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Eltako ELECTRONICS

Wireless actuator CE

for shading elements and
roller shutters FSB61NP-230V

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%.

valid for devices from production week 39/12 (see bottom side of housing)

1+1 NO contact not potential free 10A/250V AC, for roller blinds and shading systems. Bidirectional wireless and repeater function are switchable. Only 0.7 watt standby loss.

For installation.

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

Switching voltage and control voltage local 230V.

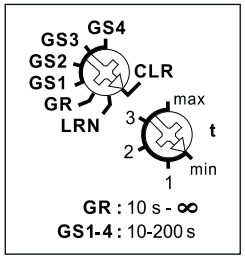
This wireless actuator features state-of-the-art hybrid technology that we developed: we combined the wear-free receiver and evaluation electronics and two bistable relays with zero passage switching.

By using a bistable relay coil power loss and heating is avoided even in the on mode. After installation, wait for short automatic synchronisation before the switched consumer is connected to the mains.

In addition to the wireless control input via an internal antenna, this wireless actuator can also be controlled locally by a conventional 230V control push-button mounted upstream. Glow lamp current is not approved.

From production week 38/2012 **bidirectional wireless** and **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-in in other actuators, in the FVS software and in FUA55 universal displays.

Function rotary switches



With the top rotary switch in the setting LRN up to 35 wireless pushbuttons can be assigned therefrom one ore more central pushbuttons. The required function of this impulse group switch can then be selected:

GS1 = Group switch with pushbutton control and off delay in seconds. Both a wireless pushbutton with the function 'Up-Hold-Down-Hold' as well as the local pushbutton can be taught-in or a wireless pushbutton like a roller Venetian blind double pushbutton with pressing above 'Up' and pressing below 'Down'. Tap briefly to interrupt the movement immediately.

Dynamic central control with and without priority can be implemented: The switch position 'Up' at the top or 'Down' at the bottom are activated specifically by a control signal < 2 seconds from a pushbutton taught-in as a central control switch.

Dynamic central control with priority: The switch position 'Up' or 'Down' and the priority are activated specifically by a control signal >2 seconds and <10 seconds from a pushbutton taught-in as a central control switch. With priority because these control signals cannot be overridden by other control signals **until** the central command is again cancelled by a gate pulse 'Up' or 'Down' from the central control switch.

The switch position 'Up' or 'Down' and the priority are activated specifically by a control signal >10 seconds, e.g. from a central control switch FSM61. With priority because these control signals cannot be overridden by other control signals **until** the central command is again cancelled by the end of the control signal.

GS2 = Group switch same as GS1, central switch always without priority.

GS3 = Group switch same as GS2, **in addition with double-click reverse function** for the local pushbutton and a wireless pushbutton as universal switch taught-in appropriately: After double-clicking, the Venetian blind moves in the opposite direction until it is stopped by a brief tap.

GS4 = Group switch same as GS2, **in addition with tip reverse function**: The control pushbutton is initially in static mode. The relay is energised as long as the pushbutton is tapped so that the Venetian blind can be reversed in the opposite direction by short impulses.

When tapped, the direction switch moves the Venetian blind in the corresponding direction. The universal switches move opposite to the previous direction. If the pushbutton remains closed a little longer, the relay switches over to dynamic mode and the relay remains closed to close or open the Venetian blind, even it the push-button is open before the end of the movement. A brief tap interrupts this process immediately.

GR = Group relay. As long as the wireless pushbutton is closed, a contact is closed. Then it reopens. On reception of the next wireless signal the other contact closes, etc. A mandatory pause of 500ms is maintained after a contact change. A local 230V control push-button initiates the same function. Only for wireless: the control signal 'Central up' closes Contact ▲ and 'Central down' closes Contact ▼ as long as the push-button is closed. When the bottom rotary switch is in position 'max', no time delay is activated at GR (time delay time = ∞). A time delay of 10 to 200 seconds is adjustable between rotary switch positions 'min' and shortly before 'max'. This opens the closed contact automatically on expiry of the time delay, even if the switch is still closed.

Use the bottom rotary switch to set the time delay to the position 'Halt' in seconds. Select a delay time that is at least as long as the shading element or roller shutter needs to move from its end position to the other position.

Shading scene control:
Up to 4 saved 'Down' running times are retrievable using the control signal of a pushbutton and double rocker taught-in as a **scene button** or taught-in by a PC loaded with the FVS software. If this was not the last function anyway, the shading element is first moved 'Up' at the RV delay time programmed by the bottom rotary switch to ensure a safe starting position. The device then switches over automatically to 'Down' and stops on expiry of the saved time. If any FTKs are taught-in, they do not prevent this shading scene control.

If a **wireless outdoor brightness sensor FAH60** is also taught-in in addition to a scene pushbutton, the taught-in scenes 1, 2 and 4 are executed automatically depending on the outdoor brightness: Scene 1 in direct sunlight (>25kLux), Scene 2 in daylight (300 Lux to 25kLux) and Scene 4 in darkness (1-30 Lux). During the first teach-in, therefore, a scene pushbutton is assigned automatically to Scenes 1 = no function, 2 = raise fully and 4 = lower fully. Scene 1 must be taught-in separately if the FAH60 is to trigger a shading system when direct sunlight is detected. A taught-in Scene 3 is only retrievable by means of a scene pushbutton.

Scenes 2 and 4 can be changed separately at any time. However, this is not advisable if the right rocker is programmed to be used as a normal up/down shutter pushbutton or an FAH60 was taught-in.

FAH60 wireless telegrams for Scenes 1 = direct sunlight are executed immediately and 4 = darkness. Three telegrams are required for Scene 2 = daylight in order to mask out interference lights. To prevent 'nervous' opening and closing of a shading element when there is rapid fluctuation between darkness and brightness, changing FAH60 wireless telegrams are only executed every 2 minutes.

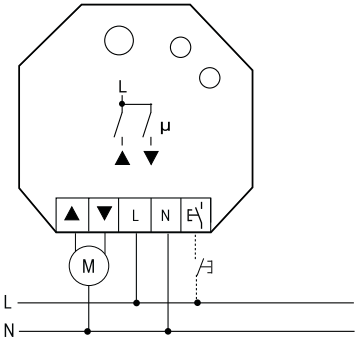
The automatic systems can be cancelled or overridden at any time by confirming any one of the taught-in pushbuttons. Central pushbuttons always have priority.

When a wireless window/door contact FTK or Hoppe window handle is taught-in, a lock-out protection is set up while the door is open and disables a Central Down command.

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

Important installation advice:
To avoid a fault of the FSB61NP-230V through the connected motor, the two motor leads in the switch box should be passed on to one side of the FSB61NP-230V.

Typical connection



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 FSB61NP-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, the repeater and the confirmation telegram are switched-off.

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:
   Left stop min = teach-in direction switch top 'UP' and bottom 'DOWN' or 'hold' in both cases;
   Direction switches are completely taught-in automatically when operating the top or bottom pushbutton. Otherwise top and bottom must be taught-in in the same way if the top and bottom pushbutton are to have the same function.
   Position 1 = teach-in 'central DOWN';
   Position 2 = teach-in universal switch 'DOWN-HOLD-UP-HOLD' and window/door contact FTK;
   Position 3 = teach-in 'central UP';
   Right stop max = scene button and PC;
   When a FAH60 is taught-in, the position of the lower rotary switch determines the threshold at which scene 4 is called. 'min' = total darkness to 'max' = start of twilight.
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.

Teaching-in shading scenes:
The following scenes are saved in scene pushbuttons that are taught-in in fully automatic mode, as described above. 1 = No function; 2 = Raise fully; 3 = No function, and 4 = Lower fully. Scenes 1 and 3 may have to be taught-in separately. Scenes 2 and 4 may also be changed separately. However, this is not advisable if the right-hand rocker is programmed to be used as a normal up/down shutter pushbutton or an FAH60 was taught-in.

Individual teach-in: Start 'Down' from the top end position with an already taught-in universal or direction switch. The point of time of repressing the pushbutton then determines the function which can **then** be taught-in in the scene pushbutton:

a) Press the pushbutton immediately to cancel another function that is saved.
b) Press the pushbutton after approx. 1s to trigger the standard function 'Up'.
c) Press the pushbutton after more than 2s, but shorter than the RV time setting to trigger the function 'Stop after this time' for shading purposes.
d) Do not press pushbutton any more and wait until the RV time has expired. This triggers the standard function 'Down'.

The teach-in the scene pushbutton:
Press the required double rocker end for approx. 3s but not longer than 5s. Then open the shading element fully by pressing the universal or direction switch and continue as described above for other scenes.

Switching on/off repeater:
If control voltage is applied to the local control input when the power supply is switched on, the repeater is switched on/off. When the power supply is switched on, the LED lights up for 2 seconds = repeater off (as-delivered state) or 5 seconds = repeater on to indicate the state.

Switch-on confirmation telegrams:
For deliveries ex-works the confirmation telegrams are switched-off. Set the upper rotary switch to CLR. The LED flashes nervously. Now within 10 seconds turn the bottom rotary switch 3 times to the left (anticlockwise) and then back away. The LED stops flashing and goes out after 2 seconds. The confirmation telegrams are switched-on.

Switch-off confirmation telegrams:
Set the upper rotary switch to CLR. The LED flashes nervously. Now within 10 seconds turn the bottom rotary switch 3 times tot he left (anticlockwise) and then back away. The LED goes out immediately. The confirmation telegrams are switched-off.

Teaching-in feedback of this actuator in other actuators or GFVS software:
For raising and lowering and simultaneously transmitting of feedback the local control input has to be applied.The corresponding feedback will be sent when reaching the end position top or bottom after the set RV time at the device.

Teaching-in feedback of other actuators in this actuator: 'Raising' will be taught-in in position 'central up'. 'Lowering' will be taught-in in position 'central down'. After teach-in the function and desired off-delay will be set.

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.

For later use!

Eltako GmbH
D-70736 Fellbach
☎ +49 711 94350000
www.eltako.com

10/2013 Subject to change without notice.