transmission path, and is therefore not suitable for safety-related applications, such as emergency stop and emergency call.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

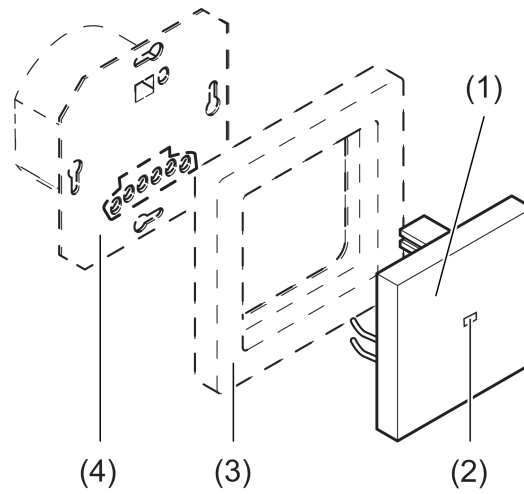**Front view 1-channel (Figure 1) and 2-channel (Figure 2)**
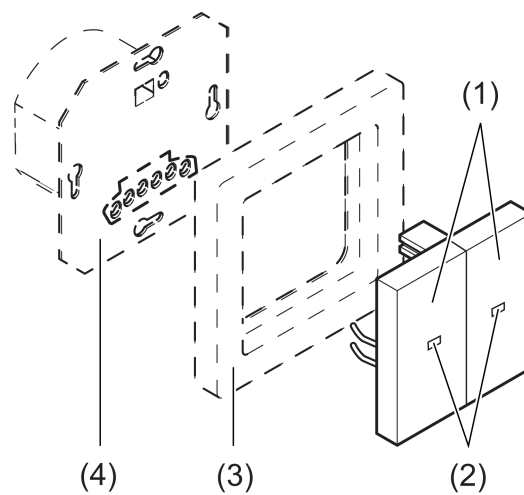

Figure 1: Device components 1-channel

Figure 2: Device components 2-channel

(1)   Rockers (accessory)
(2)   Status LED
(3)   Cover frame (accessory)
(4)   Insert

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The function of this device depends upon the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer´s product database.

The device can be updated. Firmware can be easily updated with the Jung ETS Service App (additional software).

The device is KNX Data Secure capable. KNX Data Secure offers protection against manipulation in building automation and can be configured in the ETS project. Detailed specialist knowledge is required. A device certificate, which is attached to the device, is required for safe commissioning. During mounting, the certificate must be removed from the device and stored securely.

The range of a radio system depends on various external circumstances. The range can be optimised by the choice of installation location. The product documentation for this device contains application basics for the KNX radio system.

Planning, installation and commissioning of the device are carried out with the aid of the ETS, version 5.7.5 and above.

Intended use

– Operation of loads, e.g. light on/off, dimming of brightness and colour temperature, Venetian blinds up/down, value transmitter 1 byte, 2 bytes, 3 bytes and 6 bytes, brightness values, temperatures, calling up and saving of light scenes
– Room temperature control
– Operation in cabled KNX systems via radio media coupler (see chapter Accessories)
– Operation of switching, dimming, DALI, Venetian blind or room temperature insert or 3-wire extension from the LB-Management

Product characteristics

– Activation of blind/shutters, with Venetian blind insert
– Switching and dimming of lighting, with switching or dimming insert
– Colour temperature control of lighting, with DALI insert TW
– Room temperature control, with RTC insert
– Control via the extension terminal on the LB insert (installation push-button, extension 2-wire, extension 3-wire)
– Push-button sensor functions switching, dimming, Venetian blind, value transmitter, scene extension, 2-channel operation and controller extension adjustable
– Operating concept (rocker or button) adjustable for every operating area
– Button assessment (single-area operation or dual-area operation) adjustable
– One or two functions per operating area
– Controller extension with adjustable operating mode selection, forced operating mode switch over, presence function and setpoint shift
– Status LED – optionally red, green, blue – adjustable per rocker
– LED functions orientation lighting and night reduction can be set separately
– Brightness of LED adjustable and switchable while in operation
– Disable or function switch-over of all or of individual button functions possible with disabling function
– Temperature measurements optionally with device internal sensor and external sensor connected via communication object (only with suitable inserts)

[i] Temperature measurements are only possible in combination with the following inserts:

   - Relay switch insert 1-channel

- Electronic switch insert 1-channel
- Power DALI push-button controller TW
- Universal blinds insert
- Standard blinds insert
- Room thermostat insert with sensor connection
- Satellite insert 3-wire

[i] For accurate temperature measurement, make sure that the connected loads do not exceed 40 W for the Electronic switch insert 1-channel.

[i] To ensure good transmission quality, keep a sufficient distance from any possible sources of interference, e.g. metallic surfaces, microwave ovens, hi-fi and TV systems, ballasts or transformers.

4 Operation

The operation of functions or electrical consumers can be set individual for each device:

Operation concept	single-area operation	dual-area operation
Rocker function	-	Each rocker can perform an individual function.
Button function	Two buttons above one another perform the same function.	Each button can perform an individual function.

4.1 Operation concept

The operation concept can be configured in the ETS either as a rocker function or alternatively as a button function. With the rocker function, two buttons lying one above the other are combined into one rocker. In the button function, each button is evaluated as single-area operation.
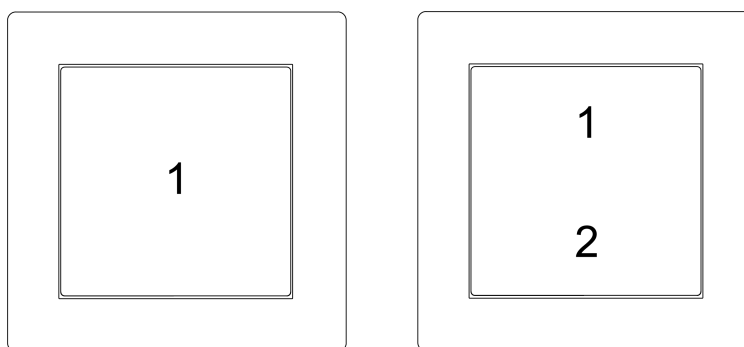

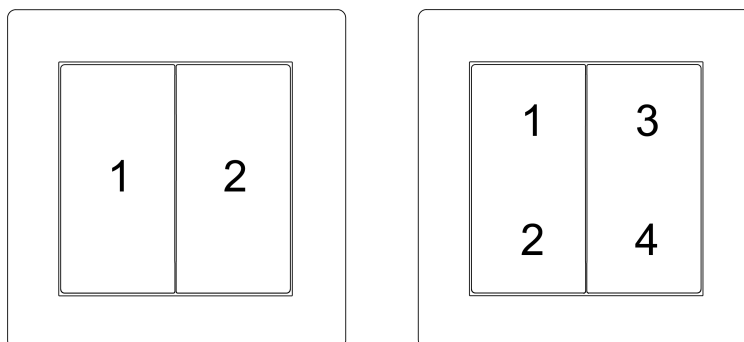Figure 3: Operating concept 1-gang (left: rocker function, right: button function)

Figure 4: Operating concept 2-gang (left: rocker function, right: button function)

4.2 Examples for operating various standard applications

- Switch: Short press on button.
- Dim: Long press on the button. The dimming process ends when the button is released.
- Move Venetian blind: Long press on button.
- Stop or adjust Venetian blind: Short press on button.
- Set value, e.g. brightness or temperature setpoint: Short press on button.
- Open scene: Short press on button.
- Save scene: Long press on button.
- Execute channel 1: Short press on button.
- Execute channel 2: Long press on button.
- Operate controller extension: Short press on button.

5 Insert-cover alignment

The device combination of insert and cover carries out an automatic insert-cover alignment as soon as a cover is placed on an insert and the mains voltage is switched on.

Case 1: Insert and cover are brand new

After the insert-cover alignment, the device combination is functional in a standard configuration.

Case 2: Insert is brand new and cover was already in operation

After the insert-cover alignment, the device combination is functional in a standard configuration.

Case 3: Insert was already in operation and cover is brand new

After the insert-cover alignment, the device combination is functional in a standard configuration.

Case 4: Insert and cover were already in operation in combination

After the insert-cover alignment, the device combination is functional. The device combination performs its function according to its last configuration.

Case 5: Insert and cover were already in operation separately from one another

After the insert-cover alignment, the device combination is not functional. The insert-cover alignment identifies this case as a swapping of the covers, for example after renovating a room. The insert-cover alignment reports an error via the status LED.

[i] This device combination becomes functional again after programming with the ETS, a master reset or resetting to factory settings.

Case 6: Insert is not supported by the cover

The insert-cover alignment reports an error via the status LED if the cover has been placed on an insert not supported by the cover. The device combination is not functional.

5.1 Error message

The error reported by the insert-cover alignment is indicated by the status LED for 60 seconds. Within these 60 seconds, the status LED flashes 3 times in pulses.

After an error has been detected during insert-cover alignment, the new assignment of a device combination of insert and cover is only possible via the ETS. The device combination remains without function until a new ETS is commissioned.

[i] The 60-second signalling of the error is restarted each time the button is actuated.

[i] The 2-gang device variant indicates the error message via the left status LED.

[i] A firmware update is also possible in the event of an error.

6   Delivery state

The device combination of insert and cover functions in the delivery state after successful insert-cover alignment. The cover is for local use in a standard configuration (see operating instructions of the insert).

$\boxed{i}$ The device combination does not transmit RF telegrams.

$\boxed{i}$ The ETS can reset the device to the delivery state with the "Unload device" command.

Status LED in the delivery state

In the delivery state, the status LED indicates the "Device unprogrammed" state. The red status LED flashes with a frequency of approx. 0.75 Hz.

7 Information for electrically skilled persons

7.1 Fitting and electrical connection

⚠ **DANGER!**

Mortal danger of electric shock.

Disconnect the device. Cover up live parts.

Mounting and connecting the device

ⓘ If necessary, see the adhesive label on the back of the cover to identify the insert (physical address).

In secure operation (preconditions):

– Secure commissioning is activated in the ETS.

– Device certificate entered/scanned or added to the ETS project. A high resolution camera should be used to scan the QR code.

– Document all passwords and keep them safe.

ⓘ The insert must be disconnected from the power supply before plugging in or unplugging the KNX RF push-button.

Switching, dimming, Venetian blind or room temperature controller insert or 3-wire extension are mounted and connected properly (see instructions of the relevant inserts).

The mains voltage has been switched off.

■ Fit the cover with frame on the insert (Figure 1).

■ Switch on mains voltage.

■ In secure operation: The device certificate must be removed from the device and stored securely.

The device can be commissioned and is ready for operation.

ⓘ If the status LED flashes red three times at repeated intervals, the cover was previously connected to another insert. To enable operation again, either place the cover on the associated insert or put the device combination into operation with the ETS.

ⓘ When switching to another application, the device should always be reset to the default setting and then reprogrammed.

7.2 Commissioning

Programming the physical address and application program, 1-channel (Figure 5) and 2-channel (Figure 6)

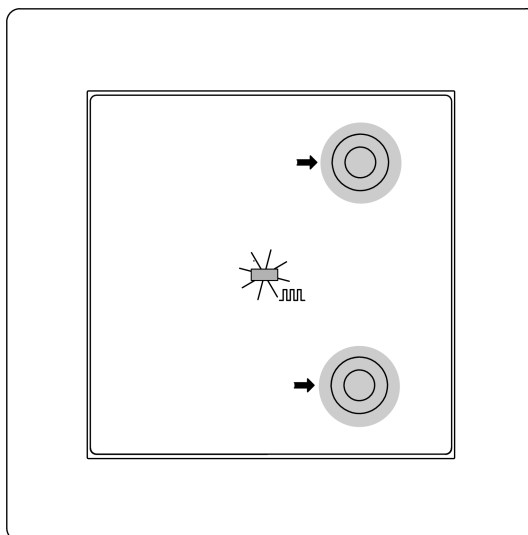ⓘ   Project design and commissioning with ETS from version 5.7.5 and above.

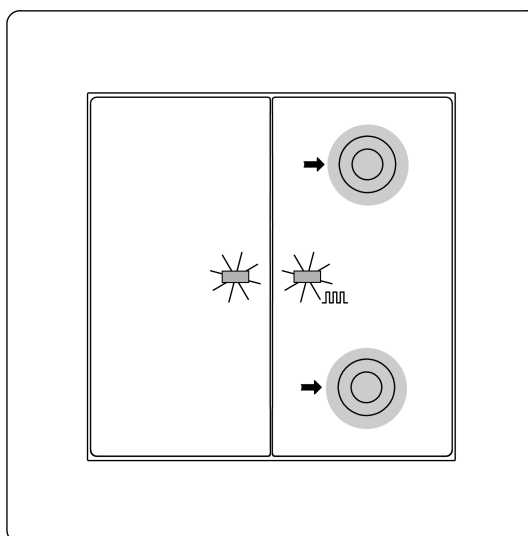Figure 5: Activating programming mode (1-channel)

Figure 6: Activating programming mode (2-channel)

Precondition: The device is connected and ready for operation.

■   Activate programming mode: Press the top right button and bottom right button simultan-eously and hold for longer than 4 seconds (Figure 5).
The Status LED flashes red. Programming mode is activated.

ⓘ   When the programming mode is activated, telegrams can be sent to the bus.

■   Programming the physical address.
The status LED returns to its previous state. Physical address is programmed.

Prerequisite for the "Touch dimmer" insert: Load is connected to the insert.

■   Programming the application program.

ⓘ The status LED is switched off while the application program is programmed. As soon as the programming is successfully completed, the status LED carries out its parameterised function.

ⓘ For "Touch dimmer": The load must be connected before ETS commissioning. Without a connected load, the ETS aborts the programming process of the application program.

ⓘ When the application program is unloaded, the status LEDs behave as in the delivery state.

7.2.1 Safe-state mode and master reset

Safe-state mode

The safe state mode stops the execution of the loaded application program.

If the device does not work properly - for instance as a result of errors in the project design or during commissioning - the execution of the loaded application program can be halted by activating the safe-state mode. The device remains passive in safe-state mode, since the application program is not being executed (state of execution: terminated).

[i] Only the system software of the device is still functional. ETS diagnosis functions and programming of the device are possible.

Activating the safe-state mode

- Switch off the voltage.
- Wait about 15 s.
- Press the top right and bottom right button.
- With the buttons pressed, switch the voltage back on and keep the buttons pressed for more than 10 seconds.
 The safe-state mode is activated. The status LED flashes red slowly (approx. 1 Hz).

[i] Only release the the top right and bottom right buttons when the LED flashes.

Deactivating safe-state mode

- Switch off the voltage (wait approx. 15 s) or carry out ETS programming.

Master reset

The master reset restores the basic device setting (physical address 15.15.255, firmware remains in place). The device must then be recommissioned with the ETS.

[i] During secure operation: A master reset deactivates device security. The device can then be recommissioned with the device certificate.

[i] Devices can be reset to factory settings with the ETS Service App. This function uses the firmware contained in the device that was active at the time of delivery (delivery state). Restoring the factory settings causes the devices to lose their physical address and configuration.

If the device - for instance as a result of errors in the project design or during commissioning - does not work properly, the loaded application program can be deleted from the device by performing a master reset. The master reset resets the device to delivery state. Afterwards, the device can be put into operation again by programming the physical address and application program.

Performing a master reset

Precondition: The safe-state mode is activated.

- Press and hold down the top right and bottom right button for more than 5 seconds until the status LED flashes.
- Release the top right button and bottom right button.
  The device performs a master reset. The status LED flashes quickly (approx. 4 Hz).

  The device restarts and is in delivery state.

8 Technical data

KNX

KNX medium	RF1.R
Safety	KNX Data Secure (X-mode)
Commissioning mode	S-mode
Radio frequency	868.0 ... 868.6 MHz
Transmission capacity	max. 20 mW
Transmitting range in free field	typ. 100 m
Receiver category	2

Ambient conditions

Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Relative humidity	max. 93 % (no condensation)

9 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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