

Multifunction universal dimmer switch

EUD12M-UC



POWER MOSFET 500W. Standby loss 0.1 watt only. Modular device for DIN EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep.

Universal dimmer switch for R, L and C loads up to 500 watt, depending on ventilation conditions. Dimmable energy saving lamps ESL up to 100 watt. Automatic detection of load R+L oder R+C. ESL is manually settable.

Up to 3600W with capacity enhancers

LUD12-230V at the terminals X1 and X2 (not ESL). Universal control voltage 8 to 230V UC and additionally the universal voltage control inputs 8 to 230V UC central ON and central OFF. The control inputs are electrically isolated from the supply voltage and switching voltage.

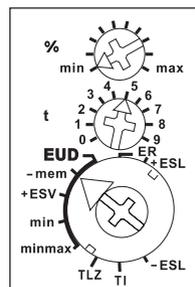
Contact position indication with LED below the upper rotary switch. This starts blinking after 15 seconds if a push-button is jammed and if one of the functions EUD, ESV or TLZ is set.

The minimum brightness level can be adjusted with the rotary switch %, e.g. for dimmable energy saving lamps ESL.

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.

From 110V control voltage glow lamp current up to 5 mA (not for ER and TI). Automatic electronic overload protection and over-temperature switch-off.

Function rotary switches



EUD: Universal dimmer switch. The **dimming speed t** and the **minimum brightness level %min/max** are adjustable. Short-time control commands switch on/off, permanent control varies the brightness to the maximum level. A interruption of control changes the direction of dimming. The setting of the brightness level is stored after switching off.

Switching operation for children's rooms:

If the light is switched on by holding down the push-button, 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 push-button during the dimming down process dims up and stops the snooze function.

-mem: Like the setting EUD, but the adjustment of the brightness level is not stored after switching off. It is always switched on at the maximum brightness level.

+ESV: Like the setting EUD. In addition with adjustment of the off delay t up to 90 minutes, if the manual OFF command is not given. The switch off early warning function before time-out can be adjusted by dimming down with %min/max from 0 to 3 minutes. The dimming speed is preset at a medium value. The brightness level is preset with the minimum value.

min: Universal dimmer switch. When applying the control voltage it is switched on at the minimum brightness level, which is set with %min/max. Afterwards the light is dimmed up in dimming time t (max. = 90 minutes) up to maximum level. If the control voltage is removed it is switched off instantly, also during the dimming time.

minmax: Function like the setting min, but when the control voltage is removed it is dimmed down to the adjusted minimum brightness level. After that is switched off.

TLZ: Staircase time switch, with switch off early warning function through dimming which can be switched on. With incrementing

(the time can be extended) and permanent light by push-button. Variable time range settable from 1 to 9 minutes. Early warning time up to 3 minutes with %min/max.

Also for dimmable energy saving lamps ESL.

TI: Clock generator with adjustable cycle times t from 0.1 to 0.9 second. The break time can be set from -50% at %min to +100% at %max. Mid-position of %min/max: closing time = break time.

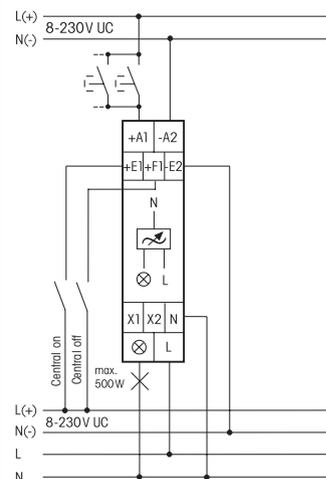
ER: Switching relay. Adjustment of soft start and soft OFF with the rotary switch t. Adjustment of dimming level %min/max between minimum and maximum brightness level.

The settings ESL consider the special conditions regarding dimmable energy saving lamps: The starting operation is optimized and the dimm speed changes logarithmically. In these settings the special switching operation for children's rooms is not possible and no wound (inductive) transformer must be dimmed. In position -ESL Memory is switched off. This can be of advantage for energy saving lamps because cold energy saving lamps require a higher minimum brightness as it will possibly be stored in Memory for warmer energy saving lamps.

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. 230V incandescent-lamps and halogen lamps) may be added anytime.

Mixing of L loads and C loads is possible with dimmer switches **EUD12Z** and **EUD12M** in connection with capacity enhancer **LUD12**.

Typical connection



Tecnical data

Incandescent and halogen lamps 230V (R)	up to 500W ¹⁾
Inductive transformers (L)	up to 500W ¹⁾²⁾³⁾
Electronic transformers (C)	up to 500W ¹⁾²⁾³⁾
Dimmable energy saving lamps ESL ⁵⁾	up to 100W
Max./min. temperature at mounting location	+50°C/-20°C ⁴⁾
Standby loss (activ power)	0.1 W

¹⁾ At a load of more than 300W ventilation clearance of 1/2 module to adjacent devices must be maintained.

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.

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⁾ In the positions ESL it is not allowed to dim inductive (wound) transformers.



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.f

Warning!

Only a trained electrician may install this equipment, otherwise there is a risk of fire or electric shock.