

RS485 bus actuator

Multifunction impulse switch with integrated relay function FMS14

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 32/19 (see bottom side of housing)

Multifunction impulse switch with integrated relay function, 1+1 NO potential free 16A/250V AC, incandescent lamps 2000W, with DX technology. Bidirectional. Only 0.1-0.6 watt standby loss.

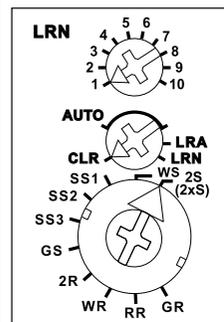
Modular device for DIN-EN 60715 TH35 rail mounting.
1 module = 18mm wide, 58mm deep.
Connection to the Eltako-RS485 bus. Bus cross wiring and power supply with jumper.

Patented Eltako Duplex technology allows you to switch normally potential free contacts in zero passage switching when 230V A/C voltage 50Hz is switched. This drastically reduces wear. To achieve this, simply connect the N conductor to the terminal (N) and L to K(L). This results in an additional standby consumption of only 0.1 watt.
Maximum current over both contacts 16A for 230V.

If supply voltage fails, the device is switched off in defined mode.

When both relays of the FMS14 are switched on, 0.6 watt are required.

Function rotary switches

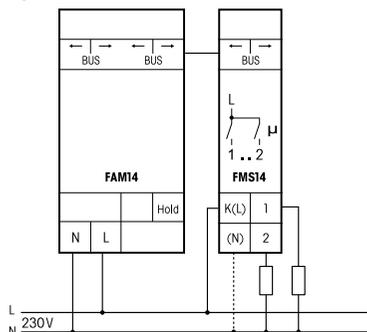


The upper and the middle rotary switches are for teaching-in the sensors. In normal mode, the middle rotary switch is then set to AUTO and the bottom rotary switch to the required function:

- 2S** = Impulse switch with 2 NO contacts
- (2xS)** = 2-way impulse switch each with one NO relay
- WS** = Impulse switch with 1 NO contact and 1 NC contact (0.3 watt standby loss)
- SS1** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 1
- SS2** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 2
- SS3** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 3
- GS** = Impulse group switch 1+1 NO contacts
- 2R** = Switching relay with 2 NO contacts
- WR** = Switching relay with 1 NO contact and 1 NC contact (0.3 watt standby loss)
- RR** = Switching relay (closed-circuit current relay) with 2 NC contacts (0.5 watt standby loss)
- GR** = Group relay 1+1 NO contacts
- Switching sequence SS1: 0 - contact 1 (1-2) - contact 2 (3-4) - contacts 1 + 2
- Switching sequence SS2: 0 - contact 1 - contacts 1 + 2 - contact 2
- Switching sequence SS3: 0 - contact 1 - contacts 1 + 2
- Switching sequence GS: 0 - contact 1 - 0 - contact 2
- GR: Relay with alternating closing contacts.

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

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 FMS14

The teach-in memory is clear on delivery from the factory. To ensure that a device was not previously taught-in, **clear the complete memory:**

Turn the middle rotary switch to CLR. The LED flashes at a high rate. Within 10 seconds, turn the upper 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.

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

- Set the top rotary switch to the required teach-in function:
 - 2 = teach-in 'central OFF';
 - 3 = teach-in universal switch;
 - 4 = teach-in 'central ON';
 - 5 = teach-in direction switches, rotary switches and GFVS;
 Direction switches are completely

taught-in automatically when operating the top or bottom pushbutton.

- 7 = Teach in universal switch Contact 1;
- 8 = Teach in universal switch Contact 2;
- 9 = Teach in direction switch, rotary switches and GFVS Contact 1;
- 10 = Teach in direction switch, rotary switches and GFVS Contact 2.

- Set the middle rotary switch to LRN. The LED flashes at a low rate.
- 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.

Set the middle rotary switch to AUTO after teach-in.

On teach-in from rotary switches and GFVS the actuator automatically sends a confirmation telegram when it has a device address and the upper rotary switch on the FAM14 is turned to Pos. 2.

Assign device address for the FMS14:

The rotary switch on the FAM14 is set to position 1, its lower LED flashes red. The middle rotary switch of the FMS14 is set to LRN, the LED flashes smoothly. After the address of the FAM14 was assigned, its lower LED flashes green for 5 seconds and the LED of the FMS14 goes out.

Delete device configuration:

Set the middle rotary switch to CLR. The LED flashes nervously. Then turn the upper rotary switch within 10 seconds 3 times to the leftmost stop (anticlockwise) and turn it back again.

The LED stops flashing and goes out after 5 seconds. The factory settings are restored.

Delete device configuration and device address:

Set the middle rotary switch to CLR. The LED flashes nervously. Then turn the upper rotary switch within 10 seconds 6 times to the leftmost stop (anticlock-

wise) and turn it back again.

The LED stops flashing and goes out after 5 seconds. The factory settings are restored and the device address deleted.

Configure FMS14:

The following points can be configured with the PC tool PCT14:

- behavior upon return of supply voltage
- teaching-in of wireless pushbuttons with single or double click
- add or change sensors

CAUTION! Don't forget 'disconnect FAM' in the PC tool. While the connection from the PC tool to the FAM14 exists, no wireless commands are executed.

Teach-in confirmation telegram of another bus actuator to the FMS14:

As in the teach-in procedure, only set the middle rotary switch to LRA instead to LRN. Teach-in 'switch ON' as 'central ON'. Teach-in 'switch OFF' as 'central OFF'.



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!

We recommend the housing for operating instructions GBA14.

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