Eltako ELECTRONICS

Wireless actuator
Multifunction impulse switch
FMS61NP-230V

CE

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 25/18 (see bottom side of housing)

1+1 NO contacts not potential free 10A/250V AC, incandescent lamps up to 2000 watts. Encrypted wireless, bidirectional wireless and repeater function are switchable. Only 0.8 watt standby loss.
For installation.
45mm long, 45mm wide, 33mm deep.
Supply voltage, switching voltage and control voltage local 230V.

If a power failure occurs, the switching state is retained. If a power failure occurs repeatedly, the device is switched off in a defined sequence.

This wireless actuator is a multifunction impulse 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.

In addition to the wireless control input via an internal antenna, this multifunction impulse switch can also be controlled locally by a conventional 230V control switch previously mounted (in the 2xS function only contact 1).
Maximum current as the sum of both contacts 16A at 230V.

You can teach in encrypted sensors. You can switch on **bidirectional wireless** and/or a **repeater** function.

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 and in the GFVS software.

Function rotary switches
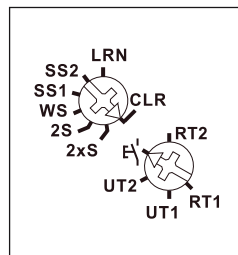
With the top rotary switch in the setting LRN up to 35 wireless pushbuttons can be assigned therefrom one ore more central control pushbuttons. The required function of this multifunction impulse switch can then be selected. Switching will be visualised by flashing of the LED.

2xS= 2fold impulse switch each with 1 NO contactl

2S = impulse switch with 2 NO contacts

WS = impulse switch with 1 NO contact and 1 NC contact

SS1 = impulse multicircuit switch 1+1 NO contact with switching sequence 1

SS2= impulse multicircuit switch 1+1 NO contact with switching sequence 2

Switching sequence SS1:
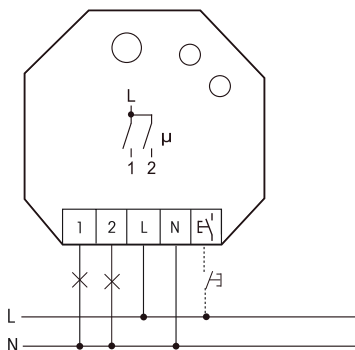0 - contact 1 - contact 2 - contacts 1+2
Switching sequence SS2:
0 - contact 1 - contacts 1+2 - contact 2
The bottom rotary switch is only required to teach-in the transmitters.

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

Typical connection

Technical data

Rated switching capacity each contact	10A/250V AC
Incandescent lamp and halogen lamp load [1] 230V	2000W
Local control current at 230V control input	3.5mA
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000VA
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500VA
Compact fluorescent lamps with EVG* and energy saving lamps	15x7W 10x20W
Max. parallel capacitance (approx. length) of local control lead at 230V AC	0.01 µF (30m)
Standby loss (active power)	0.8W

[1] Applies to lamps of max. 150W.

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

Teaching-in actuator FMS61NP-230V
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:**
Turn the upper rotary switch to CLR.

The LED flashes at a high rate. Within 10 seconds, turn the lower rotary switch three times to right stop (turn clockwise) and back again. The LED stops flashing and goes out after 2 seconds.
All taught-in sensors are cleared; the repeater and the confirmation telegrams 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.

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:
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.

RT1 = teach-in direction pushbutton, rotary switch and GFVS for contact 1 with the function 2xS;

UT1 = teach-in universal pushbutton for contact 1 with the function 2xS;

UT2 = teach-in universal pushbutton for contact 2 with the function 2xS;

⊟ **=** teach-in universal pushbutton for series pushbutton, 2S and WS;

RT2 = teach-in direction pushbutton, rotary switch and GFVS for contact 2 with the function 2xS;

Direction pushbuttons are completely taught-in automatically when operating. The side on which the pushbutton is first operated is defined for switching on, the other side for switching off. A taught-in direction pushbutton RT1 or RT2 acts as a **central pushbutton** in the functions 2S, WS, SS1 and SS2. A direction pushbutton has to be taught-in into both channels RT1 and RT2 in the function 2xS to act as a **central pushbutton.**

At teaching-in from rotary switches and GFVS, confirmation telegrams are automatically activated and sent.

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.

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

Within 2 seconds, turn the upper rotary switch three times to right stop LRN (turn clockwise). The LED flashes 'double'.

'Double-click' the pushbutton you want to teach in. The LED goes out.

To change back to teach-in with a 'single click', turn the upper rotary switch 3 times to right stop LRN (clockwise) within 2 seconds. The LED flashes at a low rate.

After a power supply failure, the device reverts automatically to teach-in with a 'single click'.

You can teach in unencrypted and encrypted sensors.

Teach in encrypted sensors:
1. Turn the upper rotary switch to LRN.
2. Turn the lower rotary switch three times to left stop (anticlockwise). The LED flashes very rapidly.
3. Within 120 seconds, enable sensor encryption. The LED goes out.
   Caution: Do not switch off the power supply.
4. Then teach in the encrypted sensor as described in *Teach in sensors.*

To teach in other encrypted sensors, turn the upper rotary switch briefly away from position LRN and then turn it to 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.

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: Contact 1: Set the upper rotary switch to 2xS. For changing of switching state and simultaneously transmitting of feedback the local control input has to be applied.
Contact 2: Turn the upper rotary switch from 2S to WS, contact 2 switches on and the corresponding feedback will be sent. Turn the upper rotary switch from WS to 2S, contact 2 switches off and the corresponding feedback will be sent.

Teaching- in feedback of other actuators in this actuator: Teaching-in feedback other actuators is only reasonable if this actuator is run in function setting 2S or 2xS. The confirmation telegrams will be taught-in as a central pushbutton. After teaching-in set the rotary switch to the desired function.

⚠ 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.

EnOcean wireless

Frequency	868.3 MHz
Transmit power	max. 10 mW

Hereby, Eltako GmbH declares that the radio equipment type FMS61NP-230 V is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: eltako.com

Must be kept for later use!