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Eltako ELECTRONICS

Wireless actuator for shading elements and roller shutters

FSB70-230V

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 21/12 (see bottom side of housing)

Impulse group switch 1+1 NO contact not potential free 10A/250V AC, for roller blinds and shading systems. Bidirectional wireless and with repeater function. Only 0.6 watt standby loss.

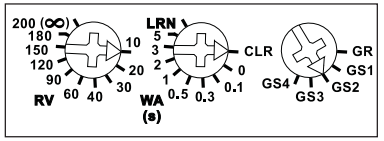
Mounting in the 230V power supply cord, e.g. in false ceilings. 100mm long, 50mm wide and 31mm deep.

This wireless actuator is an impulse group switch and 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.

Starting in production week 21/2012 with **bidirectional wireless;** in addition, a **repeater** function can be switched in. Every change in state and incoming central command telegrams are confirmed by a wireless telegram. This wireless telegram can be taught-in in other actuators, in the GFVS software and in FUA55 universal displays.

Function rotary switches



With the middle rotary switch on the side in the setting LRN up to 35 wireless pushbuttons can be assigned, of which one ore more central pushbuttons. Then the automatic turning system (WA) is set using the same rotary switch.

The required function of the actuator can then be selected **with the right rotary switch:**

GS1 = Group switch with pushbutton control and off delay in seconds. A wireless pushbutton can be taught-in as an universal push-button with the function 'up-stop-down-stop', as well as a wireless pushbutton as a roller shutter double pushbutton as a direction pushbutton with pressing up 'up' and pressing down '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 button always without priority.

GS3 = Group switch same as GS2, **in addition with double click reverse function** for a wireless switch taught in as universal switch: 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 tap 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.

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.

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 GFVS software.

If this was not the last function anyway, the shading element is first moved 'Up' at the RV delay time programmed by the left 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 (300Lux to 25kLux) and Scene 4 in darkness (1-30Lux). 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.

With the left rotary switch on the side the off delay can be set in position 'Hold' in seconds. Therefore, the time delay must be chosen at least as long as the shading element or roller shutter will need to move from one limit position to the other.

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. This blocks a down command from the central unit and direction switch.

The LED on the side below the left rotary switch performs during the teach-in process according to the operation manual. It shows wireless control commands by short flickering during operation.

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 FSB70-230V

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 middle rotary switch to CLR. The LED flashes at a high rate. Within the next 10 seconds, turn the left 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 middle 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 left rotary switch to the desired teaching-in function:
   Position 10 = teach-in universal switch 'DOWN-HOLD-UP-HOLD';
   Position 20 = teach-in direction switch top 'UP' and bottom 'DOWN' or 'hold' in both cases;
   Direction switches are taught-in fully automatically when you press top or bottom. Otherwise, top and bottom must be taught in simultaneously if the switch is to have the same function at top and bottom.
   Position 30 = teach-in 'central DOWN';
   Position 40 = teach-in 'central UP'.
   Position 60 = teach-in scene button.
   When an FAH60 is taught-in, the position of the left rotary switch determines the threshold at which scene 4 is called. 10 = total darkness to 200 = start of twilight.
2. Set the middle 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 middle 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:
Set the middle rotary switch to LRN. Switch on supply voltage. The repeater is switched on or 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.

Teaching-in feedback of this actuator in other actuators or GFVS software:
While raising and lowering and simultaneously sending of the confirmation telegram a previously taught-in wireless pushbutton has to be used. Set the receiving actuator to 'LRN' after moving off of the shutter. 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.

Must be kept for later use!

Eltako GmbH

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

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