

Wireless actuator Fan relay F2L70-230V

2-speed fan actuator 1+1 NO contacts not potential free 10A/250V AC. Only 0.9 watt standby loss. Activates passive and active sensors.

Mounting in the 230V power supply cord, e.g. in false ceilings. 100 mm long, 50 mm wide and 25 mm deep.

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.

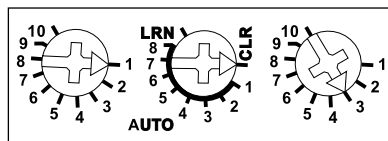
By using a bistable relay coil power loss and heating is avoided even in the on mode.

After installation, wait for short automatic synchronisation before the switched consumer is connected to the mains.

This fan relay evaluates the information of up to 23 passive sensors, e.g. wireless push-buttons, window/door contacts, Hoppe window handles or wireless transmitter modules. A single active sensor for CO₂, humidity or temperature can be taught-in additionally or individually.

When the two contacts are switched in parallel, the 2-speed actuator for 2 fan speeds becomes an actuator for one fan.

Function rotary switches



The middle rotary switch must be set to position LRN for teach-in. Set the required operating mode when the fan actuator is in operation.

During the teach-in process, adjust the **left rotary switch** to set the sensor type. A double rocker wireless pushbutton is taught-in in rotary switch position 1. The double rockers are assigned automatically: top left for Stage 1, top right for Stage 2. Bottom left and bottom

right OFF, both contacts open. If you switch the two contacts in parallel, one wireless pushbutton and 1 rocker are sufficient. In this case, top is ON and bottom is OFF.

All passive sensors, such as wireless buttons and wireless transmitter modules, can be taught-in in rotary switch position 2. An active sensor can be taught-in in any teach-in position. Only one sensor can be taught-in.

When operated with an active sensor, use the right rotary switch to set the switch-on threshold. When the threshold is reached, stage 1 is switched on. Use the left rotary switch to set the addition value at which Contact 2 closes. The middle rotary switch sets one of the operating modes AUTO1 to AUTO8:

AUTO1 for manual mode of a 2-stage fan by means of a double rocker wireless pushbutton. Each contact is closed separately (exclusive).

AUTO2 same as AUTO1, Contact 2 cuts in to switch Stage 2 (accumulative).

AUTO1 and AUTO2 cause both contacts to open in the case of passive sensors, such as wireless pushbuttons and transmitter modules which are taught-in as off-switches.

As long as the control voltage is applied to transmitter modules or a window monitored by an FTK or Hoppe window handle is open, the contacts are open and can not be switched on manually.

AUTO3: Activating with wireless CO₂ sensor. The switch-on thresholds are set by the rotary switches on the right and left. The contacts close 'exclusively'.

AUTO4: Same as AUTO3, but activated by the wireless humidity sensor.

AUTO5: Same as AUTO3, but activated by the wireless temperature sensor.

AUTO6: Same as AUTO3, but the contacts close 'adding'.

AUTO7: Same as AUTO4, but the contacts close 'adding'.

AUTO8: Same as AUTO5, but the contacts close 'adding'.

The **right and left rotary switches** are used in conjunction with sensor activation AUTO3 to AUTO8 to set the switch-on thresholds for Contact 1 and to set accumulative values at which Contact 2 closes.

Overview of switch-on thresholds

(right rotary switch):

CO₂ (ppm):

1 = 700 ppm; 2 = 800 ppm; 3 = 900 ppm;
4 = 1000 ppm; 5 = 1200 ppm; 6 = 1400 ppm;
7 = 1600 ppm; 8 = 1800 ppm, 9 = 2000 ppm
and 10 = 2200 ppm.

Humidity (%):

1 = 10%, 2 = 20%, ... 10 = 100%.

Temperature (°C):

1 = 20°C, 2 = 22°C, 3 = 24°C, ... 10 = 38°C.

Overview of addition values

(left rotary switch):

CO₂ difference:

1 = 50 ppm, 2 = 100 ppm, 3 = 150 ppm, ...
10 = 500 ppm. Fixed hysteresis: 50 ppm.

Humidity difference:

1 = 5%, 2 = 10%, 3 = 15%, ... 10 = 50%. Fixed hysteresis: 5%.

Temperature difference (K):

1 = 1K, 2 = 2K, 3 = 3K, ... 10 = 10K.
Fixed hysteresis: 1K.

The **LED on the side** below the left rotary switch accompanies the teach-in process as described in the operation manual. It indicates control commands by short flickering during operation.

Technical data

Rated switching capacity each contact	10A/250V AC
230V AC fan	max. 250VA per channel
Standby loss (active power)	0.9W

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 F2L70-230V

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 or sensors of a channel 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. If an FT4 or an FSM is required to act as a pure off switch, then set the left rotary switch to Position 2, if not set it to position 1.
2. Set the middle rotary switch to LRN. The LED flashes at a low rate.
3. Operate the sensor to 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 teaching-in active sensors, use the right rotary switch to set the required switch-on threshold and use the left rotary switch to set the addition value.



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.