

Wireless actuator

Socket universal dimmer switch  
FSUD-230V**Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!**Temperature at mounting location:  
0°C up to +35°C.  
Storage temperature: -25°C up to +70°C.  
Relative humidity:  
annual average value <75%.**valid for devices from production week 11/14** (see bottom side of housing)

Universal dimmer switch, 300W power MOSFET. Automatic lamp detection. Only 0.7 watt standby loss. With adjustable minimum brightness.

With switching operation for children's rooms and snooze function.

Encrypted wireless, bidirectional wireless and repeater function are switchable.

Adapter for German fused safety socket. With increased shock protection.

Supply and switching voltage 230V.

Universal dimmer switch for lamps up to 300W. Dimmable energy saving lamps ESL and dimmable 230V-LED lamps, dependent on the lamps electronics.

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

No minimum load.

**This dimmer switch is activated by wireless pushbuttons FT and FFT, handheld wireless transmitters FHS and FMH, and remote controls FFB and UFB.**

The set brightness level is stored when switched off (memory), but can be switched off for ESL lamps.

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.

**Starting in production week 11/14, you can teach in encrypted sensors. Bidirectional wireless and/or a repeater function can be switched on.**

Every change in state and incoming central command telegrams are then confirmed by a wireless telegram. This wireless telegram can be taught into other actuators, the software GFVS 3.0, and universal displays FUA55.

The current dimming value is also displayed in % in the software GFVS.

Up to 35 wireless pushbuttons are assigned **with the left button LRN**, either as a universal pushbutton, direction pushbutton or central pushbutton.It can be switched on and off manually **with the right button**.**The pushbuttons can be either taught-in as direction pushbuttons or universal pushbuttons:****As direction button** 'switch on and dim up' is on one side and 'switch off and dim down' on the other side. A double-click on the switch on side triggers the automatic dimming up to full brightness. A double-click on the switch off side triggers the snooze function. The children's room function is triggered on the switch on side. **As a universal pushbutton** the direction change is made by briefly releasing the pushbutton.**Central control pushbutton on:**

Switching on with memory value when active.

**Central control pushbutton off:**

Switching off.

**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. The last saved brightness level is not modified.

**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.

**The LED** performs during the teach-in process according to the operation manual. It shows wireless control commands by short flickering during operation.**Technical data**

Incandescent and halogen lamps <sup>1)</sup> 230V (R)	up to 300W <sup>6)</sup>
Inductive transformers (L)	up to 300W <sup>2) 3)</sup>
Electronic transformers (C)	up to 300W <sup>2) 3)</sup>
Dimmable energy saving lamps ESL	up to 300W <sup>5)</sup>
Dimmable 230V LEDs	up to 300W <sup>5)</sup>
Ambient temperature range	0-35°C <sup>4)</sup>
Standby loss (activ power)	0.7W

<sup>1)</sup> Applies to lamps of max. 150W.<sup>2)</sup> 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!<sup>3)</sup> **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.**<sup>4)</sup> Affects the max. switching capacity.<sup>5)</sup> Usually applies for dimmable energy saving lamps and dimmable 230V 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 5W-LEDs).**Teaching-in wireless sensors in wireless actuators****All sensors must be taught-in in the actuators so that they can detect and execute commands.**

The teach-in memory is empty on delivery from the factory. To ensure that a device

was not previously taught-in, **clear the memory completely:**

Press the left button LRN/CLR for approximately 3 seconds, the LED flashes excitedly. Press the right button ON/OFF approximately 5 seconds, the LED goes out. All taught-in sensors are cleared, the repeater and the confirmation telegrams are switched off.

**Clear individual taught-in sensors:**

Press the left button LRN/CLR for approximately 3 seconds, the LED flashes excitedly. Press the sensor which is to be cleared, the LED goes out.

If all the functions of an encrypted sensor are cleared, teach-in must be repeated as described under *Teach-in encrypted sensors*.**Teaching-in sensors:****Teach-in universal pushbutton and PC with Eltako Wireless Building Visualisation and Control Software GFVS:**

Press and hold the left button LRN/CLR for approx. 0.5 seconds and then release. The LED lights up. Press the right button ON/OFF briefly once. The LED flashes once as confirmation. Operate the sensor to be cleared. The red LED goes out.

**Teach in direction pushbutton:**

Press and hold the left button LRN/CLR for approx. 0.5 seconds and then release. The LED lights up. Press the right button ON/OFF briefly twice. The LED flashes twice as confirmation. Operate the sensor to be cleared. The red LED goes out.

When you press a pushbutton, a rocker is fully taught-in automatically. The side where the pushbutton is first pressed is defined as switch-on and the other side is then the switch-off side.

**Teach in central control pushbutton 'ON':**

Press and hold the left button LRN/CLR for approx. 0.5 seconds and then release. The LED lights up. Press the right button ON/OFF briefly three times. The LED flashes three times as confirmation. Operate the sensor to be cleared. The red LED goes out.

**Teach in central control pushbutton 'OFF':**

Press and hold the left button LRN/CLR for approx. 0.5 seconds and then release. The LED lights up. Press the right button ON/OFF briefly four times. The LED flashes four times as confirmation. Operate the sensor to be cleared. The red LED goes out.

Exit the learn and clear mode immediately by briefly pressing the LRN/CLR button. The routine exits the learn and clear mode automatically after 60 seconds.

**To prevent unintentional teach-in, teach in pushbuttons by "double-clicking" (pressing rapidly twice in succession).**

1. Briefly press the left button LRN/CLR button 2 times, the LED blinks 2 times for confirmation.
2. Select the desired teaching-in function with the right button.
3. Press the taught-in button with 'double click'. The LED goes out. Unencrypted and encrypted sensors can be taught-in.

**Teach in encrypted sensors:**

1. Press the left button LRN/CLR for approximately 0.5 seconds and then release, the LED lights up.
2. Briefly press the right button ON/OFF 5 times, the LED flashes very excitedly.
3. Enable encryption of the sensor within 120 seconds. The LED goes out. Attention! The power supply should not be turned off.

4. Now teach-in the encrypted sensor as described among teaching-in sensors.

If further encrypted sensors should be taught-in, go back to point 1.

With encrypted sensors, use the 'rolling code', i.e. the code changes in each telegram, both in the transmitter and in the receiver.

If a sensor sends more than 50 telegrams when the actuator is not enabled, the sensor is no longer recognised by the enabled actuator and you must repeat teach-in as 'encrypted sensor'. It is not necessary to repeat the function teach-in.

**Save minimum brightness (fully dimmed):**

Switch on light with a wireless pushbutton. Mutually hold the left button LRN/CLR and the right button ON/OFF for 2 seconds,

set the desired minimum brightness with the wireless pushbutton and then release both buttons. The LED lights up briefly for confirmation.

**PC with Eltako Wireless Building Visualisation and Control Software GFVS:**

The percentage brightness can be adjusted at the PC between 0 and 100 percent and then be retrieved.

**Switch memory on/off:**

Hold the left button LRN/CLR and insert the FSUD-230V into the socket. The memory function will be switched on or off. For status indication the LED flashes for 2 seconds = memory off or 0.5 seconds = memory on (as-delivered state).

**Switch on/off repeater:**

Press and hold the right button ON/OFF and plug the FSUD-230V into the socket. Switch repeater on or off. The LED lights up for 2 seconds to indicate the status = repeater off (as-delivered state) or for 5 seconds = repeater on.

**Switch on/off confirmation telegrams:**

Press and hold down the left button LRN/CLR and the right button ON/OFF together and plug the FSUD-230V in the socket. Confirmation telegrams are switched on and off. The LED lights up for 0.5 seconds = confirmation telegrams OFF (as-delivered state) or for 2 seconds = confirmation telegrams ON to indicate the status.

**Confirmation telegrams:**

The FSUD-230V transmits a feedback into the Eltako wireless network with its own ID. After switching on 0x70 and the dimming value in % will be sent. After switching off 0x50 and the dimming value in % will be sent. After dimming the dimming value in % will be sent.

**Teach in confirmation telegrams in other actuators on in the Wireless Building Visualisation and Control Software GFVS:**

Press the right button ON/OFF to change the switch position and send the confirmation telegram at the same time.



May only be used in closed dry rooms.

The socket must be easily accessible.

Don't insert in a row.

**ELTAKO GmbH hereby declares that the products that relates to this operating manual, are in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC. A copy of the EU declaration of conformity can be requested at the address below.**

WEEE registration number DE 30298319

**Must be kept for later use!**

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