Sensor module
Ref.No.: SM 1608
V03

Safety instructions

Caution! Electrical devices may only be installed and fitted by electrically skilled persons.
Non-compliance with the installation information could cause damage to the device, fire or other hazards.
Connect the module exclusively to the universal relay or dimming station (no mains potential!).
To fasten radio to the supporting ring, only use the enclosed plastic screws.
These instructions are a component part of the product and must remain with the end customer.

Function

Correct use

- Operation of consumers, e.g. light on/off, dimming, blinds/shutters up/down, calling up and saving light scenes etc.
- Connection to relay station or dimming station
- Installation in appliance box according to DIN 49073

Product characteristics

- Up to 16 load outputs of the relay or dimming station can be controlled.
- Switching, contact, dimming, blind/shutter
- Light scenes: up to 4 light scenes per control point can be freely configured.
- Central function: all assigned load outputs are switched on/off centrally.
- Free assignment of the sensor surfaces to the load outputs, central functions and light scenes
- Possible to change settings
- LED can be used as feedback and as orientation light
- Feedback of switching states on all connected sensor modules.
- LED brightness adjustable in 3 stages (100 %, 50 %, off).
- Up to 4 sensor modules can be connected to a single relay/dimming station, even with stations connected in parallel.
- Cloning: transfer of a set assignment to another sensor module.
- If mains power fails, assignments are retained.
- Easy installation through 2-wire cable.
- Can be labelled using JUNG labelling tool.

Structure of the device

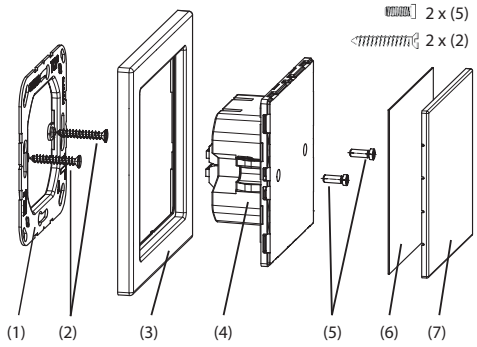

Fig.1.: Structure of the device

(1) Supporting ring
(2) Box screws
(3) Frame
(4) Sensor module
(5) Plastic screws
(6) Insert for labelling
(7) Cover

Operation

Operation is through touching the respective sensor surface (button).

Operating blind/shutter

- Move blind/shutter: press and hold button
- Stop or adjust blind/shutter: press button briefly

Operating light (relay station)

Switching: press button briefly (toggle mode)

Operating light (dimming station)

- Switching to switching-on brightness: press ON button briefly

ⓘ Pressing and holding the OFF button switches to minimum brightness.

ⓘ Pressing and holding the ON button switches on and dims to maximum brightness.

Switching the light scene

- Press button briefly

ⓘ The light scenes switch the outputs in sequence.

ⓘ In the light scenes, the dimming station switches to switching-on brightness only from the switched-off state.

Information for the electrically skilled person

Installation and electrical connection

DANGER!
Electric shock from touching live parts in the installation environment.
An electric shock can be fatal.
Before working on the device, disconnect the power and cover live parts in the area!

Supporting ring side **A** for flat design
Supporting ring side **B** for LS range.

- Install supporting ring (1) in the right orientation on a flush-mount appliance box (designation „TOP“ = above; „Type A“ or „Type B“ forwards)
  Only use supplied box screws (2).
- Set frame (3) on the supporting ring.
- Connect sensor module (4) with the station and set onto the supporting ring. Connecting terminal downwards!
- Only fasten the sensor module to the supporting ring with the enclosed plastic screws (5). Only tighten the plastic screws lightly (!).
- Snap the cover (7) with inserted inscription label or photo (6) onto the sensor module. Snap fastening on side of cover.

DANGER!
When installing with 230 V devices under a common cover, e.g. socket outlets, there is a danger of electric shock in the event of an error!
An electric shock can be fatal.
Do not install any 230 V devices in combination with a push-button sensor expansion module under a common cover!

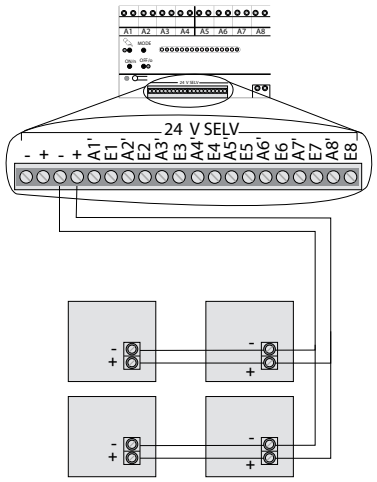

Fig.2.: Connection of max. 4 sensor modules to the relay or dimming station.

ⓘ Pay attention to polarity

ⓘ Before setting parallel mode on the second station, the sensor module must be connected. Otherwise parallel mode will not be recognised.

Start-up

In the state as delivered, the buttons (sensor fields) are allocated and the station outputs are assigned.

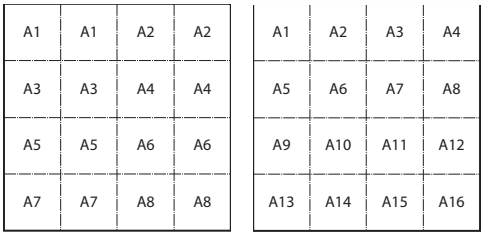

Fig.3.: Button assignment for connection to one station A1 - 8 and to 2 stations operated in parallel A1 - 16

ⓘ The operation mode of the load outputs must be selected on the relay station in correspondence to the requirement (contact, switching, blind). The operation mode cannot be set on the sensor module.

Preliminary remark to programming

The program is called up by entering a 4-digit button combination twice. LEDs 1 - 6 light up.

Preliminary remark to grouping (button 1)

Assigning the relay or dimming station outputs to the buttons on the sensor module.
Up to 16 buttons can be assigned to a single output.

- Relay station: toggle mode. The output is switched on or off through the same button. In blind/shutter mode, one channel for moving up and one channel for moving down are assigned.
- Dimming station: each load output is assigned 2 channels. Example: Load 1 switches on and dims brighter, channel 2 switches off and dims darker.

Preliminary remark to central function (button 2)

Central OFF and central ON can be assigned independently of each other.
Channels which should respond to the central function are set at the stations. In the state as delivered, all channels respond to the central function.

Preliminary remark to light scene (button 3)

ⓘ Before setting the light scene, the station must be set through button 6.
Switching several outputs with one button.
Switching states are assigned to the outputs.
4 light scenes per control point are available.

Preliminary remark to LED brightness (button 4)

The LED brightness can be set for the switched-on and switched-off states.

Preliminary remark to tone (button 5)

Feedback tone when sensor module is actuated.

Preliminary remark to stations (button 6)

Indication of which stations, relay or dimming station, are connected.

Programming

Entering a 4-digit button combination brings you to the programming level.
The sensor module must be connected to the station.
In the following, „sensor surfaces“ are designated as „buttons“.

Programming mode from state as delivered or after reset

No change on the sensor module has taken place yet.
When grouping, central function or light scene are selected, all pre-set groupings are deleted. All surfaces can be reassigned.
When LED brightness or tone is selected, the preset links are retained even when no changes have been made and the area is left directly through button 16.

Changing the links

Settings that have been made can be changed in the respective area.

Programming level

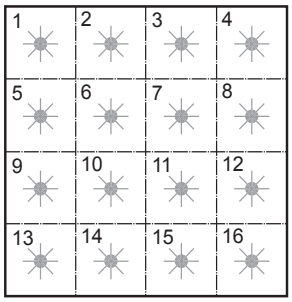

Fig.4.: Numbering the buttons

No switching commands are executed in the grouping mode.

- Press buttons 6 – 3 – 5 – 5 in sequence
  (Figure 5).
  All LEDs flash 2x.
- Press buttons 6 – 3 – 5 – 5 in sequence once again.
  All LEDs flash 2x.
  LEDs 1 to 6 light up.
  The selection level is active (Figure 5).

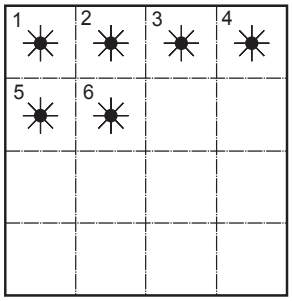

Fig.5.: LEDs 1 - 6 light up

Button 1: grouping
Button 2: central function
Button 3: light scene
Button 4: LED brightness
Button 5: tone on/off
Button 6: stations

Button 1: Setting or changing the grouping

During the assignment, first a load output (1 - 8 or 1 - 16) is selected, then the buttons which should switch the load output. The dimming stations are assigned 2 channels for each load output.
Example: Load 1 switches on and dims brighter, channel 2 switches off and dims darker.
Buttons 1 - 6 light up.

- Press button 1 (**Grouping**).
  The link mode **Grouping** is active.
  LEDs of switch outputs that have not yet been assigned flash; assigned LEDs light continuously.
- Select load output, press button.
  Other buttons assigned to load outputs light up 50 %.
  Free buttons are off.
- Select the buttons that should switch the load output.
  The selected buttons flash.
  Any buttons can be selected.

ⓘ Buttons that are already allocated can be assigned to the active channel by pressing. The existing links are overwritten during saving. The LEDs of these buttons flash 50 % - 100 %. Pressing again establishes the previous selection.

- To save the link, press and hold button 16 for approx. 3 seconds.
  Longer acknowledge tone.
  Return to load output selection.
  LEDs of load outputs that have not yet been assigned flash, LEDs of assigned load outputs light continuously.
- For additional links, select flashing button.
- Back to selection level: press and hold button 16 approx. 3 seconds.
  Longer acknowledge tone.
- LEDs 1 - 6 light up.
- End selection level, press and hold button 16.
  Longer acknowledge tone

Operating level is active.

Button 2: Setting or changing the central function

When assigning the central function, button 1 for central ON or button 2 for central OFF are selected, then the buttons which should switch the central function.
It is also possible to assign only central ON or central OFF.

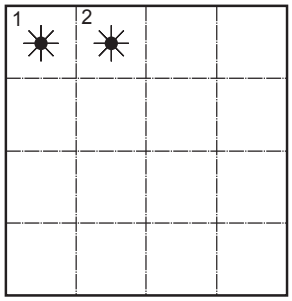

Fig.6.: Installation

Buttons 1 - 6 light up.

- Press button 2 (central function)
  The link mode **Central function** is active.
  Button 1: central ON
  Button 2: central OFF
  Free central function lights up
  Assigned central function flashes
- Select central function, press button
  Other buttons assigned to switch outputs light up 50 %.
  Free buttons are off.
- Select free buttons which should switch the central function.
  The selected buttons flash.
  Any free buttons can be selected.

ⓘ Pressing a flashing button again cancels the selection. The button is off.

- To save this link, press and hold button 16 for approx. 3 seconds.
  Back to central function selection.
  LED of central function that has not yet been assigned flashes, assigned lights up.

ⓘ For additional links, select flashing button.
To change an existing central function, select the lit button.

- Back to programming level: press and hold button 16 approx. 3 seconds.
  LEDs 1 - 6 light up.
  Longer acknowledge tone.
- End programming level: press and hold button 16 approx. 3 seconds.
  Flashing of all LEDs indicates acknowledgement.
  Longer acknowledge tone.
  Operating level is active.

Button 3: Setting or changing the light scene

ⓘ Before setting the light scene, the station must be set through button 6.
ⓘ Status feedback to the stations must be active.

When the light scene is assigned, first one of the total of 4 light scenes is selected. Next assign the switching state of the load outputs, then the buttons which should switch the scene. The outputs switch the set light scene with a short delay.

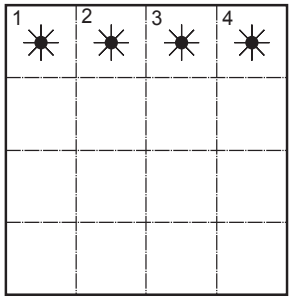

Fig.7.: Light scenes 1 - 4

Buttons 1 - 4 flash.

- Press button 3 (light scene).
  The link mode **Light scene** is active.
  LEDs 1 - 4 represent the light scenes 1 - 4.

Free light scenes flash, assigned light scenes light continuously.
- Select a light scene button 1 - 4.
  One LED lights up for each connected load output (1 - 8 or 1 - 16).

ⓘ The switching state of the respective load output is set by buttons.

LED channel	Load
LED ON:	Current status is retained.
LED flashes slowly:	Channel switches on (switch channels on relay station and switching-on brightness on dimming station).
LED flashes quickly:	Duration command for blind/shutter and dim function. Move blind/shutter to end position; dimmer dims to max. or min. brightness.
LED OFF:	Channel switches off.

The dimming station switches the load at output 1 with channel 1 on and channel 2 off. For light scenes, the following settings for output 1 apply:

LED button 1	LED button 2	Light
ON	ON	Current status is retained
LED flashes slowly	ON	Switching-on brightness
LED flashes quickly	ON	Maximum brightness
ON	LED flashes quickly	Minimum brightness
ON	OFF	off

ⓘ During display of the light scene, the outputs at the station correspondingly switch with delay.

ⓘ Light scenes must not be assigned to button outputs.

All load outputs have been set.
- Press and hold button 16
  Buttons assigned to other switch outputs light up 50 %.
  Free buttons are off.
- Select free buttons.
  The selected buttons flash.
- To save this light scene, press and hold button 16 for approx. 3 seconds
  Return to light scene selection
  LEDs 1 - 4: free light scenes flash, assigned light scenes light continuously.

ⓘ For additional light scenes, select flashing button. To change an existing light scene, select the lit button.
- Back to selection level: press and hold button 16 approx. 3 seconds.
  LEDs 1 - 6 light up.
- End selection level, press and hold button 16
  Flashing of all LEDs indicates acknowledgement.
  Longer acknowledge tone.
  Operating level is active.

Button 4: LED brightness

All LEDs are set in sequence. Touching the respective LED changes the flashing. The blinking signals the LED bright-

ness in the switched-on and switched-off states.
- Press button 4 (LED brightness)
  The link mode **LED brightness** is active.
  Assigned buttons flash 100 % off.
  Free buttons are off.
- Set the LEDs by pressing the respective button

	100 % off
1x	50 - 100 %
2x	On - Off
3x	Off - 50 %
4x	Off - 100 %
etc.	

Setting unassigned buttons as orientation light.
LED is off.
- Press button for approx. 1 second and release it.
  LED lights up 100 %.
- Press button for approx. 1 second once again and release it.
  LED is off.

All LEDs have been set.
- Back to selection level: press and hold button 16 approx. 3 seconds.
  LEDs 1 - 6 light up.
- End selection level: press and hold button 16
  Longer acknowledge tone.
  Operating level is active.

Button 5: Tone on/off

Switch acknowledgement tone on/off with a touch.
Buttons 1 - 6 light up.
- Press button 5 (**Tone on/off**).
- The mode **Tone on/off** is active.
  LED 1 lights up: tone on
  LED 2 lights up: tone off
- Back to programming level: press and hold button 16 approx. 3 seconds.
  LEDs 1 - 6 light up.
  Longer acknowledge tone.
- End programming level: press and hold button 16.
  Longer acknowledge tone.
  Operating level is active.

ⓘ When the tone is switched off, the long acknowledgement tone when the level is changed is eliminated.

Button 6: Stations

Before light scenes are set, which station is connected with which device address must be entered here.

ⓘ The sensor module recognises whether one or two stations are connected. When one station is connected, only button 1 lights up.

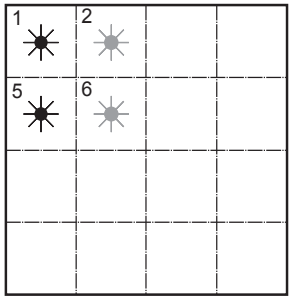

Fig.8.: Relay station presetting

Presetting:
Relay station to device addresses 1 and 2

	Relay station	Dimming station
Device address 1	**Button 1**	Button 2
Device address 2	**Button 5**	Button 6

Buttons 1 - 6 light up.
- Press button 6 (**stations**).
  The mode **Stations** is active.
- To set the stations, press buttons as indicated in the table.
  Example:
  Device address 1 dimming station: **button 2**
  Device address 2 relay station: **button 5**
- Back to programming level: press and hold button 16 approx. 3 seconds.
  LEDs 1 - 6 light up.
  Longer acknowledge tone.
- End programming level: press and hold button 16.
  Longer acknowledge tone.
  Operating level is active.

ⓘ When the tone is switched off, the long acknowledgement tone when the level is changed is eliminated.

Reset

Reset sensor module to the state as delivered. All settings on the sensor module are overwritten.
The sensor module is in normal mode.
- Press buttons 12 – 9 – 7 – 9 in sequence.
  All LEDs flash 2x.
- Press buttons 12 – 9 – 7 – 9 in sequence once again.
  All LEDs flash 2x, longer acknowledge tone.
  The state as delivered has been restored.

Cloning sensor modules

„Cloning“ refers to transmitting the button assignment of a sensor module to other sensor modules. No operation of the relay station is possible during an ongoing cloning operation.
Several sensor modules are connected to the relay station.
Only sensor modules with the same release status can be cloned.
A button has been assigned at one sensor module.
- Press the MODE and Central Switching Mode buttons of the relay station or the MODE and Prog. button of the dimming station simultaneously until the LEDs ✎, ON/▲ and OFF/▼ flash.
  The stations and sensor modules are in cloning mode.
  A **C** flashes at the sensor modules.
- Press a button on the sensor module being cloned within approx. 2 minutes.
  A **+** flashes at the sensor module.
  All other sensor modules continue to blink a **-**.
- Press a button on another sensor module within approx. 2 minutes.

ⓘ If a longer acknowledgement tone is emitted, the cloning was not successful. The procedure must be repeated.
LEDs 1 - 16 switch on in sequence. If all LEDs light up, the transfer is concluded.
The sensor module is ready for operation.
- For further sensor modules, repeat the steps described above.

ⓘ It is not possible to clone devices with different release statuses. Sensor modules with release status R3 register a fault, longer acknowledgement tone; sensor modules with release status R2 can no longer be correctly operated. A reset must be carried out.

ⓘ Cloning mode cannot be ended manually. In order to abort an ongoing cloning mode, do not touch any sensor module for 2 minutes.

ⓘ If cloning mode was activated at the station without any sensor modules being connected, cloning mode is terminated automatically after 3 minutes.

Help in case of problems

The sensor module does not respond
Two stations are connected in parallel
Device address of the second station was not converted.
Change device address
The sensor module does not display the switching state correctly
Switch on status feedback to the station (see relay and dimming station instructions).

Accessories

Universal relay station Art. No.: RS 8 REG HE
Universal dimming stationArt. No.: UDS 4 REG HE

Technical data

Rated voltage, button:	DC 24 V SELV
Max. current	approx. 19 mA

Connection	Connection terminal
Cable length	max. 100 m
Cable type	J-Y(St)4 2x2x0.8
Safety class:	III
Ambient temperature:	-5° C to +45° C
Storage/transport temperature:	-25° C to +70° C
Insert thickness	max. 0.25 mm

We reserve the right to make technical changes.

Warranty

Our products are under guarantee within the scope of the statutory provisions.
Please send the device, postage paid, to our central Customer Service Centre, with a description of the error.
ALBRECHT JUNG GMBH & CO. KG
Service Centre
Kupferstr. 17-19
44532 Lünen
Germany

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