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Eltako ELECTRONICS

Wireless Powernet connector for input and output FPV12USB-12 V DC

CE

Wireless powernet connector to input wireless telegrams from the FVS-Safe server into the 230 V power mains and to output the wireless telegrams from the 230 V power mains via the USB interfaces directly to the FVS-Safe server. Only 0.7 watt standby loss.

Modular device for DIN-EN 60715 TH35 rail mounting.
2 modules = 36 mm wide, 58 mm deep.

FPV12USBs are used to input wireless telegrams from the FVS-Safe server into the 230 V power mains and to output the wireless telegrams from the 230V power mains via the USB interfaces directly to the FVS-Safe server which can operate in both directions. Up to four FPV12- and FPV12USB-12 V DC can be combined into a group to enter or output telegrams at various points in the power mains.

The 12 V DC power supply is provided by a switching power supply unit SNT12-12 V DC that is only 1 or 2 modules wide. With a power consumption of 12 W or 24 W, it can also power actuators as a rail mounted device.

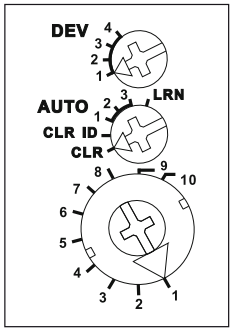
The length of the 230 V transmission line between input and output can be up to 300 metres. It is dependent on the contact resistance of the intermediate connections and the cable layout. If Powernet telegrams are not coupled into other external cables, this can be arranged using a phase coupler FPP12 so that output can be made to any line.

Up to 32 sensors with their fixed ID numbers saved can be taught-in in the input FPV12USB.

An output FPV12USB need not be taught-in. It outputs the original ID of the sensors over USB.

It is not possible to transmit from an input FPV12USB to an output FPV12USB.

Function rotary switches



Use the top rotary switch to select the device adress 1, 2, 3 or 4 of the addressed output FPV when the sensors are taught-in. Set the home device adress in operation.

Up to 4 FPV12 devices are combinable to form an input/output group. Each FPV12 receives its own device adress (DEV) 1, 2, 3 or 4.

Use the middle rotary switch to teach-in in accordance with the manual. In operation, **AUTO1** is set.

Use the bottom rotary switch to identify the FPV group in order to limit it from another group which may be located in the same power network.

Every FPV12 is equipped with a **fault relay** for safety applications. This closes the floating contact 1-2 for 3 seconds if the output FPV12 sends no receive confirmation within 5 seconds or the data buffer (24 telegrams) overflows.

Up to 24 consecutive incoming wireless telegrams are buffered and pushbutton signals are transferred as first priority. Transmission takes place in compliance with CENELEC B in the range from 95 to 125 KHz at up to 2.5 Kbps.

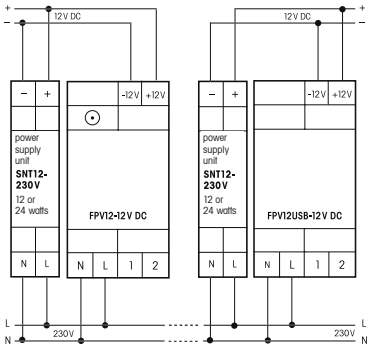
Initialisation: Initialisation starts after the power supply is applied, after the address is changed (top rotary switch) or after the group is changed (bottom rotary switch). The green LED under the bottom rotary switch lights up for 2 s and the red LED under the top LED lights up for 10 s. During initialisation, wireless telegrams continue to be received and buffered. On completion of initialisation the data is sent. In case of extreme faults on the network, the FPV automatically performs an initialisation.

The red LED accompanies the teach-in process and indicates incoming USB telegrams in operation by blinking briefly. The green LED indicates received Powernet telegrams in operation by blinking briefly.

Technical data

Rated switching capacity	4 A/250 V AC
Standby loss (active power)	0.7 W

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.

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 **delete the memory contents completely:**

Set the middle rotary switch of the input FPV to CLR. The red LED flashes at a high rate. Within the next 10 seconds, turn the upper rotary switch three times to the right stop and then turn back away from the stop. The LED stops flashing and goes out after 2 seconds.

Deleting individual destination addresses (output FPV):
Set the middle rotary switch of the input FPV to CLR. The red LED flashes at a high rate. Set the top rotary switch to the destination address to be deleted and operate the sensor. The red LED goes out.

Deleting individual sensors:
Set the middle rotary switch of the input FPV to CLR ID. The red LED flashes at a high rate. Operate the sensor to be deleted. The red LED goes out.

Deleting individual sensors in the actuator:
Proceed as for teach-in, except set the actuator to CLR instead of LRN.

Teaching-in sensors in the input FPV12USB:
Up to 32 sensors with their IDs can be taught-in.

1. Set the bottom rotary switch to 1. If a Powernet repeater is used, set the bottom rotary switch to 10!
2. Set the middle rotary switch to LRN -> the red LED flashes at a low rate.
3. Set the top rotary switch to the device adress (DEV) of the output FPV.
4. Operate the PC sensor -> the red LED goes out.
5. Set the top rotary switch to its own device adress (DEV).
6. Set the bottom rotary switch to the FPV Groups 1..10.
7. Set the middle rotary switch to AUTO1.
8. To teach-in further sensors, continue the procedure from pos 2.

Teaching in PC sensors to an actuator:
1. Set the actuator to LRN.
2. Actuate the PC sensor.

A teach-in telegram with a new ID is sent from the output FPV12 to the actuator.

Operational settings
Set the top rotary switch to its own device adress (DEV) 1, 2, 3 or 4.
Each FPV of a group needs to have a different device address (DEV).
Set the middle rotary switch to AUTO1.
Set the bottom rotary switch to FPV12 group 1..10 to which the FPV12USB belongs.

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.

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