

KNX radio button 1gang quicklink
KNX radio button 2gang quicklink
KNX radio button 4gang quicklink

Safety instructions

Electrical equipment must only be installed and assembled by a qualified electrician in accordance with the relevant installation standards, regulations, directives and safety and accident prevention directives of the country.

Failure to comply with these instructions may result in damage to the device, fire or other hazards.

The radio transmission is not suitable for safety or alarm applications.

These instructions are an integral component of the product and must be retained by the end user.

Design and layout of the device

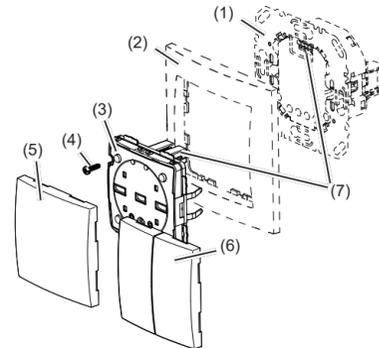


Fig. 1: Design and layout of the device

- (1) Insert (see "Accessories", not in scope of delivery)
- (2) Frame (not included)
- (3) Application module 1, 2 or 4gang
- (4) Module retaining screw (not for Berker R. 1/R.3/R.8)
- (5) Design cover button 1gang
- (6) 2gang button or 4gang button design cover
- (7) Interface between insert/application module

Function

System information

This device is a product of the quicklink system, in which installation devices communicate via radio signals.

quicklink stands for a configuration mode, in which the function-related connection between transmitters and receivers is set on the device through buttons and displays without further tools.

All devices configurable by quicklink can be operated together in one system.

This device complies with EU Directive 2014/53/EU. The declaration of conformity and further system information can be accessed at hager.com.

The device may be operated in all EU and EFTA states (excluding Switzerland and Liechtenstein).

Correct use

- For operation and remote control on a switch insert, on a dimmer insert or on a power supply for KNX radio application modules
- The device has been designed for smaller applications, in which a maximum of 20 devices are allocated
- Only suitable for use in indoor areas with no drip and no spray of water

i The quicklink configuration of the devices must only be carried out by qualified electricians.

Product characteristics

- Functions for remote control, scenes, control circuits via radio signals
- LED display of the compatibility of the insert/application module
- Saving of switch-on brightness level if operated on a dimmer insert
- Option for load setting during operation with universal inserts (see settings)

Operation

Operating concept

The operation of the top or bottom push-button operation area is validated differently for each button. Simultaneous pressing of top and bottom push-button operation areas triggers special functions.

Operation on a switch insert

Load status	Operation button, factory setting	Switch insert
OFF	Press top or bottom	Switch ON load.
ON	Press top or bottom	Switch OFF load.

Table 1: Operation on a switch insert

Operation on a dimmer insert

Dimming status	Operation button, factory setting	Dimmer insert
OFF	Short press on top or bottom	Switch ON with saved switch-on brightness level.
ON	Short press on top or bottom	Switching OFF.
ON	Press top and bottom simultaneously > 5 s	Save brightness as switch-on brightness-level. As confirmation, the light switches OFF briefly and ON again. In the delivery condition, the maximum brightness is saved as the switch-on brightness level.
ON/OFF	Long press on top	Dimming to maximum brightness-level
ON	Long press on bottom	Dimming to minimum brightness-level
OFF	Long press on bottom	Switching on with minimum brightness-level

Table 2: Operation on a dimmer insert

Operation via extension unit, push-button, NO contact

Dimming status	Operation push-button	Switch insert	Dimmer insert with extension unit input
OFF	Press < 0.4 s	Switch ON	Switch ON with saved switch-on brightness-level
ON	Press < 0.4 s	Switch OFF	Switch off
ON	Press > 0.4 s	Switch OFF	Dimming to minimum/maximum brightness-level with alternating direction
OFF	Press > 0.4 s	Switch ON	Dimming from minimum to maximum brightness-level

Table 3: Operation via extension unit, push-button, NO contact

i The switch-on brightness-level cannot be saved on an extension unit push-button.

Operation on a power supply for KNX radio application module

The push-buttons are freely configurable; operation is dependent on the configuration (Table 7).

Settings

Setting the load

If the switching/dimming of the universal inserts is not as desired after commissioning the load may need to be re-set.

i A load setting is required each time the load is changed.

- Switch off load.
- Press button top and bottom area simultaneously for more than 10 seconds. The connected load flashes once. The device is in selection mode.

i If no further actions are performed within the next 10 seconds, the dimmer switches to normal operation.

- Briefly press the bottom button repeatedly to activate the desired setting mode. ► See Table 4a / 4b

i Information for electricians: For the version labelling of the flush-mounted insert, see packaging label or sticker on the back of the housing.

Adjusting the load for KNX radio button 1gang or 4gang on a universal switch or dimmer insert 1gang from Version R1.2

Press bottom button	Setting mode	Duration and confirmation of the load setting	Information for use
1 x	Load factory setting	Settings duration: approx. 30 sec. i Load switching/dimming phases may occur during the automatic settings process. The load flashes one last time as a confirmation and then goes out. The device returns to normal operation.	Factory setting with automatic load recognition. If the switching/dimming behaviour is dissatisfying after that, restart the selection mode and select the suitable option.
2 x	LED mode 1 (phase cut-on)	After approx. 5 sec., the load flashes twice as a confirmation and then goes out. The device returns to normal operation.	Recommended for lower 230 V LED loads up to max. 60 W if the switching/dimming behaviour is dissatisfying after the automatic load setting.
3 x	LED mode 2 (phase cut-on)	Settings duration: ≤ 50 sec. i Load switching/dimming phases may occur during the automatic settings process. Finally, the load flashes three times as a confirmation and then goes out. The device returns to normal operation.	Recommended for higher 230 V LED loads from 50 W, which can be operated in the phase cut-on. Observe manufacturer's data!
4 x	Fine setting of minimum brightness	5 predefined minimum brightness levels for 2.5 sec. each, run through repeatedly (3 runs). ■ As soon as the connected load shows a satisfying minimum brightness, confirm by quickly pressing the bottom button. After approx. 5 sec., the load flashes four times as a confirmation and remains switched on (50% brightness). The device returns to normal operation.	To optimise the switch-on behaviour, or if the load flickers in the lower dimming range, the minimum brightness setting can be manually adjusted here.

Table 4a

Adjusting the load on a universal switch or dimmer insert up to Version R1.1

Briefly press the button	Setting mode	Confirmation of the load setting	Information for use
1 x	Load fine-setting	Load flashes 1 x after approx. 30 s and changes to normal operation	Not suitable for ohmic loads (e.g. incandescent, HV halogen lamps); use factory load setting. If the load fine-setting does not bring any improvement for energy-saving lamps or 230 V LED lamps, select the energy-saving lamp fine-setting or 230 V LED lamp universal setting. The load fine-setting is not available on 2gang universal inserts.
2 x	Load factory setting	Load flashes 2 x after approx. 6 s and changes to normal operation	
3 x	Energy-saving lamp fine-setting in phase cut-on	Load flashes 3 x after approx. 30 s and changes to normal operation	Energy-saving lamps are switched on at a brightness level of at least 50% in order to ensure an ignition process.
4 x	230 V LED lamp universal setting in phase cut-on or phase cut-off	Load flashes 4 x after approx. 5 s and changes to normal operation	For connected dimmable 230 V LED lamps the dimming principle and the optimal switch-on brightness level is set automatically.
	For all setting modes	Load flashes 5 x	The selected setting mode is not supported by the insert.

Table 4b

Information for electricians

Overview of the operating elements beneath the design cover

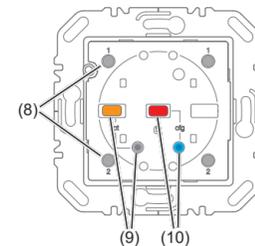


Figure 2a: Operating elements of the 1gang radio button

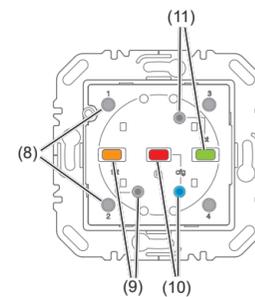


Figure 2b: Operating elements of the 2 and 4gang radio button

- (8) Press-activation points of the push-button operation area
- (9) **fct** button with **fct** LED
- (10) **cfg** button with **cfg** LED
- (11) **fct2** button with **fct2** LED

Installation

Selecting installation location

A minimum distance between the transmitter and corresponding receiver of about 1 m must be maintained.

A minimum distance to electronic devices which emit high frequency signals such as computers, electronic transformers or microwave devices of approx. 0.5 m must be maintained.

Mounting on or close to metal surfaces may cause impairment of the function.

Take material penetration into account. The range of the system can be optimised by selecting the best possible mounting location:

Material	Degree of material penetration
Wood, plaster, plaster-board, uncoated glass	approx. 90 %
Brick, press boards	approx. 70 %
Reinforced concrete, underfloor heating	approx. 30 %
Metal, metal grids, aluminium laminates, coated glass	approx. 10 %
Rain, snow	approx. 1 ... 40 %

Table 5: Material penetration

Mounting the device (Figure 1)

The insert is installed (see operating instructions for the insert).

- Attach the application module (3) together with frame (2) to a suitable insert (1) and establish a connection between insert and the application module via the plug-in interface (7).

As soon as voltage is supplied to the button, the **cfg** LED (Figure 2, 10) indicates whether the button and the insert are compatible with each other:

cfg LED display	Meaning
LED flashes green for 5 s	Compatible
LED flashes red for 5 s	Not compatible
LED flashes orange for 5 s	Compatible, but not configured to each other. For a new configuration, the application module must be reset to the factory setting.

- If required/included use module retaining screw (4).
- Click the design cover (5 or 6) into place on application module (3).
- i** If a configuration needs to be made or settings need to be changed, only attach the design cover afterwards.

Insert/application module combinations and operation in the factory setting

Depending on the insert used, in factory setting the radio button has the following function for local operation (Table 6).

	KNX radio button 1gang	KNX radio button 2gang	KNX radio button 4gang
Switch insert 1gang	on/off	--	on/off (RF)
Switch insert 2gang	--	on/off	on/off
Dimmer insert 1gang	☀	--	☀ (RF)
Dimmer insert 2gang	--	☀	☀
Power supply	(RF)	(RF)	(RF)

- on/off Switching (see operation on a switch insert)
- ☀ Dimming (see operation on a dimmer insert)
- Not to be combined
- (RF) Transmitter command freely configurable (see Configuration of radio button as transmitter)

Table 6: Button operation in factory setting

Operating and assembly instructions



KNX radio button 1gang quicklink

Order no. 8514 51 ..

KNX radio button 2gang quicklink

Order no. 8514 61 ..

KNX radio button 4gang quicklink

Order no. 8564 81 ..

(EN)

Berker GmbH & Co. KG
 Zum Gunterstal
 66440 Blieskastel, Germany
 Tel.: + 49 6842 945 0
 Fax: + 49 6842 945 4625
 e-mail: info@berker.de

www.berker.com



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KNX radio timer quicklink

The radio configuration sets up the functional connection between commanding (transmitters) and function-executing (receivers) radio components. Thus, central unit, group, extension unit and time controls can, for example, be realised in a wireless manner.

The following can be configured:

- The local operation of the load connected to the insert
- Radio commands to control other receivers
- Functions which are executed when the radio commands are received

 The top and bottom push-button operation areas can be configured differently.

 For configuration by means of Hager connection device TX100 or ETS, additional functions are available (see operating instructions for TX100 or application description for ETS).

Configuration of KNX radio button as a receiver

Configuration to control the load connected to the insert (Table 7)

- via reception of a radio command
- via local operation

 Local operation is a function that is pre-configured at the factory and can be changed.

As an example, the configuration with a wall transmitter and the radio button as receiver is described below (Table 8).

The button design cover is not attached.

fct LED display	Configurable functions		Function resulting from transmitter operation, notes
	On switch insert	On dimmer insert	
	ON/OFF	ON/OFF, dim UP/DOWN	Short button-press: Switch ON/OFF Long button-press: Dimming, reverse dimming direction per actuation
	ON	ON, dim UP	Short button-press: Switch ON Long button-press: Dim UP to maximum brightness
	OFF	OFF, dim DOWN	Short button-press: Switch OFF Long button-press: Dim DOWN to minimum brightness
	Scene 1		Receiver is allocated to a scene due to the configuration of the function.
	Scene 2		Short button-press: Recall the saved state of the connected load for the scene
	Timer		Switch ON for the set switch-on time
	NO contact (contact duration)		Switch ON when the switching contact is closed Switch OFF when the switching contact is opened
	Cancel		No function Assignment to transmitter is deleted

Table 7: Configurable functions

Configuration of KNX radio button as a transmitter

If the radio button is operated as a transmitter, it can support the following functions for the receivers. The details of the function can vary, depending on the receiver being used:

	ON/OFF, 1-push-button operation
	ON
	OFF
	ON/OFF, dim UP/DOWN, 1-push-button-operation
	ON/OFF, dim UP
	ON/OFF, dim DOWN
	Scene 1
	Scene 2
	Timer
	NO contact (contact length)
	Move UP, stop
	Move DOWN, stop

As an example, the configuration of the radio button with receivers, for which the supported displays occur through the **cfg** LED and **fct** LED, is described here (Table 9). Differing configuration displays, such as for receivers with display, can be found in the receiver operating instructions.

Deleting a configuration

To delete a configured receiver or the local operation, perform the configuration again.

- **Start configuration** (see Configuration of radio button as a receiver).
- **Select transmitter button.**
- **Select function on receiver:** On the receiver, select the **Delete** function and **confirm function on the receiver.**
- **Completing the configuration:** Briefly press the **cfg** button on the transmitter.

Configuration of group functions

By means of a group function, one transmitter controls several receivers. To do so, the same function must be configured on all receivers.

- **Start configuration** (see Configuration of radio button as a receiver).
- **Select transmitter button.**
- **Select function on receiver:** Select the Group function as described on each receiver to be included and **confirm function on the receiver.**
- **Completing the configuration:** Briefly press the **cfg** button on the transmitter.

Configuration of scenes

Individual settings for lighting and the position of blinds can be combined into scenes. Two different scenes can be created via quicklink and called up by pressing a button on the transmitter. A scene is created by configuring a push-button operation area of a transmitter (radio command) in the corresponding receivers with the Scene function (Table 7).

- **Start configuration.**
- **Select transmitter button:** Select the button for the Scene command.
- **Select function on receiver:** Select the Scene function as described on each receiver to be included and **confirm function on the receiver.**
- **Completing the configuration:** Briefly press the **cfg** button on the transmitter.

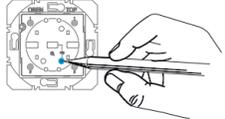
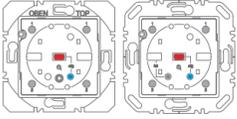
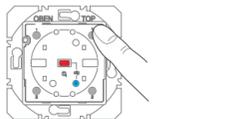
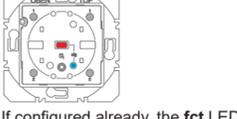
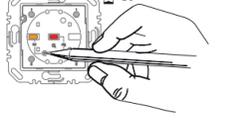
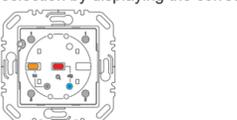
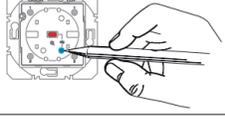
Operation	Result
<p>Start configuration</p> <ul style="list-style-type: none"> ■ Press the cfg button on the wall-transmitter briefly.  <p> If there is no further activation, configuration is automatically ended after 10 minutes.</p>	<p>The cfg LEDs on the wall-transmitter and the radio button turn red.</p>  <p>Any receivers within radio range also indicate the configuration mode.</p>
<p>Select transmitter button</p> <ul style="list-style-type: none"> ■ On the wall-transmitter, briefly press the press-activation point, which should activate the function. 	<p>The cfg LED on the wall-transmitter flashes for 1 second.</p>  <p>If configured already, the fct LED of the radio button indicates the currently configured function.</p>
<p>Select function on receiver</p> <ul style="list-style-type: none"> ■ Keep pressing the fct button on the radio button briefly, until the desired function is displayed (Table 7). 	<p>After each operation, the fct LED indicates the function.</p> <p> If the transmitter button has already been configured with a function in a different receiver and/or the configured function is part of a group control, only this function can be configured. To change a function, the existing configuration needs to be deleted and the new one configured.</p>
<p>Confirm function on receiver</p> <ul style="list-style-type: none"> ■ To confirm, press the fct button for more than 2 seconds. 	<p>The cfg LED flashes during the saving process (approx. 5 s). The fct LED confirms the function selection by displaying the corresponding colour.</p>  <p> Rapid flashing of the cfg LED indicates a combination that is not possible or an error.</p>
<p>Completing the configuration</p> <ul style="list-style-type: none"> ■ Press the cfg button on the wall-transmitter again briefly. 	<p>The cfg LEDs on the wall-transmitter, the radio button and all receivers within radio range go out. The function is configured.</p>

Table 8: Configure function for the KNX radio button (example with KNX radio wall-transmitter)

Changing/saving scenes

Switching, dimming and blind statuses of the receivers in a scene can be changed and saved.

- The load status can be configured locally or by remote control on the receivers integrated into the scene, e.g. light 1 = 60 % brightness level, light 2 = 40 % brightness level, blind down.
- Keep the transmitter button belonging to the configured scene command pressed for more than 5 seconds.

A brief status changeover of the receivers signals the successful saving of the scene.

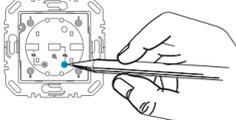
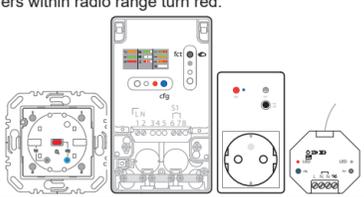
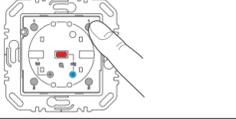
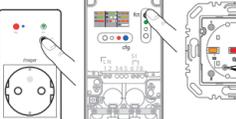
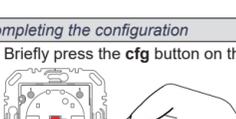
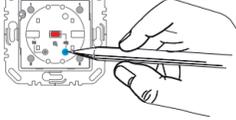
Operation	Result
<p>Start configuration</p> <ul style="list-style-type: none"> ■ Briefly press the cfg button on the radio button.  <p> If there is no further operation, the configuration is automatically ended after 10 minutes.</p>	<p>The cfg LEDs on the radio button and the receivers within radio range turn red.</p> 
<p>Select transmitter button</p> <ul style="list-style-type: none"> ■ Press the press-activation point of the push-button operation area for which a command should be configured. 	<p>The cfg LED on the radio button flashes for 1 second. Afterwards, the radio button (transmitter) and receiver are in configuration mode and the cfg LEDs light up.</p> <p>If configured already, the fct LED of the receiver indicates the current function configured with the button.</p>
<p>Select function on receiver</p> <ul style="list-style-type: none"> ■ Briefly press the fct button several times on the receiver to select the desired function (see the receiver operating instructions). 	<p>After each operation, the fct LED displays a function.</p> <p> If the transmitter button has already been configured with a function in a different receiver and/or the configured function is part of a group control, only this function can be configured. To change a function, the existing configuration needs to be deleted and the new one configured.</p>
<p>Confirm function on receiver</p> <ul style="list-style-type: none"> ■ To save the allocation of command and function, press the fct button on the receiver for longer than 2 seconds. 	<p>The cfg LED flashes. After successful saving, the fct LED signals the saved function.</p> <p> Rapid flashing of the cfg LED indicates a combination that is not possible or an error.</p>
<p>Completing the configuration</p> <ul style="list-style-type: none"> ■ Briefly press the cfg button on the radio button. 	<p>The cfg LEDs on the radio button and all receivers within radio range go out. The radio command for the radio button has been configured.</p>

Table 9: Configuration of KNX radio button as a transmitter

Locking/unlocking scene changes

To prevent unwanted changes to a scene, the changing of the scene can be locked.

- **Start configuration.**
 - **Select transmitter button:** Select the button for the Scene command.
 - **Select function on receiver:** If the function **Scene 1** or **Scene 2** is displayed by the **fct** LED flashing green, hold down the **fct** button on the receiver for longer than 5 seconds until the **cfg** LED flashes briefly.
- Then, the **fct** LED shows the currently set state by flashing:
 1 x flash: Scene changing and saving possible
 2 x flashes: Scene changing blocked.
- Press the **fct** button and select the desired setting.
- The setting changes each time the button is pressed.
- To accept the selected setting time, keep the **fct** button pressed for more than 2 seconds.
 - **Completing the configuration:** Briefly press the **cfg** button on the transmitter.

Setting the switch-on time for the timer

The switch-on time on the receiver can be set in stages for the **Timer** function. The factory setting is 3 min.

- **Start configuration.**
- **Select transmitter button:** Select the button with the timer.
- **Select function on receiver:** If the **Timer** function is displayed by the **fct** LED flashing red (Table 7), hold down the **fct** button on the receiver for longer than 5 seconds, until the **cfg** LED flashes briefly.

The flashing **fct** LED indicates the currently set switch-on time - 5 x for factory setting (Table 10).

- Press the **fct** button.

Each short press of the **fct** button increases the switch-on time by one step.

 During the setting, the **fct** LED indicates the switch-on time (Table 10) for orientation.

- To accept the selected switch-on time, press the **fct** button for longer than 2 seconds.

- **Completing the configuration:** Briefly press the **cfg** button on the transmitter.

x number of flashes of the fct LED	Switch-on time
1	1 s
2	30 s
3	1 min
4	2 min
5	3 min
6	5 min
7	15 min
8	30 min
9	1 h
10	3 h

Table 10: Settable switch-on times

Resetting the KNX radio button to factory settings

The device is not in configuration mode.

- Keep the **cfg** button pressed for longer than 10 seconds, until the **cfg** LED switches from being red to flashing.
- Release the **cfg** button.

The **cfg** LED flashes rapidly in red. The device re-initialises itself. In the meantime, the **cfg** LED turns red. After that, the LED goes out and flashes 5 x to indicate the compatibility. The reset is has been completed. The process lasts about 20 s.

 This process deletes the complete configuration of the radio button. Settings of the insert (switch-on brightness level, load setting) are not reset.

Technical data

Transmission frequency	868-870 MHz
Transmission power	25 mW
Radio protocol	KNX Radio RF1.M
Power supply	via the insert ▶ See Accessories
quicklink logic functions	max. 20 transmitters/receivers
Receiver category	2
Transmitter duty cycle	< 0.1 %
Degree of protection	IP 20
Relative humidity	0 ... 65% (no condensation)
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-20 ... +60 °C
Mounting orientation	Interface between application and power module at top

Accessories

Inserts for KNX radio button 1gang quicklink

Relay insert	8512 12 xx
Universal switch insert 1gang	8512 11 xx
Push-button dimmer 1gang	8542 11 xx
Push-button dimmer comfort 1gang	8542 12 xx
Power supply for KNX radio application module	8502 01 xx

Inserts for KNX radio button 2gang quicklink

Universal switch insert 2gang	8512 22 xx
Universal push-button dimmer 2gang	8542 21 xx
Power supply for KNX radio application module	8502 01 xx

Inserts for KNX radio button 4gang quicklink

Relay insert	8512 12 xx
Universal switch insert 1gang	8512 11 xx
Push-button dimmer 1gang	8542 11 xx
Push-button dimmer comfort 1gang	8542 12 xx
Universal switch insert 2gang	8512 22 xx
Universal push-button dimmer 2gang	8542 21 xx
Power supply for KNX radio application module	8502 01 xx

Warranty

We reserve the right to realise technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale.