

RS485 bus switching actuator

Multifunction time relay

FMZ12-12V DC

Switching actuator multifunction time relay with 10 functions, 1 CO contact potential free 10A/250V AC, incandescent lamps 2000 watts*, with DX technology. Only 0.3 watt standby loss.

Modular device for DIN-EN 60715 TH35 rail mounting.

1 module = 18mm wide, 58mm deep.

Connection to the Eltako RS485 Bus, terminals RSA and RSB. Up to a total of 128 actuators can be added in this way.

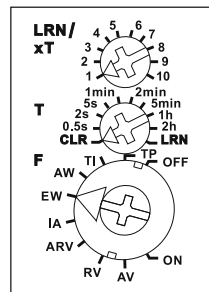
Up to 35 switches are assignable, of which may be one or several central control switches. In addition, wireless window/door contacts (FTK) may have a NO or NC function when the window is open. If a direction switch is taught-in, a function (e.g. TI) can be started using the top switch (START) and stopped with the bottom switch (STOP).

Eltako Duplex technology allows you to switch normally potential free contacts in zero passage switching when 230V A/C voltage 50 Hz 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.

The 12V DC supply voltage of the complete RS485 bus is mainly powered at 6W, 12W or 24W by a switch mode power supply unit SNT12-12V DC that is only 1 or 2 pitch units wide. The power consumption of the 12V DC power supply is only 0.3W.

Time setting between 0.5 second and 20 hours.

Function rotary switches



Teach-in takes place **using the top and middle rotary switches** and then the time is set. T is the time base and xT the multiplier.

The function is selected **using the bottom rotary switch**:

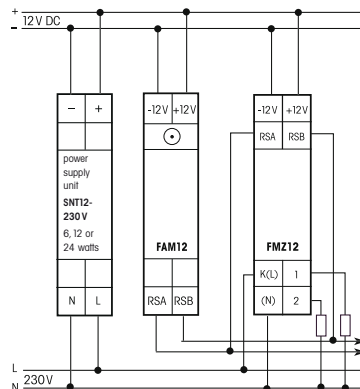
- RV** = off delay
- AV** = operate delay
- TI** = clock generator starting with impulse
- TP** = clock generator starting with pause
- IA** = impulse controlled operate delay (e.g. automatic door opener)

- EW** = fleeting NO contact
- AW** = fleeting NC contact
- ARV** = operate and release delay

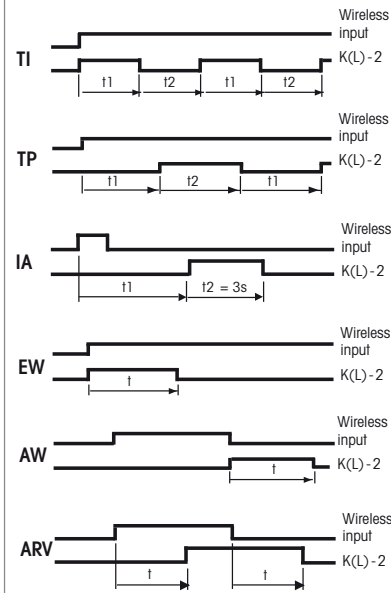
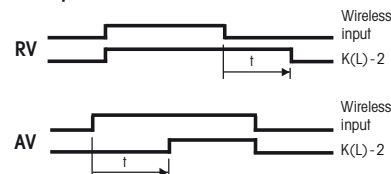
The LED below the upper function rotary switch performs during the teach-in process according to the operation manual. It shows control commands by short flickering during operation.

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes. The maximum load will be reduced for shorter times as follows: up to 2 seconds 15 %, up to 2 minutes 30 %, up to 5 minutes 60 %.

Typical connection



Description of functions



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 FMZ12

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 upper 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. Set the top rotary switch to the required teach-in function:
 - 2 = teach-in 'central OFF';
 - 3 = teach-in universal switch;
 - 5 = teach-in direction switches;
- Direction switches are completely taught-in automatically when operating the top or bottom pushbutton. The side on which the pushbutton is first operated is defined for START and the other side for STOP.

- 6 = teach-in FTK as NC contact;
- 8 = teach-in FTK as NO contact.

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.

Set the time after teach-in with the middle and top rotary switches.



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.