Operating instructions

Standard rotary dimmer LED
Art. no. 1730DD



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1 Safety instructions



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

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

Danger of electric shock. Device is not suitable for disconnection from supply voltage because mains potential even is applied on the load when the device is switched off. Before carrying out work on the device or load, switch off all associated circuit breakers.

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.

This manual is an integral part of the product, and must remain with the end customer.

2 Intended use

- Switching and dimming of lighting
- Operation with suitable cover
- Mounting in appliance box with dimensions according to DIN 49073

3 Product characteristics

Product characteristics

- Device works according to the leading edge phase control or trailing edge phase control principle
- Automatic setting of the dimming principle suitable for the load
- Operation without neutral conductor possible
- Switch-on via bulb-preserving soft start
- Switch on with last saved brightness or saved switch-on brightness
- Switch-on brightness can be saved permanently
- Minimum brightness can be saved permanently
- Electronic short-circuit protection with permanent switch-off after 7 seconds at the latest
- Electronic over-temperature protection

Power extension possible by means of power boosters.

4 Operation

Switching light or adjusting brightness

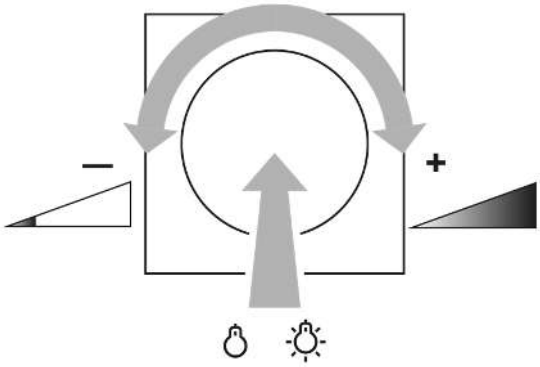

Image 1: Switching light or adjusting brightness

- Press the setting knob briefly: Light switches on or off (see figure 1).
- Turn the setting knob quickly: Brightness is changed quickly (see figure 1).
- Turn the setting knob slowly: Brightness is changed slowly (see figure 1).

Switching the light on at minimum or maximum brightness

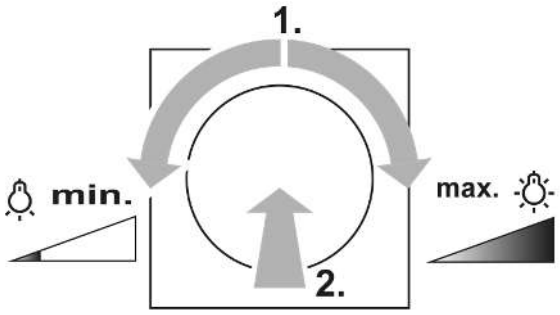

Image 2: Switching on the light at minimum or maximum brightness

- Turn the setting knob by a quarter turn, then press the setting knob briefly: Light switches on at minimum brightness or maximum brightness (see figure 2).

Saving the switch-on brightness

- Adjust the brightness.
- Press the setting knob for longer than 4 seconds.

  Switch-on brightness is saved. The lighting switches briefly off and on again as confirmation.

Deleting the switch-on brightness

- Press the setting knob briefly: Light switches on at the saved switch-on brightness.
- Press the setting knob for longer than 4 seconds.

The switch-on brightness is deleted. Switching on takes place at the last brightness value set. For confirmation, the light is switched off briefly and switched on again.

5 Information for electrically skilled persons

5.1 Mounting and electrical connection

DANGER!

Mortal danger of electric shock.

Disconnect the device. Cover up live parts.

Mounting and electrical connection

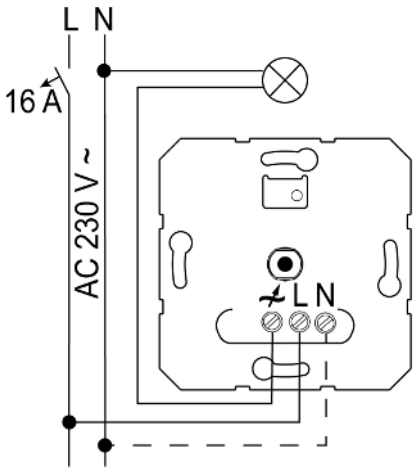

Image 3: Connection diagram

Connect 600 Watt LED lamps or compact fluorescent lamps at most per 16 ampere circuit breaker. When connecting transformers, observe the data of the transformer manufacturer.

The dimmer takes into account the different electronic characteristics of most dimmable LED lamps on the market. However, it cannot be guaranteed that in individual cases the desired results may not be achieved.

Operation without neutral conductor possible.

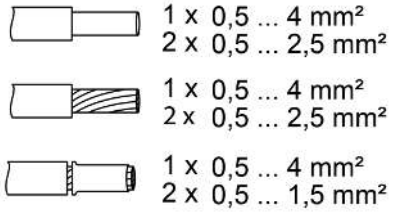

Image 4: Clampable conductor cross-section

Reset the overheating protection / short-circuit protection

If the electronic overheating or short-circuit protection has been activated, separate the dimmer from the grid.

5.2 Commissioning

Setting the minimum brightness

Precondition: The dimmer is ready for operation and the load is switched off.

- Press the setting knob for approx. 10 to 15 seconds until the light switches on and off again.
- Press again and hold the knob within 5 seconds. Light switches on at the lowest brightness and slowly becomes brighter.

i In the lowest dimming position, a lamp light must be visible.

- Once the desired minimum brightness is reached, release the setting knob.

  The minimum brightness is stored and the light is switched off.

6 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Standby power	approx. 0.35 W
Power loss	approx. 2 W
Ambient temperature	-5 ... +45 °C

Connected load at 25°C (see figure 5)

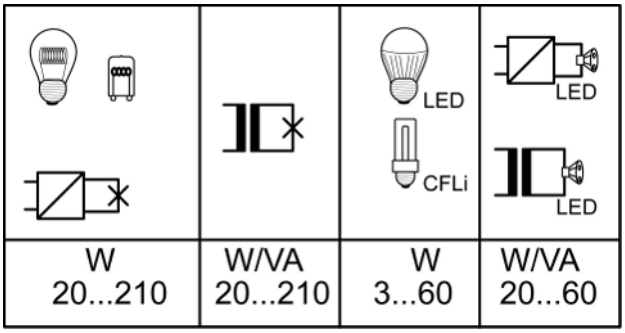

Image 5: Connected load

Mixed load	
ohmic-capacitive	20 ... 210 W
capacitive-inductive	not permitted
ohmic-inductive	20 ... 210 VA
ohmic and HV LED	typ. 3 ... 60 W
ohmic and compact fl lamp.	typ. 3 ... 60 W

- If the dimmer is adjusted to trailing edge phase control, the maximum connected load for HV-LED lamps is typ. 3 ... 120 W and electronic transformers with LV-LED lamps typ. 20 ... 120 W.
- Power specifications including transformer dissipation.
- Operate inductive transformers with at least 85% nominal load.
- Ohmic-inductive mixed load: max. 50% proportion of ohmic load. Otherwise, an incorrect measurement is possible.
- Operation without neutral conductor: Minimum load 50 W. Does not apply to loads with HV-LED and compact fluorescent lamps.

Power reduction	
per 5 °C in excess of 25 °C	-10%
when installed in wooden or dry construction walls	-15%
when installed in multiple combinations	-20%
Power boosters	see power booster instructions
Total length power cable	max. 100 m

7 Troubleshooting

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

Cause: The set minimum brightness is too low.

Increase minimum brightness.

Connected lamps do not switch on in the lowest dimming position or only after a delay

Cause: The set minimum brightness is too low.

Increase minimum brightness.

Connected LED lamps or compact fluorescent lamps flicker or buzz, no correct dimming possible, device buzzes

Cause 1: Lamps are not dimmable.

Check manufacturer's instructions.

Exchange lamps for another type.

Cause 2: Dimmer is connected without neutral conductor.

Connect neutral conductor if possible, otherwise exchange lamp for another type.

Connected 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.

Exchange HV-LED lamps for another type.

The dimmer switches the load off briefly and then on again.

Cause: Short-circuit protection has tripped but now there is no longer a fault.

The dimmer has switched off and the load cannot be switched on again

Cause 1: Overheating protection has tripped.

Disconnect dimmer from mains by switching off circuit breaker.

Reduce the connected load. Exchange lamps for another type.

Let dimmer cool down for at least 15 minutes.

Switch circuit breakers and dimmer on again.

Cause 2: Overvoltage protection has tripped.

Exchange lamps for another type.

Cause 3: Short-circuit protection has tripped.

Disconnect dimmer from mains by switching off circuit breaker.

Eliminate short-circuit.

Switch circuit breakers and dimmer on again.

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

Cause 4: load failure.

Check load, replace lamp. For inductive transformers, check primary fuse.

LED lamp is dimly lit when dimmer is switched off

Cause: LED lamp is not suitable for this dimmer.

Use a compensation module, see accessories.

Use another type of LED lamp or an LED lamp of another manufacturer.

8 Accessories

Compensation module LED	Art. no. KMLED230U

9 Warranty

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

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