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Universal dimmer switch EUD12NPN-UC

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location:
-20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity:
annual average value <75%.

Universal dimmer switch. Power MOSFET up to 400 W. Automatic lamp detection. Standby loss 0.1 watt only. With adjustable minimum or maximum brightness and dimming speed. With switching operation for children's rooms and snooze function.

Modular device for DIN EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep. Universal dimmer switch for lamps up to 400 watts, depending on ventilation conditions. Dimmable energy saving lamps ESL and dimmable 230 V LED lamps dependent on the lamps electronics and the dimming technology.

Zero passage switching with soft start and soft OFF to protect lamps.

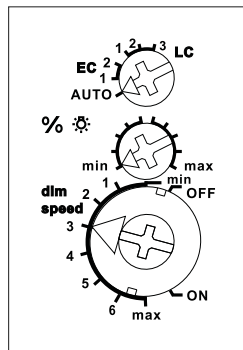
Universal control voltage input 8 to 230 V UC, electrically isolated from the 230 V supply voltage and switching voltage. No minimum load required.

Short-time control commands switch on/off, permanent control varies the brightness to the maximum level. An interruption of control changes the direction of dimming. The setting of the brightness level is stored after switching off.

In case of a power failure the switching position and the brightness level are stored. If applicable the dimmer will be switched on at the stored brightness level after the supply voltage is recovered.

Glow lamp current up to 5 mA starting at 110 V. Automatic electronic overload protection and over-temperature switch-off.

Function rotary switch



The LED below the rotary switch on the front shows control commands. It starts blinking after 15 seconds if a pushbutton is inhibited.

In operation, **the upper rotary switch** determines, whether automatic lamp detection or special comfort positions should operate:

AUTO allows the dimming of all lamp types.

EC1 is a comfort position for energy saving lamps which must be switched on with increased power dependent on the construction, so they will also switch on again safely in cold condition when dimmed down.

EC2 is a comfort position for energy saving lamps which will not be switched on again when dimmed down dependent on the construction. Memory is switched off in this position.

LC1 is a comfort position for dimmable 230 V LED lamps which are not being dimmed down enough when set to AUTO (trailing phase angle) dependent on the construction and must therefore be forced to leading phase angle.

LC2 and **LC3** are comfort positions for dimmable 230 V LED lamps like LC1, but with different dimming curves.

In positions EC1, EC2, LC1, LC2 and LC3 no inductive (wound) transformers should be used. In addition, the maximum number of dimmable LED lamps can be lower than in the AUTO position dependent on the construction.

The minimum brightness level (completely dimmed down) or the maximum brightness level (completely dimmed up) is adjustable with the **middle % rotary switch.**

The dimming speed can be adjusted **with the lower dimming speed rotary switch.**

The duration of soft start and soft OFF is changed simultaneously.

With special switching operation for chil-

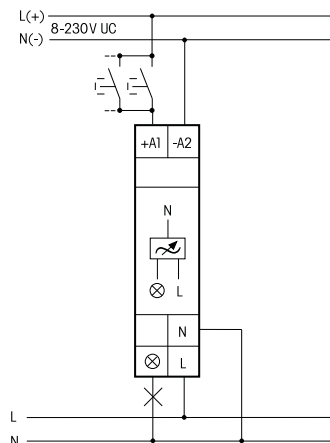
children's rooms: If the light is switched on by holding down the pushbutton, it starts at the lowest brightness level after approx. 1 second and dims up slowly as long as the pushbutton is held down without modifying the last stored brightness level.

Snooze function: With a double impulse the lighting is dimmed down from the current dimming position to the minimum brightness level and switched off. The current dimming position as well as the adjustable minimum brightness level determine the dimming time (max. = 60 minutes) which can be reduced as required. It can be switched off at any time by short-time control commands during the lighting is dimmed down. Holding down the pushbutton during the dimming down process dims up and stops the snooze function.

Mixing of L loads (inductive loads, e.g. wound transformers) and C loads (capacitive loads, e.g. electronic transformers) is not permitted. R loads (ohmic loads, e.g. 230 V incandescent lamps and halogen lamps) may be added anytime.

The universal dimmer switch **EUD12D** in conjunction with the capacity enhancer **LUD12** is suitable **for mixing of L-loads and C-loads.**

Typical connection



Technical data

Dimmable 230 V LED lamps	Trailing edge up to 400 W ⁵⁾⁶⁾
	Leading edge up to 100 W ⁵⁾⁶⁾
Incandescent and halogen lamps ^{1) 230 V (R)}	up to 400 W ⁶⁾
Inductive transformers (L)	up to 400 W ²⁾³⁾⁶⁾
Electronic transformers (C)	up to 400 W ²⁾³⁾⁶⁾
Dimmable energy saving lamps ESL	up to 400 W ⁵⁾⁶⁾
Max./min. temperature at mounting location	+50°C/-20°C ⁴⁾
Standby loss (activ power)	0.1W

¹⁾ Applies to lamps of max. 150 W.

²⁾ Per dimmer it is only allowed to use max. 2 inductive (wound) transformers of the same type, **furthermore no-load operation on the secondary part is not permitted. The dimmer might be destroyed.** Therefore do not permit load breaking on the secondary part. Operation in parallel of inductive (wound) and capacitive (electronic) transformers is not permitted!

³⁾ **When calculating the load a loss of 20% for inductive (wound) transformers and a loss of 5% for capacitive (electronic) transformers must be considered in addition to the lamp load.**

⁴⁾ Affects the max. switching capacity.

⁵⁾ Usually applies for dimmable energy saving lamps and dimmable 230 V LED lamps. Due to differences in the lamps electronics, there may be limited dimming range, switch on and off problems dependent on the manufacturer and a restriction on the maximum number of lamps; especially if the connected load is very low (for 5 W-LEDs). The comfort positions EC1, EC2, LC1, LC2 and LC3 optimize the dimming range, which, however, only gives a maximum power up to 100 W. No inductive (wound) transformers may be dimmed in these comfort positions.

⁶⁾ At a load of more than 200 W ventilation clearance of ½ module to adjacent devices must be maintained.



The strain relief clamps of the terminals must be closed, that means the screws must be tightened for testing the function of the device. The terminals are open ex works.

Must be kept for later use!

We recommend the housing for operating instructions GBA14.

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