

Flush-mounted dimming actuator, 1-gang, with satellite input
Art.-No.: 3210 UP



Operating instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Danger of electric shock on the KNX installation. Do not connect any external voltage to the inputs. Doing so may damage the device(s), and the SELV potential on the KNX bus line will no longer be available.

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.

Danger of electric shock. Before working on the device or before exchanging light bulbs, disconnect mains voltage and switch off circuit breakers.

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

Do not connect any electronic lamps, e.g. switchable or dimmable compact fluorescent lamps or LED lamps. 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

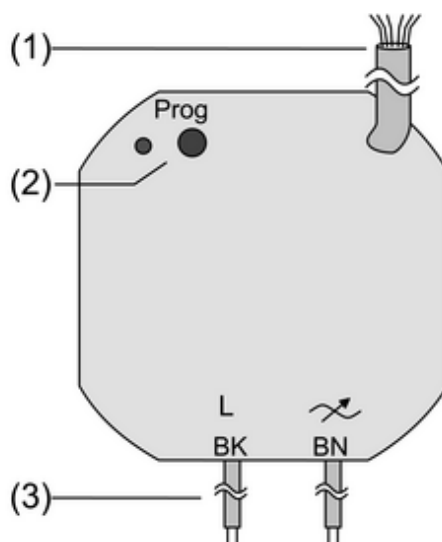


Figure 1: Flush-mounted dimmer actuator

- (1) Control cable
- (2) Programming button and LED
- (3) Connection of mains and power cables

Connection assignment, power cables

BK, black: connection conductor L

BN, brown: dimming output

Connection assignment of control cable

RD, red: KNX+

BK, black: KNX–

GN, green: input 1

YE, yellow: input 2

WH, white: COM input 1

BN, brown: COM input 2

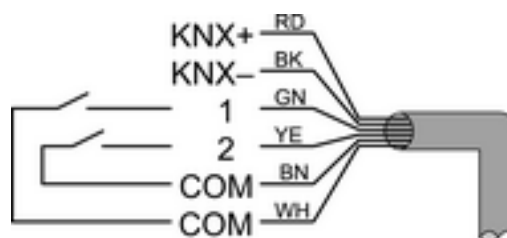


Figure 2: Connection assignment of control cable

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. Planning, installation and commissioning of the device are carried out with the aid of KNX-certified software. The latest versions of product database and the technical descriptions are available on our website.

Intended use

- Switching and dimming of incandescent lamps, 230 V halogen lamps and LV halogen lamps with inductive transformers or Tronic transformers
- Installation in appliance box to DIN 49073

Product characteristics

- Automatic selection of the dimming principle suitable for the load
- Protected against no-load, short-circuit and overheating
- Feedback of the switching position and the dimming value
- Parameterisable switch-on and dimming behaviour
- Timed dimmer: switch-on delay, switch-off delay, staircase lighting timer
- Light scene operation
- Two binary inputs for potential-free contacts, usable as extension inputs for local operation
- Supply via bus, no additional power supply necessary
- Mains failure longer than approx. 0.7 seconds leads to switch-off of the dimmer actuator.

i Ripple-control pulses from the electric power company may be visible in the form of flickering. This does not represent any defect in the device.

4 Information for electrically skilled persons

4.1 Fitting and electrical connection



DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before working on the device, disconnect the power supply and cover up live parts in the working environment.

Connecting and mounting the device



DANGER!

When connecting the bus/extensions and mains voltage wires in a shared appliance box, the KNX bus line may come into contact with the mains voltage.

This endangers the safety of the entire KNX installation. People at remote devices may also receive an electric shock.

Do not place bus/extensions and mains voltage terminals in a shared connection compartment. Use an appliance box with a fixed partition wall (figure 3) or separate boxes.

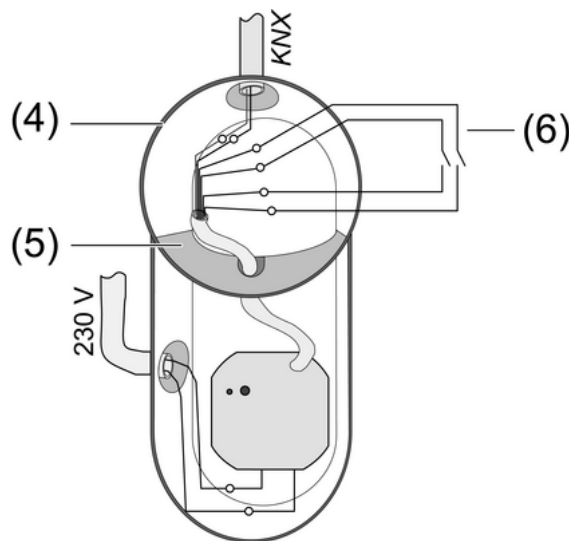


Figure 3: Installation in appliance box

- (4) Appliance box
- (5) Partition
- (6) Potential-free contacts, e.g. for window contact or installation pushbuttons

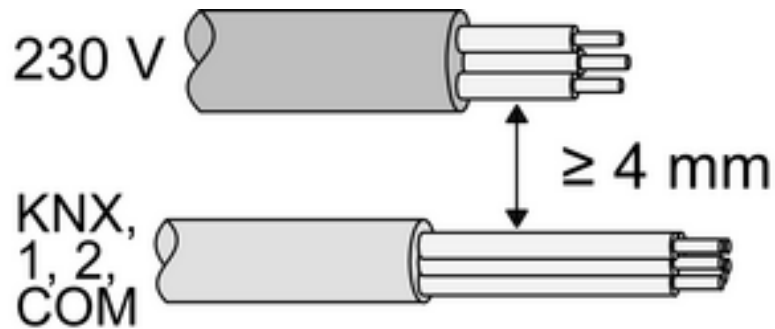


Figure 4: Spacing between mains cable and control cable

Minimum spacing between the mains voltage and bus/extension wires: 4 mm (figure 4).

Do not exceed permissible total load including transformer power dissipation.

Operate inductive transformers with at least 85% nominal load.

Mixed loads with inductive transformers: ohmic load max. 50%.

Trouble-free operation is only ensured with electronic transformers manufactured by us or with dimmable inductive transformers.



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.

- Connect the load (figure 5). Use the supplied sprung screwless terminals. Flexible cable ends must be tin-plated.
- Connect the device to KNX.
- If necessary, connect potential-free contacts to the inputs (figure 2).
- Install the device in the appliance box.

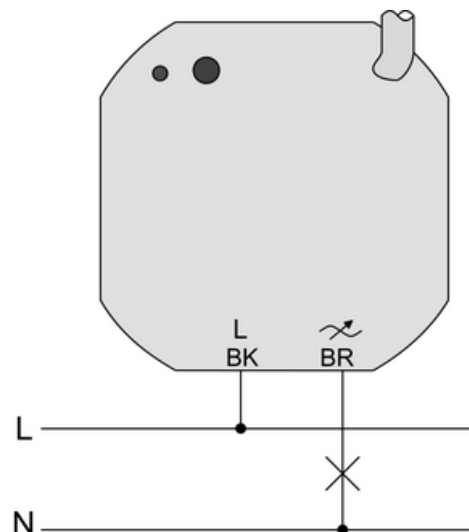


Figure 5: Connection

Function of Inputs 1 and 2 in the as-delivered state

Input	NO contact	Output
1	Press briefly	Light on 100%
1	Press for a long time	Dimming brighter
2	Press briefly	Light off
2	Press for a long time	Dimming darker

4.2 Commissioning

Load the address and the application software

- Switch on the bus voltage
- Assign physical addresses and load application software into the device.
- Note the physical address on the device label.

5 Appendix

5.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Contact type	ε, MOSFET
Connected load	
Incandescent lamps	50 ... 210 W
HV halogen lamps	50 ... 210 W
Inductive transformers	50 ... 210 VA
Tronic transformers	50 ... 210 W
Mixed loads	
Ohmic-inductive	50 ... 210 VA
ohmic-capacitive	50 ... 210 W
capacitive-inductive	not permitted
Control cable and inputs	
Control cable (preterminated)	YY6x0.6
Input type	Potential-free
Total length of extension unit cable	max. 5 m
Poll voltage, extension inputs	approx. 5 V
Dimensions Ø×H	53×28 mm
Connection mode	Screwless terminal (enclosed)
Single stranded	1.0 ... 2.5 mm ²
KNX	
KNX medium	TP 1
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Power consumption KNX	typical 150 mW
Connection mode KNX	Connection terminal on control cable

5.2 Troubleshooting

Light has switched off

Cause 1: short-circuit in output circuit.

Disconnect device from mains; switch off associated circuit breakers.

Eliminate short-circuit.

Switch mains voltage on again.

Switch device off and then on again.

- i** When a short-circuit occurs the affected output switches off. Automatic restart when short-circuit is eliminated within 100 ms (inductive load) or 7 seconds (capacitive or ohmic load). After that lasting switch-off.
- i** When a short-circuit occurs during the calibration process, the load calibrates itself again after the short-circuit is eliminated.

Cause 2: load failure.

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

Cause 3: Output is disabled.

Cancel disabling.

Cause 4: bus voltage failure.

Check bus voltage.

Cause 5: mains voltage failure.

Check mains voltage.

Cause 6: overheating protection has tripped due to overload or too high ambient temperature.

Disconnect device from mains; switch off associated circuit breakers.

Let device cool down for at least 15 minutes.

Check installation situation, ensure cooling, e.g. provide distance from surrounding devices.

Reduce the connected load.

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

Cause: wrong dimming principle set

Installation or commissioning error. Disconnect device and luminaire, switch off circuit breaker.

Check installation and correct.

Luminaires flicker irregularly

Cause: ripple-control pulses from the electric utility or distribution network operator.

Use audio frequency suppressors.

5.3 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 unit postage-free with a description of the defect to our central customer service office:

ALBRECHT JUNG GMBH & CO. KG

Service Center
Kupferstr. 17-19
D-44532 Lünen
Service-Line: +49 (0) 23 55 . 80 65 51
Telefax: +49 (0) 23 55 . 80 61 89
kundencenter@jung.de

General equipment

Service-Line: +49 (0) 23 55 . 80 65 55
Telefax: +49 (0) 23 55 . 80 62 55
kundencenter@jung.de

KNX equipment

Service-Line: +49 (0) 23 55 . 80 65 56
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