

Universal dimming station 4-gang  
Art. No. UDS 4 REGHE

## Operating instructions

### 1 Safety instructions

Electrical equipment may only be installed and fitted 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. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.**

**Danger of electric shock. Device is not suitable for disconnection from supply voltage. The load is not electrically isolated from the mains even when the device is switched off.**

Do not connect any lights with integrated dimmers. Device can be damaged.

Do not connect any LED or compact fluorescent lamps that are not specifically suitable for dimming. Device can be damaged.

Fire hazard. For operation with inductive transformers, each transformer must be fused on the primary side in accordance with the manufacturer's instructions. Only safety transformers according to EN 61558-2-6 may be used.

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

### 2 Device components

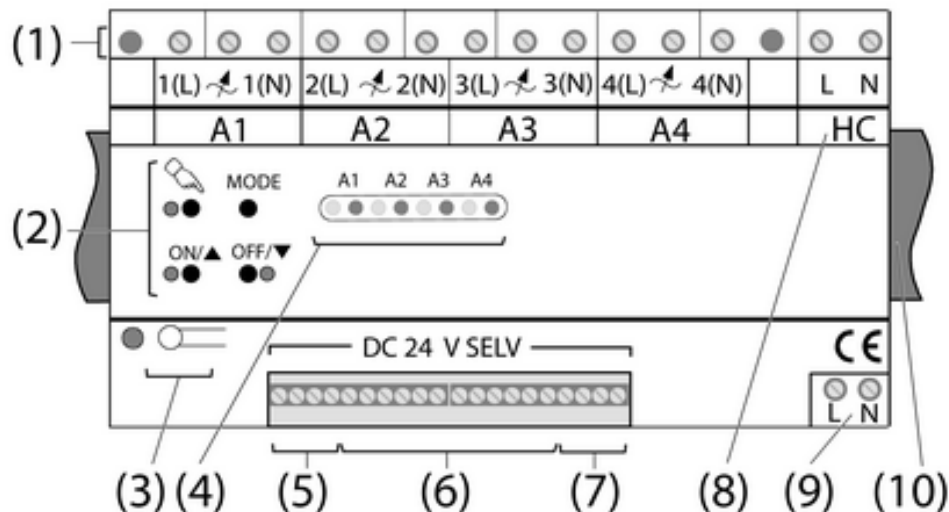


Figure 1: Device components

- (1) Load outputs **A1...A4**
- (2) Keypad for local control
- (3) Button **Prog, LED Prog**
- (4) Status LEDs for load outputs **A1...A4**
- (5) Connection of control sections or control voltage
- (6) Activation outputs **A1'...A4'** / Switching outputs **E1 ON/OFF...E4 ON/OFF**
- (7) Connection for central function **Central ON/OFF**
- (8) Connection of hotel card switch
- (9) Connection for mains supply

(10) DIN rail

**Meaning of the LED in normal operation**

Status LED (4) red and green light up.	Initialisation of load output running
Status LED (4) green is illuminated. Status LED (4) green off	Load output switched on Load output switched off
Status LED (4) red flashes	Control of load output via control section or load output overtemperature
Status LEDs (4) red and green flash	Short-circuit of load output
LED	Local control is switched on or programming operation is switched on
LED ON ▲ flashes	Local control of load output, on, brighter
LED ON ▼ flashes	Local control of load output, off, darker

**3 Function**

**Intended use**

- Switching and dimming of incandescent lamps, HV halogen lamps and Tronic-Transformers with halogen lamps or dimmable inductive transformers with halogen or LED lamps, HV-LED lamps and compact fluorescent lamps
- Suitable for mixed load up to the specified output (see section Technical data)
- Control by means of sensor modules, push-button modules, push-buttons 24 V, push-button modules 24 V or unlit installation buttons.
- Installation in distribution boxes on DIN rail according to EN 60715
- No mixed-load operation of Tronic and inductive transformers on the same load output.
- HV-LED and compact fluorescent lamps generate high pulsed currents, when they are operated in the leading edge phase control. Depending on the design and power rating of these lamps, the connected load of the specified values could vary.
- When connecting dimmable HV-LED lamps or compact fluorescent lamps, set the operating mode that is suitable for this purpose. Do not connect any other loads.

**Product characteristics**

- Keypad for control of the dimmer station
- Control outputs **A1'...A4'** for activation of feedback LEDs on the control sections.
- Electronic short-circuit protection with permanent switch-off after 7 seconds at the latest
- Electronic over-temperature protection
- Switch-on brightness can be adjusted separately for each load output
- Switch-on brightness has been saved permanently.
- Bulb-preserving soft start
- Switch-off with dimming function
- Increase in output power possible through parallel switching of multiple outputs of a dimmer station
- Connection for hotel card switch
- Central function Central ON, Central OFF
- Common switching-on and switching-off of the load outputs
- Operation with pushbutton sensors 24 V or push-button modules 24 V: Parallel switching of up to four relay or dimmer stations possible
- Operation with sensor modules or pushbutton modules: Parallel switching of two relay or dimmer stations possible
- Automatic or manual setting of the dimming principle suitable for the load
- Power extension through power boosters (see power booster instructions) Do not connect any HV-LED lamps or compact fluorescent lamps in combination with power boosters.
- Flickering of the connected lamps due to undershoot of the specified minimum load or through centralised pulses from the power stations. These are not device faults.
- Brief flickering upon load detection of ohmic loads. No operation is possible during load detection.

### Behaviour on failure and return of the mains power supply

If only the main power supply fails, then the status of the load output remain intact at first. The dimmer station initialises when the mains power supply returns. All load outputs are switched off after initialisation.

- i** During initialisation the dimmer station cannot be operated. The green and red Status LEDs (4) of all the load outputs **A1...A4** illuminate. Initialisation is complete as soon as all the Status LEDs are off.

### Behaviour on failure and return of the mains voltage on one or more load outputs

Should the mains voltage fail, the affected load outputs will switch off. When the mains voltage returns, the affected load outputs will recalibrate themselves. During the calibration operation, the green and red Status LEDs (4) illuminate and the load outputs cannot be operated. The load outputs are switched off after calibration.

### Function of hotel card switch

In combination with a hotel card switch, the light is switched on at switch-on brightness when the hotel card is inserted. When the hotel card is removed, any switched-on lights remain switched on for 1 minute and the dimmer station can be operated. When this time has elapsed, the light is darkened to minimum brightness and is then switched off. The dimming function can be set to steps of 30 seconds. When the dimming starts, the dimmer station can no longer be operated.

- i** Only load outputs to whom the central function has been assigned are switched on, whilst all the load outputs are switched off.

## 4 Operation

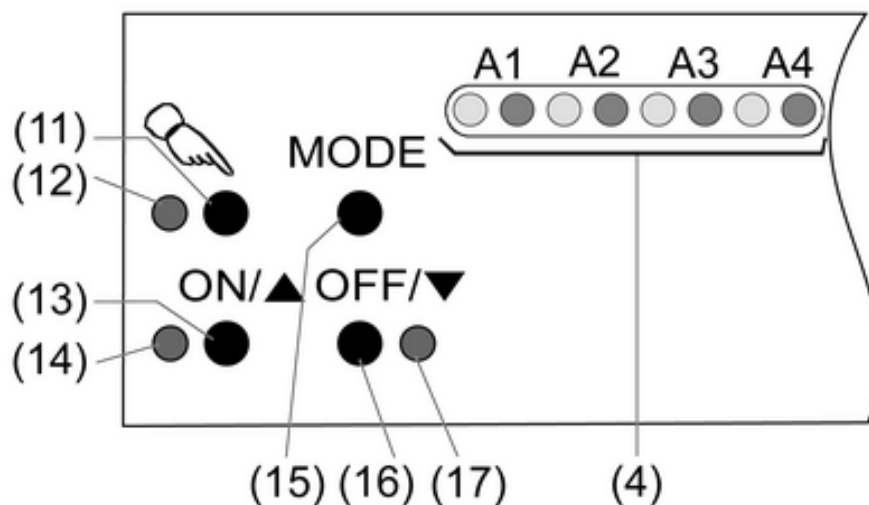




Figure 2: Keypad local control


- (4) Status LEDs for load outputs **A1...A4** in normal operation
- (11) Button : Local control
- (12) LED on: Local control or programming mode active
- (13) Button **ON/▲**: Operate load output or select Master/Slave
- (14) LED **ON/▲**: Feedback LED, load output operation
- (15) Button **MODE**: Programming mode
- (16) Button **OFF/▼**: Operate load output or select Master/Slave
- (17) LED **OFF/▼**: Feedback LED, operate load output

- i** If a hotel card switch is connected, the dimmer station can only be operated when the hotel card is inserted.


### Switch-on local control

- Press the  (11) button briefly.  
Red status LED **A1** (4) lights up, LED  (12) lights up.  
The device is in local control.  
Load output **A1** can be controlled.  
The green status LED (4) indicate the switching state of the load output. Status LED illuminated: load output is switched-on, Status LED off: load output is switched-off.

### Operating load outputs

-  Only outputs with a connected and detected load can be operated. The outputs will not switch or dim without a load.


Local control is switched on and the appropriate load output is selected.

- Press button **ON/▲** (13) for less than 0.5 seconds.  
Light switches to switch-on brightness.
- Press button **ON/▲** (13) for longer than 0.5 seconds.  
The light gets brighter up to maximum brightness. The LED **ON/▲** (14) flashes for the length of actuation
- Press button **OFF/▼** (16) for longer than 0.5 seconds.  
Light gets darker to minimum brightness. The LED **OFF/▼** (17) flashes for the length of actuation
- Press button **OFF/▼** (16) for less than 0.5 seconds.  
Light switches off.
- Press the  button briefly to go to the next load output.  
The red status LED (4) of the next load output **A2...A4** lights up.  
The green status LED (4) indicate the switching state of the load output.
- Operate load output as described above.

### Switching the light on with minimum brightness

Local control is switched on and the appropriate load output is selected.


Light is off.

- Press the **OFF/▼** button for longer than 0.5 seconds.  
Light switches on with minimum brightness. The LED **OFF/▼** (14) flashes for the length of actuation
-  Alternatively, press the **ON/▲** button for longer than 0.5 seconds. The light switches on with minimum brightness and becomes brighter up to maximum brightness. The LED flashes for the length of actuation.

### Save switch-on brightness

Switch-on brightness can only be saved using the buttons on the dimmer station. A separate switch-on brightness can be saved for each load output. In the state as supplied the maximum switch-on brightness is saved.

Local control is switched on and the appropriate load output is selected.

- Set the light to the required brightness value (see above).
- Press both buttons **ON/▲** (13) and **OFF/▼** (16) for longer than 3 seconds.  
The switch-on brightness has been saved permanently. The red status LED (4) flashes twice as an acknowledgement.  
The load output is reinitialised. The light is briefly switched off and switched on again at the saved switch-on brightness. The red and green status LEDs (4) light up.
-  Saving the switch-on brightness again overwrites the old value.

### Switching the load outputs centrally

All the load outputs to whom the central function has been assigned can be switched together. As long as the **Mode** push-button is pressed, the system is switched from the operation of a load output to central operation.

Local control is switched on.

- Press the **Mode** push-button and keep it pressed until the load outputs are switched.  
The red Status LEDs (4), whose central function have been assigned to the load outputs, illuminate.



Light is off.


- Press button **ON/▲** (13) for less than 0.5 seconds.  
Light switches to switch-on brightness.
- Press button **OFF/▼** (16) for less than 0.5 seconds.  
Light switches off.

 Central dimming is not possible.

### Switching off local control

Local control is switched on.

- Keep pressing the  push-button, LED (12)  if off.  
Local control is switched off.  
When local control is switched off, the load outputs retain the switch position and brightness previously set.

 After 15 s with no button being pressed, the device automatically switches local control off.

### Operating using control sections

A load output is operated according to the two surface principle. One push-button, control surface or installation button for switch-on and brighter and one push-button, control surface or installation button for switch-off and darker. The individual load outputs are operated in the same way as for local control. It is not possible to save switch-on brightnesses with control sections. The red Status LED (4) of the operated load output flashes for as long as one control section is actuated.

### Central function via control sections

The functions Central ON and OFF have their own push-button, sensor surface or installation button.

Central function has been assigned to the load outputs.

- Press the appropriate button, sensor surface or installation button for less than 0.5 seconds.  
The light switches on or off at switch-on brightness.

## 5 Information for electrically skilled persons

### 5.1 Fitting and electrical connection



#### **DANGER!**

**Electrical shock when live parts are touched.**

**Electrical shocks can be fatal.**

**Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.**

### Fitting the device

Observe the temperature range (see "Technical data"). Ensure sufficient cooling.  
Output terminals up (figure 3).

- i** When operating multiple dimmers or power boosters in a sub-distribution, maintain a distance of 1 module, approx. 18 mm, between the devices in order to prevent overheating.
  - Mount device on DIN rail.

**Connection: for operation with independent load outputs**

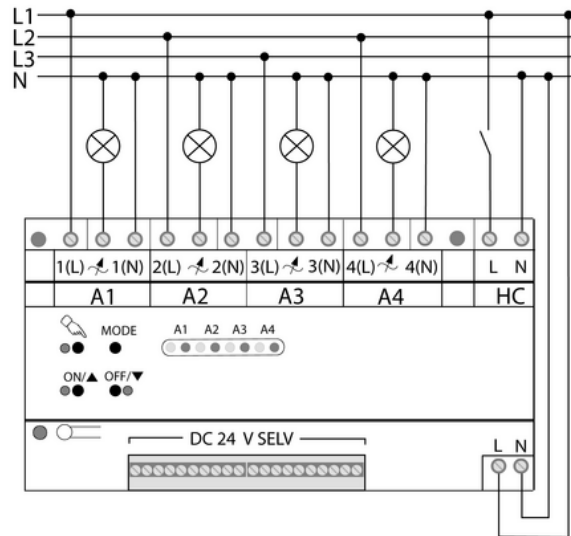


Figure 3: Connection example: mains power supply, hotel card switch and loads

- Connect the mains power supply (figure 3).
- Connect the hotel card switch as shown in the connection example (figure 3).
- i** If no hotel card switch is used, connect the outer conductor and neutral conductor of the mains supply to the terminals for the hotel card switch **HC** as well.



**CAUTION!**

**Danger of destruction from mixed loads.**

**The dimmer and load may be destroyed.**

**Do not connect capacitive loads, e.g. electronic transformers, and inductive loads, e.g. inductive transformers, together on the same dimmer output.**

**Do not connect inductive transformers together with HV LED lamps or compact fluorescent lamps on the same dimmer output.**

- i** HV-LED lamps and compact fluorescent lamps: Only connect lamps of one manufacturer and of the same type on the same output. Do not connect any other loads to this output.
- i** Observe delivery state. Before connecting HV LED lamps or compact fluorescent lamps, set the dimming principle that is suitable for this purpose. LED phase cut-off for the highest possible output power.
- i** Connect 600 Watt HV LED lamps or compact fluorescent lamps at most per 16 ampere circuit breaker.
  - Connect loads as shown in the wiring example (figure 3).
- i** It is possible to increase power of the individual outputs by means of power boosters. Make selection in accordance with the dimmer and load. Do not connect any HV-LED lamps or compact fluorescent lamps in combination with power boosters.

**Connection for operation with load outputs switched in parallel**

Two to four load outputs can be switched in parallel for power extension. A load output is then assigned to the Master of the additional load outputs as a Slave.

- Connect mains supply (9) as shown in the connection example (figure 4)
- Connect the hotel card switch as shown in the connection example (figure 4).

- i** If no hotel card switch is used, connect the outer conductor and neutral conductor of the mains supply to the terminals for the hotel card switch **HC** as well.

All load outputs are switched off.

Load outputs are not yet switched on.



### **DANGER!**

**Electrical shock when live parts are touched.**

**Electrical shocks can be fatal.**

**Use only insulated tools when working on the device! Cover up live parts in the working environment.**

- Switch on mains voltage.  
All the LEDs illuminate briefly.  
**LED Prog** lights up red.
- Insert the hotel card in the hotel card switch.  
**LED Prog** lights up green.
- Press the push-button **Prog** (3) until **LED Prog** (3) flashes alternately in red and green.  
Programming mode is switched on. In this operating mode, the push-buttons of the button panel (2) are assigned to the load outputs according to the table.

Load output <b>A1</b>	
Load output <b>A2</b>	<b>MODE</b>
Load output <b>A3</b>	<b>ON/▲</b>
Load output <b>A4</b>	<b>OFF/▼</b>

In general, any load output can be specified as the Master. The first selected load output is the Master to which any other load outputs are assigned as Slaves. A maximum of two Masters may be specified. In this case, a Master is first specified with a Slave and then the steps repeated for the second Master.

- Press the push-button of a load output and keep it pressed during Slave assignment.  
The green status LED (4) of the load output lights up. The load output is specified as the Master.
  - Briefly press the push-button of another load output.  
The load output is assigned to the Master as a Slave. The red status LED (4) of the load output lights up.
- i** To delete the assignment, press the push-button of the Slave again. The red status LED (4) goes out.
- If necessary, briefly press the push-button of another free load output.  
The load output is assigned to the Master as a Slave. The red status LED of the load output lights up.
  - Release the push-button of the Master.  
The green Status LED of the Master illuminates.

Two further load outputs are available.

- Optionally, carry out the second Master-Slave assignment as described above.
- Press the **Prog** push-button until all the LEDs illuminate briefly.  
The red Status LEDs illuminate briefly.  
Assignments are saved. The dimmer station reinitialises itself.

- i** During initialisation, firstly the green and red Status LEDs (4) of all the load outputs **A1...A4** illuminate. Initialisation is complete as soon as all the Status LEDs are off.
- Switch off mains voltage.

**Connect any loads to load outputs switched in parallel**

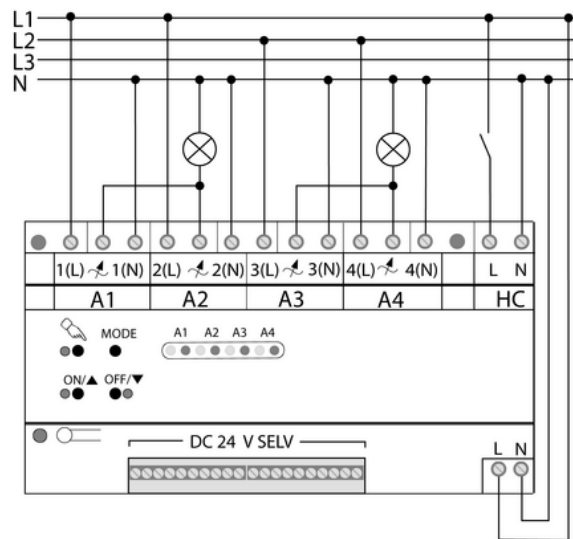


Figure 4: Connection example of load outputs switched in parallel



**CAUTION!**

**Risk of destruction of load outputs switched in parallel if the device is set incorrectly.**

**Dimmer and loads may be destroyed.**

**Specify the Master and the Slave before connecting the loads to the load outputs.**



**CAUTION!**

**Danger of destruction. 400 V are shorted when outputs switched in parallel are connected to different outer conductors.**

**The device will be destroyed.**

**Always connect outputs switched in parallel to the same outer conductor.**



**CAUTION!**

**When connecting power boosters to load outputs switched in parallel, there is no guarantee that the dimmer sets the dimming principle suitable for the load.**

**Dimmer, power booster and load may be destroyed.**

**Do not connect any power extensions to load outputs switched in parallel.**



**CAUTION!**

**Danger of destruction from mixed loads.**

**The dimmer and load may be destroyed.**

**Do not connect capacitive loads, e.g. electronic transformers, and inductive loads, e.g. inductive transformers, together on the same dimmer output.**

Only subject load outputs switched in parallel to up to 80%.

The minimum load of parallel switching of load outputs is 150 W.



**Example**

Load output	Connected load
A1	20...150 W/VA
A1+A2	150...240 W/VA
A1+A2+A3	150...360 W/VA
A1+A2+A3+A4	150...480 W/VA

- i** Do not connect any HV-LED lamps or compact fluorescent lamps to outputs switched in parallel.
- i** Do not connect Tronic and inductive Transformers together on the same output.
  - Connect loads as shown in the connection example.

**Connecting a control section**

Operation take place using the devices listed under Accessories.

- Connect the control section as shown in connection example (figure 5), (figure 6) or (figure 7).

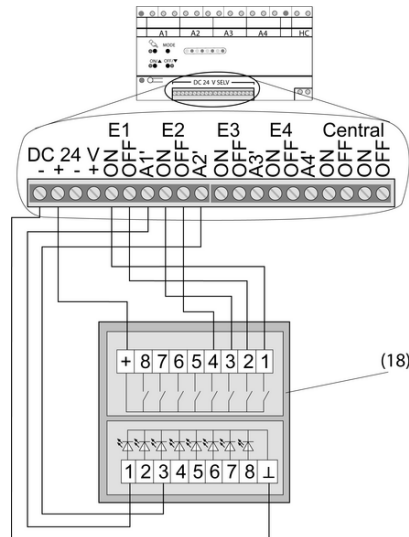


Figure 5: Connection example of push-button 24 V, 4-gang, push-button module 24 V, 4-gang

- i** They are only connected in the first four channels for the sake of clarity. Supplement further channels correspondingly. A cable of up to 20 wires is needed for a full connection.

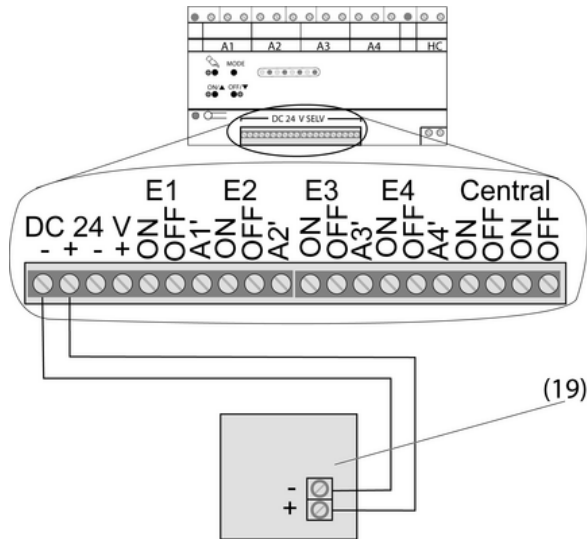


Figure 6: Connection example for sensor module or push-button module

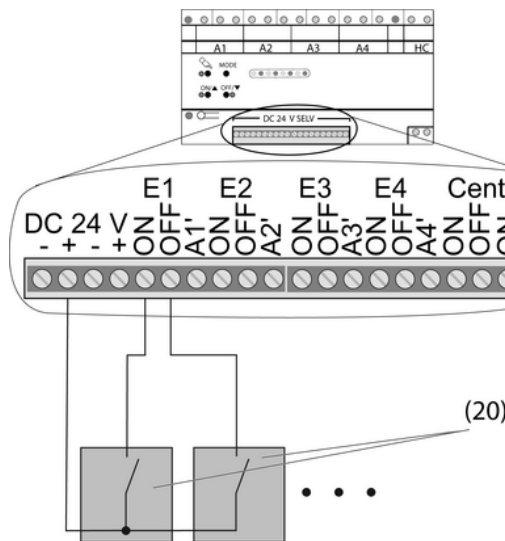


Figure 7: Wiring example for unlit installation button

(18) Push-button 24 V / Push-button module 24 V

(19) Sensor module/ push-button module

(20) Unlit installation button

**Operation of two dimmer stations with a sensor module or push-button module**

Sensor modules or push-button modules can operate two dimmer stations together. This requires connection of both dimmer stations in parallel. To do this, the sensor modules must have at least version V02. The device address of a dimmer station must be changed (see "Setting the device address")

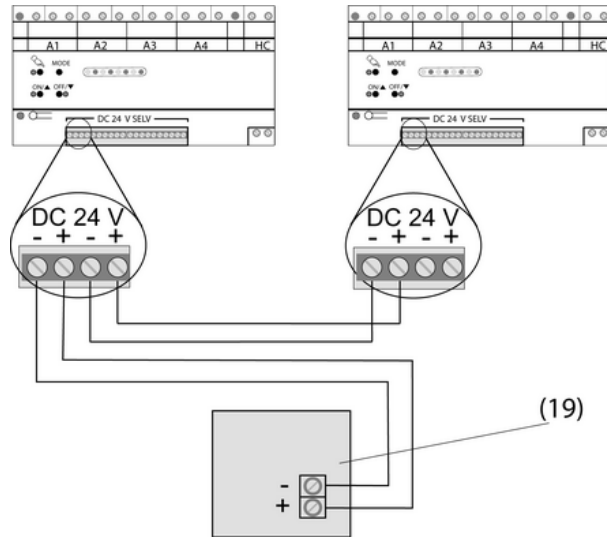


Figure 8: Connection example for one sensor module or push-button module to two dimmer stations

- Connect the sensor module or push-button module to two dimmer stations according to the connection example (figure 8).
- i** Connect the power supply of the dimmer stations to the same outer conductors.
- i** Even dimmer stations switched in parallel may only have four sensor modules or push-button modules connected to them.

**Operation of multiple dimmer stations with a push-button 24 V or push-button module 24 V**

In operation with push-button 24 V or push-button module 24 V, they can be connected to up to four dimmer stations. To do this, the negative poles of the individual dimmer stations have to be connected to each other. It is possible, for example to switch load outputs of several dimmer stations with a single push-button 24 V (figure 9), or to implement central control of several dimmer stations (figure 10).

Connection example for one push-button 24 V to two dimmer stations. Here **Kanal 1** and **Kanal 2** of the push-button 24 V switches load output **A2** of the right-hand dimmer station, and **Kanal 3** and **Kanal 4** switches load output **A1** of the left-hand dimmer station.

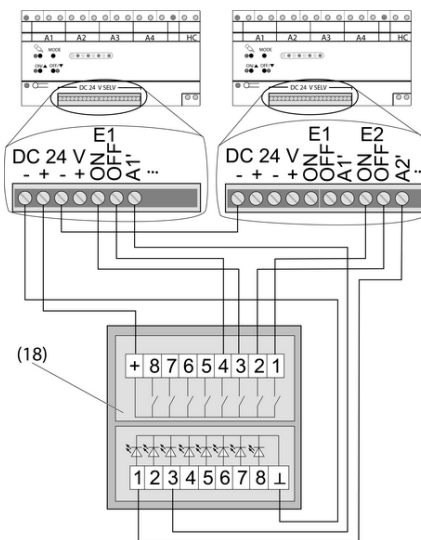


Figure 9: Connection example for one push-button 24 V or push-button module 24 V to two dimmer stations.

Connection example central function. Here **Kanal 7** of the push-button sensor Central OFF and **Kanal 8** switches Central ON.

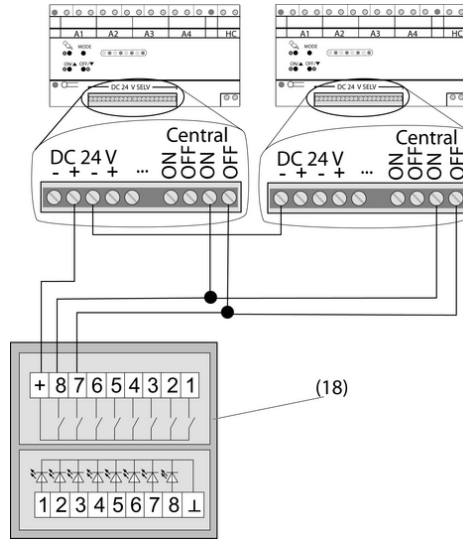


Figure 10: Wiring example for Central ON, Central OFF

- Connect push-button sensor 24 V as shown in the wiring example (figure 9) or (figure 10).
- i** The feedback LEDs of the push-button 24 V are only connected to the activation outputs of one dimmer station. This dimmer station then indicates the status of the load outputs, standing in for both dimmer stations.
- i** In like manner, installation buttons can also be used.

## 5.2 Commissioning



### DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Use only insulated tools when working on the device! Cover up live parts in the working environment.

### Overview of programming and setting modes

Press the button <b>Mode</b> (15) for approx. 3 seconds	Programming mode for the dimming principle, minimum brightness and central function
Press the push-buttons <b>ON/▲</b> (13) and <b>OFF/▼</b> (16) simultaneously for approx. 3 seconds	Setting the device address and status messages
Press <b>Mode</b> (15) and <b>Prog</b> (3) buttons simultaneously for approx. 3 seconds	Parallel switching of load outputs (see chapter Mounting and Electrical Connection)
Press <b>Mode</b> (15), <b>ON/▲</b> (13) and <b>OFF/▼</b> (16) buttons simultaneously for approx. 3 seconds	Setting the length of the dimming function and restoring factory settings

## Setting the dimming principle of the load outputs A1...A4



### CAUTION!

**Danger of destruction when operating inductive transformers in the phase cut-on section.**




**The dimmer and transformer may be destroyed.**

**Only use the Universal setting for inductive transformers.**

In the as-delivered state, all the outputs are set to Universal.


Universal: the red and green status LEDs (4) light up	Automatic calibration to the load, dimming principle, leading edge phase control or trailing edge phase control. Connection of incandescent lamps, HV halogen lamps, Tronic-Transformers with halogen lamps or dimmable inductive transformers with halogen or LED lamps.
LED phase cut-off: green Status LED (4) lights up	Setting for HV-LED or compact fluorescent lamps that can be dimmed according to the phase cut-off principle. The connection of transformers is not permitted.
LED phase cut-on: red Status LED (4) lights up	Setting for HV-LED and compact fluorescent lamps that can be dimmed according to the phase cut-on principle. The connection of transformers is not permitted.

The dimmer station is mounted and connected properly.




- Switch on mains voltage.  
All the LEDs illuminate briefly.  
All the outputs are initialised, Status LEDs (4) light up. On completion of initialisation, the Status LEDs are not lit up.
- Press **MODE** button for approx. 3 seconds.  
LED  (12) lights up, programming mode is switched on.  
The green or red, or both, Status LEDs (4) of load output **A1** light(s) up.
- If necessary, press the **Mode** button to switch to the next load output.  
The green or red, or both, Status LEDs (4) of the next load output light up.
- Use the **ON/▲** or **OFF/▼** buttons to set the dimming principle.
- Press **Prog** button briefly.  
The output applies the set dimming principle. On completion, the green and red Status LEDs (4) of the next load output light up.
-  When the dimming principle of the last load output has been saved, the switch to the minimum brightness of the load outputs takes place automatically. Red and green status LEDs (4) of load output **A1** are flashing. If the minimum brightness is not to be changed, keep pressing the **Mode** button briefly until the change-over to Configure central function takes place and the green or red Status LED (4) of the load output **A1** flashes, or Programming mode is exited and the LED  (12) is off.

## Setting the minimum brightness of the load outputs A1...A4

The use of different lamps or power extensions means that different minimum brightnesses may occur. To compensate for these, the minimum brightness of the individual load outputs can be set.

- Press **MODE** button for approx. 3 seconds.  
LED  (12) lights up, programming mode is switched on.  
The green or red, or both, Status LEDs (4) of load output **A1** light(s) up.
- Keep pressing the **Mode** button until the green and red LEDs of the load output **A1** flash.

The light of the load output **A1...A4** is set to the saved minimum brightness.


- If necessary, press the **Mode** button to switch to the next load output.  
The green and red status LEDs (4) of the next load output flash.
  - Press button  (11) briefly.  
The load output is reinitialised. The procedure is completed when the green and red Status LEDs (4) of the load output light up.
  - Use the push-buttons **ON/▲** and **OFF/▼** to set the minimum brightness.
  - Press  button briefly.  
The minimum brightness for the load output is saved. The load output is reinitialised.  
On completion of initialisation, the green and red status LEDs (4) of the next load output flash.
- i** When the minimum brightness of the last load output has been saved, the switch to configuring the central function takes place automatically. The green or red status LED (4) of load output **A1** illuminates. If you do not wish to change the central function, keep on pressing the push-button **Mode** briefly until the LED  (12) goes out.

### Configuring the central function


**i** In the state as supplied the central function is assigned to all of the load outputs.  
The LEDs of the individual load outputs indicate whether the central function is active for that output.

Red LED flashes = central function not assigned

Green LED flashes = central function assigned

- Press **MODE** button for approx. 3 seconds.  
LED  (12) lights up, programming mode is switched on.  
The green or red, or both, Status LEDs (4) of load output **A1** light(s) up.
- Keep pressing the **Mode** button until the green or red LED (4) of the load output **A1** flashes.
- To assign the central function for load output **A1**, press the **ON/▲** button.  
The green status LED (4) of load output **A1** flashes. The central function has been assigned.
- To remove the central function for load output **A1**, press the **OFF/▼** button.  
The red status LED (4) of load output **A1** flashes. The central function has been removed.
- Press **MODE** button briefly.  
The central function for the next load output can be assigned.



### Exit programming mode

- Press the **Mode** button as many times as necessary until LED  (12) goes out.  
The green status LED (4) indicate the switching states of the load outputs **A1...A4**.

**i** After 15 seconds without a button-press the programming mode is automatically terminated.

### Setting the length of the dimming function

The length of the dimming function can be shortened to 30 Sekunden steps of 180 seconds to 30 seconds.

- Press , **Mode**, **ON/▲** and **OFF/▼** buttons simultaneously for approx. 3 seconds.  
LED **ON/▲** (14) and **OFF/▼** (17) flash.  
Depending on the current length, the green and red status LEDs of the output **A1...A3** illuminate.  
One LED = 30 seconds up to six LEDs = 180 seconds
- Press **ON/▲** or **OFF/▼** button briefly until the dimming ramp has reached the desired length. The length is shorted or lengthened by one step each time the button is pressed.
- Press the buttons , **Mode**, **ON/▲** and **OFF/▼** again simultaneously for approx. 3 seconds or wait for 15 seconds.

All Status LED light up.

The device is reinitialised. The procedure is completed when the green and red status LEDs **A1...A4** (4) are off.

### Setting the device address

If two dimmer stations are connected in parallel, the device address of a dimmer station has to be reprogrammed before the sensor modules or push-button modules are commissioned. In the state as supplied each dimmer station has the device address 1.

Sensor modules or push-button modules are connected.

- Press **ON/▲** and **OFF/▼** buttons simultaneously for approx. 3 seconds.  
LED (12) lights up.  
The green status LED of output **A1** flashes. This means that the device address 1 is set.
- Press the **ON/▲** or **OFF/▼** button briefly.  
The green status LED of output **A2** flashes. Device address 2 has been set.
- Press the buttons **ON/▲** and **OFF/▼** again simultaneously for approx. 3 seconds or wait for 15 seconds.  
The dimmer station switches to normal operation.  
The dimmer station has the device address 2.

To set device address 1 again, repeat the above steps.

### Switching on status message for sensor modules and push-button modules.

In operation with sensor modules, a status message has to be transmitted regularly. In the state as supplied this status message is switched off.

- Press **ON/▲** and **OFF/▼** buttons simultaneously for approx. 3 seconds.  
LED (12) lights up.  
The green status LED (4) of load output **A1** or **A2** flashes, depending on the set device address.
- Press **MODE** button briefly.  
All green status LEDs (4) of the load outputs **A1...A4** flash briefly.  
The regular status message is switched on.
- Press the buttons **ON/▲** and **OFF/▼** again simultaneously for approx. 3 seconds or wait for 15 seconds.  
The dimmer station switches to normal operation.

The regular status message is switched off in the same way as it is switched on. All the red status LEDs (4) of the load outputs **A1...A4** flash briefly as acknowledgment.

### Restoring factory settings

#### Overview of factory settings

Device address	1
Status messages	off
Dimming principle	Universal, automatic calibration to the load, dimming principle, phase cut-on or phase cut-off. Connection of incandescent lamps, HV halogen lamps, Tronic-Transformers with halogen lamps or dimmable inductive transformers with halogen or LED lamps.
Central function	assigned
Switch-on brightness	Maximum brightness
Minimum brightness	lowest dimming position
Length of the dimming function	180 seconds

Configuration of load outputs	independent load outputs
-------------------------------	--------------------------

- Press buttons (11), **Mode** (15), **ON/▲** (13) and **OFF/▼** (16) simultaneously for approx. 3 seconds.  
LED **ON/▲** (14) and **OFF/▼** (17) flash.  
Depending on the length of the dimming function, the green and red status LEDs of the output **A1...A3** illuminate.
- Press button **Prog** (3) for longer than 20 seconds.  
The factory settings of the dimming station are set after 20 seconds. All Status LED light up.  
The device is reinitialised. The procedure is completed when the green and red status LEDs **A1...A4** (4) are off.

**Cloning sensor modules or pushbutton modules**

"Cloning" is used to transfer the button assignments of a module to other modules. Only identical devices and the same version can be cloned - sensor module to sensor module or pushbutton module to pushbutton module. Operation of the dimmer station is not possible during cloning mode.

Several sensor modules or push-button modules are connected to the dimmer station.

Button assignments have been made on a module.

- Press the **MODE** and **Prog** buttons simultaneously until the (12), **ON/▲** (13) and **OFF/▼** (17) LED flash.  
The dimmer station and sensor modules or push-button modules are in cloning operation.
- Within approx. 2 minutes, press a button on the module that is to be cloned.
- Within approx. 2 minutes, press a push-button on another sensor module or push-button module.  
The module has adopted the button assignments, and cloning mode is terminated.
- Repeat the steps described above for additional modules.
- Cloning mode cannot be terminated manually. To abort cloning mode once it has started, wait 2 minutes without pressing any sensor module or push-button module.
- If cloning mode is activated on the dimmer station when there are no sensor modules or push-button modules connected, cloning mode will be terminated automatically after 3 minutes.
- For additional information, e.g. on signalling of the modules, please refer to the instructions for the module in question.

**6 Appendix**

**6.1 Technical data**

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Power loss	max. 20 W
Standby power	max. 2 W
Terminals -, +	
Control voltage	DC 24 V SELV
Current carrying capacity	Σ 80 mA
Total length of control cable	max. 100 m
Number of sensor modules	4
Number of push-button modules	4
Number of push-button sensors 24V / push-button sensor modules 24 V	Type-dependent
Switching inputs E1 ON/OFF...E4 ON/OFF	
Control voltage	DC 24 V SELV
Resistance Ri	200 kΩ
Activation outputs A1'...A8'	
Control voltage	DC 24 V SELV
Current carrying capacity	10 mA



Resistance Ra	330 Ω
Connection	
Rated voltage/load outputs/hotel card switch	
single stranded	0.5 ... 4 mm <sup>2</sup>
Finely stranded with conductor sleeve	0.14 ... 2.5 mm <sup>2</sup>
finely stranded without conductor sleeve	0.34 ... 4 mm <sup>2</sup>
Activation outputs/switching outputs/control sections	
single stranded	1.5 mm <sup>2</sup>
Finely stranded with conductor sleeve	0.75 mm <sup>2</sup>
finely stranded without conductor sleeve	1.0 mm <sup>2</sup>
Load outputs A1...A4	
Contact type	ε
Total length power cable per channel	100 m
Connected load per load output	
Power specifications including transformer power dissipation.	
Operate inductive transformers with at least 85% nominal load.	
For ohmic-inductive mixed load, maximum 50% proportion of ohmic load. Otherwise incorrect calibration of the dimmer may result.	
Only subject load outputs switched in parallel to up to 80%.	
The minimum load of parallel switching of load outputs is 150 W.	
Incandescent lamps	20 ... 150 W
HV halogen lamps	20 ... 150 W
Tronic transformers	20 ... 150 W
Inductive transformers	20 ... 150 VA
HV-LED lamps	typical 3 ... 30 W
Compact fl lamp.	typical 3 ... 30 W
ohmic-capacitive	20 ... 150 W
ohmic-inductive	20 ... 150 VA
capacitive-inductive	not permitted
Power reduction	
per 5°C in excess of 45°C	-15 %
Power boosters	See power booster instructions
Fitting width	144 mm / 8 modules



The icons used to label the dimmer load shows the load type that can be connected to a dimmer and the electric behaviour of a load: R = ohmic, L = inductive, C = capacitive, HV = dimmable HV-LED lamps

## 6.2 Troubleshooting

### Connected HV-LED lamps or compact fluorescent lamps switch off in the lowest dimming position or flicker

The set minimum brightness is too low.  
Increase minimum brightness.

### Connected HV-LED lamps or compact fluorescent lamps flicker

Cause 1: Lamps are not dimmable.

Check manufacturer's instructions.  
Exchange lamps for another type.

Cause 2: Dimming principle and lamps do not optimally match.

Check operation in another dimming principle, reduce connected load as well if necessary.

### Connected HV-LED lamps or compact fluorescent lamps in the lowest dimming position are too bright; dimming range is too small

Cause 1: The set minimum brightness is too high.  
Reduce minimum brightness.

Cause 2: Dimming principle LED phase cut-off does not optimally match the connected lamps.

Check operation in the LED phase cut-on setting, reduce connected load as well if necessary.

Exchange lamps for another type.

### **Load output switches the load off and cannot be switched on again.**

Cause 1: overtemperature protection has tripped, the red Status LED (4) of the appropriate load output flashes.

Disconnect the load output from mains, also switch off the associated circuit breaker.

Reduce the connected load.

LED phase cut-off: Reduce the connected load. Exchange lamps for another type.

LED phase cut-on: Reduce the connected load. Check operation in the LED phase cut-off setting. Exchange lamps for another type.

Let the load output cool down for at least 15 minutes. Check installation situation, ensure cooling, e.g. provide distance from surrounding devices.

Switch circuit breakers and dimmer on again.

Cause 2: surge protection has tripped, the red and green Status LEDs (4) of the appropriate load output flash.

LED phase cut-off: Check operation in the LED phase cut-on setting, reduce connected load as well if necessary.

Exchange lamps for another type.

Switch on load output again.

Cause 3: short-circuit protection has tripped, the red and green Status LEDs (4) of the appropriate load output flash.

Switch off the mains supply.

Eliminate short-circuit.

Switch circuit breakers and the load output on again.

**i** Short-circuit protection is not based on a conventional fuse, no metallic separation of the operational current.

Cause 4: load failure.

Check load, replace light bulb. For inductive transformers, check primary fuse and replace if necessary.

Cause 5: mains voltage on the dimmer has failed.

### **Luminaires flicker or buzz, proper dimming not possible, device buzzes**

Wrong dimming principle set.

Check connected lamps. Correct the set dimming principle.

### **No operation is possible.**

Cause 1: there is no hotel card in the hotel card switch, **LED Prog** is red.

Insert the hotel card, the Prog LED turns green.

Cause 2: no hotel card switch is connected, **LED Prog** is red

Connect the hotel card switch or outer conductor and neutral conductor to the terminals for the hotel card switch, **LED Prog** turns green.

### **No control is possible via control sections.**

Cause 1: local control is switched on.

Switch off local control (see chapter 4. Operation).

Cause 2: programming mode is switched on.

Switch off programming mode (see Commissioning)

### **Load output cannot be operated.**

Cause 1: load output is not ready for operation.

Check installation.

Check load.

Cause 2: the load output is assigned to a Master as a Slave.

Check the installation, adjust the dimmer station appropriately (see the chapter Mounting).

### **Load outputs switched in parallel cannot be operated.**

One of the load outputs is not ready for operation.

Check installation.

### **Load output does not react to central controller**

Cause: no central controller is assigned to the load output.

Assign central controller (see Commissioning).

### **Load output does not switch on using the hotel card switch.**

Cause: no central controller is assigned to the load output.

Assign central controller (see Commissioning).

## **6.3 Accessories**

Relay station universal, 8-gang

Art. No. RS 8 REG HE

Sensor module 8-gang

Art. No. SM 1608

Push-button module

Art. No. 4008 TSM

Push-button sensor 24 V AC/DC, 2-gang

Art. No. ..2224..

Push-button sensor 24 V AC/DC, 4-gang

Art. No. ..2248..

Push-button module 24 V AC/DC, 1-gang

Art. No. 4212 TSM

Push-button module 24 V AC/DC, 2-gang

Art. No. 4224 TSM

Push-button module 24 V AC/DC, 3-gang

Art. No. 4236 TSM

Push-button module 24 V AC/DC, 4-gang

Art. No. 4248 TSM

Push-button module 24 V AC/DC, 1-gang

Art. No. ..5212 TSM

Push-button module 24 V AC/DC, 2-gang

Art. No. ..5224 TSM

Push-button module 24 V AC/DC, 3-gang

Art. No. ..5236 TSM

Push-button module 24 V AC/DC, 4-gang

Art. No. ..5248 TSM

## **6.4 Warranty**

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

We provide a warranty as provided for by law.

Please send the device with a description of the defect to our central customer service office.

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