

## Wireless Powernet connector

### for input and output

#### FPV12-12V DC

Wireless Powernet connector to input and output wireless telegrams into and out of the 230V power system. With 32 data channels. Only 0.7 watt standby loss. Also settable as repeater. If required, a wireless antenna FA250 or FA200 can be connected.

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

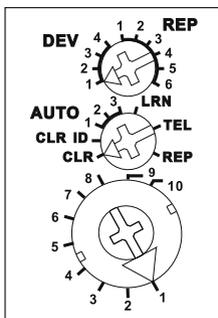
**Two FPVs are used to enter wireless telegrams into the power network and output them into the Eltako wireless network at another point. An FPV can operate in both directions. Up to four FPVs can be combined into a group to enter or output telegrams at various points in the power network.**

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

The length of the 230V 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 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 FPV. When these sensors are taught-in in the actuators, new unique ID numbers are issued by the output FPV. This ensures that the actuators only execute the commands of the output FPV, even if the original wireless telegrams arrive there.

#### Function rotary switch



**Use the top rotary switch** to select the device address 1, 2, 3 or 4 of the addressed output FPV when the sensors are taught-in. Set the home device address in operation. The associated FPVs are stored as repeaters. Up to 4 FPV12 devices are combinable to form an input/output group. Each FPV12 receives its own device address (DEV) 1, 2, 3 or 4.

**Use the middle rotary switch** to teach-in in accordance with the manual and to send teach-in telegrams to the actuator via the output FPV. In operation, **AUTO1** is set. In position **REP**, the FPV works as a pure repeater in accordance with the manual to increase the useful length of the network line.

**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 FPV is equipped with a **fault relay** for safety applications. This closes the floating contact 1-2 for 3 seconds if the output FPV sends no receive confirmation within a preset time or the data buffer 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.

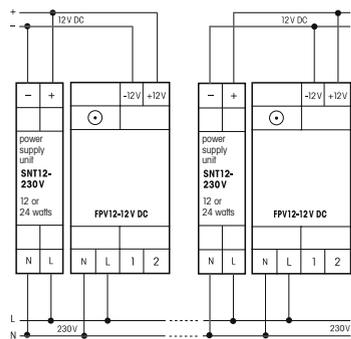
**Initialisation:** Initialisation starts after the power supply is applied, after the address is changed (top rotary switch) or after the group is changed (bottom rotary switch). The green LED under the bottom rotary switch lights up for 2 s and the red LED under the top LED lights up for 10 s. During 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 wireless 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/250V 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 FPV:

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 address (DEV) of the output FPV.
4. Operate the sensor -> the red LED goes out.
5. Set the top rotary switch to its own device address (DEV).
6. Set the bottom rotary switch to the FPV Groups 1 to 10.

7. Set the middle rotary switch to TEL. A teach-in telegram is sent cyclically every 5 seconds. The red LED light up briefly each time.
8. Set the actuator to LRN. The next teach-in telegram is taught-in.
9. Turn the middle rotary switch of the input FPV away from LRN. Set the actuator rotary switch according to its Operator Manual.
10. To teach-in further sensors, continue the procedure from pos 2.

#### Operational settings

Set the top rotary switch to its own device address (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 AUTO 1. Set the bottom rotary switch to FPV Group 1 to 10 to which the FPV belongs.

#### Powernet repeater

If an FPV is used as a repeater, the following settings must be made:

The upper rotary switch is set to REP 1..6.

REP1: Links FPV1 to FPV2

REP2: Links FPV1 to FPV3

REP3: Links FPV1 to FPV4

REP4: Links FPV2 to FPV3

REP5: Links FPV2 to FPV4

REP6: Links FPV3 to FPV4

The middle rotary switch is set to REP.

Set the bottom rotary switch to FPV Group 1 to 10 to which the repeater 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.**