GB

30100 835 - **3**

Eltako ELECTRONICS

Wireless actuator CE

Universal dimmer switch FUD61NPN-230V

300W power MOSFET, ESL up to 100W and LED up to 100W. Only 0.6 watt standby loss. With adjustable minimum brightness or dimming speed. With switching operation for light alarm clocks, children's rooms and snooze function. Also with light scene control by PC or wireless pushbuttons.

For installation. 45mm long, 55mm wide, 33mm deep.

Universal dimmer switch for R, L and C loads up to 300 watts, depending on ventilation conditions. Dimmable energy saving lamps ESL up to 100 watts and dimmable 230V LED lamps up to 100 watts. Automatic detection of load R+L or R+C when the lower rotary switch is in position R, L, C. ESL and LED is manually settable.

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

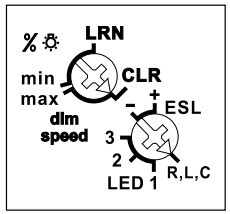
Switching voltage and control voltage local 230V. No minimum load.

The brightness level is stored on switch-off (memory).

In case of a power failure the switch position and the brightness stage are stored and may be switched on when the power supply is restored.

Automatic electronic overload protection and overtemperature switch-off.

Function rotary switches



The minimum brightness (fully dimmed) or the dimming speed is adjustable with **the %☼/dimming speed rotary switch.** In the setting LRN up to 35 wireless pushbuttons can be assigned, of which one or more central pushbuttons.

Position R,L,C is the setting for all load types except for ESL and LED. In particular for 230V glow and halogen lamps.

The settings +ESL and -ESL consider the special conditions regarding dimmable energy saving lamps: The starting operation is optimized and adapted to the dimming curve. 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.

The position LEDs take account of special conditions with dimmable 230V LED lamps: A number of different dimming curves are available. An updated list with dimming curve assignment for commercially available dimmable 230V LED lamps is ready for downloading at **www.eltako.com/dimming_curve/LED_gb.pdf.** In these settings no wound (inductive) transformer must be dimmed.

In addition to the wireless control input via an internal antenna, this universal dimmer switch can also be controlled locally by a conventional 230V control switch if fitted previously. Either separate local control inputs for dim brighter and dim darker as a direction switch, or these two inputs can be bridged and controlled with a single switch as a universal switch. The dimming direction can then be changed by interrupting the control. Short control commands switch on/off.

The wireless pushbuttons can be taught-in either as direction switches or universal switches:

When installed as a direction switch, one side is then 'switch on and dim up' and the other side is 'switch off and dim down'. A double-click on the switch-on side activates automatic dim-up to full brightness at dim speed. A double click on the switch-off side activates the snooze function. The children's room function is implemented on the switch-on side.

As a universal switch, change the direction by briefly releasing the pushbutton. With switching operation for children's rooms and snooze function.

Switching for light alarm clocks: A wireless signal of a time clock which was taught-in accordingly starts the wake up function by switching on the light at the lowest brightness level and dims up slowly until the maximum level is reached. Dependent on the set dim speed the wake up time is between 30 and 60 minutes. The dimming process is stopped by tapping briefly, e.g. on the hand-held transmitter. At setting ESL is no switching for light alarm clocks possible.

Switching operation for children's rooms (universal switch or direction switch on the switch-on side): 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.

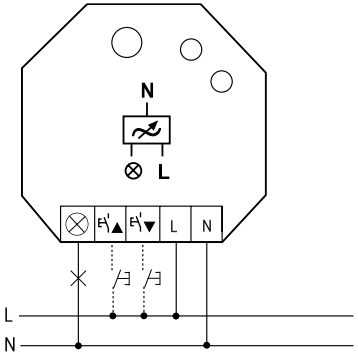
Snooze function (universal switch or direction switch on the switch-off side): With a double impulse the lighting is dimmed down from the current dimming position to the minimum brightness level and switched off. The current dimming position as well as the adjustable minimum brightness level determine 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.

Light scenes on the PC are set and retrieved using the Wireless Visualisation and Control Software FVS. A description of the FVS is at "eltako-wireless.com". One or several FUD61NPN devices must be taught in on the PC as dimming switches with percentage brightness values.

Lights scenes with wireless switches are taught in on the FUD61NPN device. Up to four brightness values which can be taught-in in light scene pushbuttons with double rocker.

The LED performs during the teach-in process accord ing to the operation manual. It shows wireless control commands by short flickering during operation.

Typical connection



Tecnical data

Incandescent and halogen [1] lamps 230V (R)	up to 300W
Inductive transformers (L)	up to 300W [2)3)]
Electronic transformers (C)	up to 300W [2)3)]
Dimmable energy saving lamps ESL [5)]	up to 100W
Dimmable 230V LEDs [5)]	up to 100W
Max./min. temperature at mounting location	+50°C/-20°C [4)]
Standby loss (activ power)	0.6W

[1)] For lamps with 150W max.

[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 capacative (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)] In the settings ESL and LED no wound (inductive) transformer must be dimmed.

Teaching-in wireless sensors in wireless actuators

All sensors must be taught-in in the actuators so that they can detect and execute commands.

Teaching-in actuator FUD61NPN-230V

The teach-in memory is empty on delivery from the factory. If you are unsure whether the teach-in memory contains something or not, **you must first clear the memory contents completely:**

Set the upper rotary switch to CLR.
The LED flashes at a high rate. Within the next 10 seconds, turn the lower rotary switch three times to the right stop (turn clockwise) and then turn back away from the stop.
The LED stops flashing and goes out after 2 seconds. All taught-in sensors are cleared.

Clear individual taught-in sensors in the same way as in the teach-in procedure, except that you set the upper rotary switch to CLR instead of LRN, and operate the sensor. The LED previously flashing at a high rate goes out.

Teaching-in sensors

1. Setting of the lower rotary switch to the desired teaching-in function:The flashing of the LED as soon as a new setting range has been reached when turning the rotary switch helps to find the desired position reliably.
   ESL- = timer as wake-up light;
   1 = teach-in 'central off';
   2 = universal switch on/off and dim;
   Universal switches must be taught-in identically at top and bottom if the switch is to have the same function at top and bottom.
   3 = teach-in 'central on';
   ESL+ = Direction switches;
   Direction switches are fully taught-in automatically when pressed. Where you press defines the switch-on and dim-up functions; the opposite side is then for switch-off and dim-down.
   R, L, C = teach in light scene pushbutton, a complete pushbutton with double rocker is assigned automatically;
   R, L, C = teach in a PC using the Wireless Visualisation and Control Software FVS.
   The percentage brightness can be set there between 0 and 100 per cent and saved. Several dimmer switches can be linked to form a light scene.
2. Set the upper rotary switch to LRN. The LED flashes at a low rate.
3. Operate the sensor which should be taught-in. The LED goes out.

To teach-in further sensors, turn the upper rotary switch briefly away from position LRN. Continue the procedure from pos 1.

After teach-in, set the rotary switches of the actuators to the required function.

Saving light scenes

Up to four brightness values retrievable with a direct light scene pushbutton can be saved.

1. Adjust the required brightness level with a previously taught-in universal or direction switch.
2. Press the pushbutton for longer than 3 seconds on one of the four rocker ends of the light scene pushbutton with double rocker to save the brightness value.
3. Repeat from point 1 to save further directly retrievable light scenes.

When an actuator is ready for teach-in (the LED flashes at a low rate), the very next incoming signal is taught-in. Therefore, make absolutely sure that you do not activate any other sensors during the teach-in phase.

Important Note!

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

12/2010 Subject to change without notice.