



## 1. Basic safety information



### WARNING

**Danger of death through electric shock or fire!**

- Installation should only be carried out by a qualified electrician!

① Due to increasing technical progress, conspicuous features in dimming behaviour or malfunctions cannot be ruled out for dimmed lamps (in particular LEDs)

- The dimmer is designed for installation on DIN top hat rails (in accordance with EN 60715)
- It conforms with IEC/EN 60669-2-1 if correctly installed

## 2. Proper use

- The dimmer switches and dims the brightness of different lamps such as bulbs, high-voltage halogen lamps, low-voltage halogen lamps (conventional or with electronic transformer), dimmable compact fluorescent lamps (energy saving lamps) or dimmable lamps for 230 V as well as for fans
- The setting for brightness is carried out using the dimmer on the button connected
- The universal dimmer has a lamp-friendly "soft" on and off system, automatic detection of the load type (not in the case of ESL2 and LED2), overheating protection against overload as well as a short-circuit protection.
- For use in private and public buildings, in closed rooms

### Disposal

- Dispose of the device in an environmentally sound manner (electronic waste)

## 3. Installation and connection

### Mounting the dimmer



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- Disconnect power source
- Ensure device cannot be switched on
- Check absence of voltage
- Earth and bypass
- Cover or shield any adjacent live components
- Mount the dimmer in the lower part of the distributor to avoid an excessively high temperature during use.
- In the case of a service line of >300 W keep an 8 mm distance to the right and left of the device.

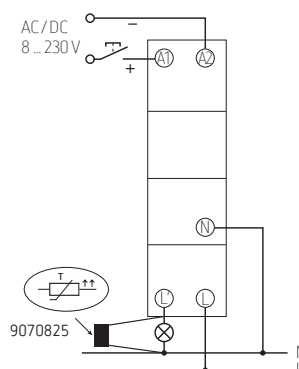
### Connecting the dimmer



- Always operate electrical and conventional transformers with the minimum load specified by the manufacturer.
- Use only dimmable compact fluorescent lamps / LED lamps as normal compact fluorescent lamps / LED lamps may be destroyed.
- When changing the lamps, switch off the power supply (at the fuse box) so that the automatic load detection is reactivated.
- Do not connect dimmer load connections (L<sup>1</sup>) in parallel.
- Do not by-pass or short-circuit the dimmer.
- Do not install any isolating or variable transformers before the dimmer.
- Do not mix wound and electronic transformers in the installation.
- Do not install wound transformers and compact fluorescent lamps / LED lamps mixed.
- Do not connect push button with glow lamp.
- Correct, automatic load detection is only possible with a connected load.
- Only use transformers approved by the manufacturer for dimmer operation.

### Connection with 8 ... 230 V

Push buttons A1 / A2 On / Off / Dim

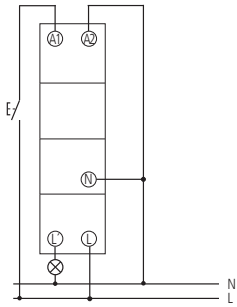


- Use compensation module 9070825 to prevent the LEDs from afterglow or flickering.
- Install the compensation module parallel to the consumer.

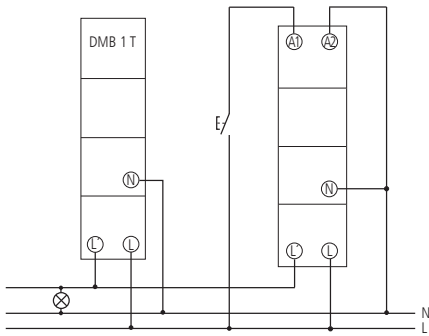


**Component can get hot!**

## Connection with 230 V



## Connection with Booster DMB 1 T (4930279)

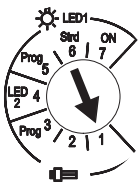


Performance upgrade (see technical data for DMB 1 T booster)

## 4. Description of functions

The dimmer is equipped with a rotary switch with 7 functions in order to set the operating mode:

### Functions for dimmable compact fluorescent lamp (CFL) (ESL)



#### Position 1

With automatic load detection (usually **trailing edge**)

- Always start with 100 % to ignite the CFL
- Dimming down only possible after 3 sec.

#### Position 2

No automatic load detection (always with **leading edge**)

- always start with at least 50 % to ignite the CFL
- Dimming down only possible after 2 sec.

#### Position 3: Prog

Teach in the minimum brightness (only for CFL)

- ① With several compact fluorescent lamps, an annoying flickering may occur when dimming in position 1.
- Use position 2
- ① Several LED lamps may cause an overload in position 2 (LED 2) that automatically leads to the load dimming.
- Select position 1 in order to avoid this

## Function for LEDs

### Position 4: LED 2

Function for LEDs; no automatic load detection (always with **leading edge**) (ideal for dimming problems with LEDs)

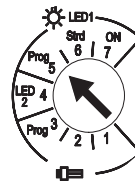
- ① Several LED lamps may cause an overload in position 4 (LED 2) that automatically leads to the load dimming.

➤ Select position 6 in order to avoid this

### Functions for standard lamps (e.g., bulbs, halogen lamps, transformer, LEDs)



LED1



#### Position 5: Prog

Teach in the minimum brightness

#### Position 6: Strd

Standard function

With automatic load detection for the conventional lamp types

#### Position 7: ON

Dimmer is always on

## 5. Setting the functions

### 1. Dimming switch-on function

- applies for position 1, 2, 4, 6

The dimmer switches on with minimum brightness and dims until one releases the button again, or the maximum brightness has been reached (activation by pressing the button for longer, > 1 s).

### 2. Switch-on brightness

- applies for position 1, 2, 4, 6

The dimmer starts with the taught in switch-on brightness (preset ex-factory, 100 %) (activation by pressing the button, < 1 s)

#### Teach in switch-on brightness

- Set the desired switch-on brightness via the button at input A1/A2.
- Keep the button pressed (> 10 seconds) until the teach in is confirmed by a change in the brightness. Afterwards it is set to the saved switch-on brightness.

### 3. Minimum brightness

- applies for position 3, 5

## Teach in the minimum brightness

The pre-set minimum brightness is set in such a manner that most lamps still light up.

- Move the rotary switch to 5 (to 3 for compact fluorescent lamps). The current minimum brightness is approached.
- Press the button at Input A1/A2 and dim up or down until the desired minimum brightness value is reached.
- Let go of the button; the brightness value is taken over.
- Set the rotary switch back to the desired function.
  - Reason: if a certain brightness value is exceeded, certain compact fluorescent lamps / LEDs go out and no longer ignite.
- Carry out settings only with warm compact fluorescent lamps (e.g., switch on for approx. 5 minutes).

## 6. Operation

### Light is OFF (with button: input A1/A2)

1 x short keystroke	< 1 s	<b>Switch-on brightness</b> The dimmer starts with the switch-on brightness taught-in (ex-factory 100 %)
1 x long keystroke	> 1 s	<b>Dimming switch-on function</b> The dimmer switches on with minimum brightness and dims until one releases the button again, or the maximum brightness has been reached.

### Light is ON (with button: input A1/A2)

1 x short keystroke	< 1 s	Switch off
1 x long keystroke	> 1 s	Dimmer dims up or down Dimming stops at minimum or maximum value. The dimming direction is changed by pressing the button again.
1 x long keystroke	> 10 s	Dimmer dims to minimum or maximum value. If the button is pressed for > 10 seconds, the previous dimming value (start value) is saved as switch-on brightness (confirmed by the brightness changing). Then it is changed to the saved switch-on brightness.

## 7. Technical Data

	Trailing edge	Leading edge
Potentiometer position	1, 6	2, 4
Operating voltage	230 V +10 % / -15 %	
Frequency	50 Hz	
Standby output	typically 0.2 W	
Load types	R/L/C	
Minimum load:	none	
Incandescent/halogen lamp load	400 W (up to 35 °C)* 330 W (up to 50 °C)*	
Dimmable compact fluorescent lamps (CFL)	400 W (up to 35 °C) 330 W (up to 50 °C)	80 W (up to 35 °C) 70 W (up to 50 °C)
Dimmable LEDs	400 W (up to 35 °C) 330 W (up to 50 °C)	60 W (up to 35 °C) 50 W (up to 50 °C)
Electronic transformers (C)	300 W (up to 50 °C)*	
Inductive transformers (L)		400 W (up to 50 °C)*

Line length	max. 100 m
Cable cross-section	max. 4 mm <sup>2</sup>
Pollution degree:	2
Permissible ambient temperature	-30 °C ... +50 °C
Protection class	II subject to designated installation
Protection rating	IP 20 according to EN 60529 when assembled correctly

\* In the case of a load of >300 W keep an 8 mm ventilation distance to the right and left.

## 8. Contact

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