

Wireless energy meter transmitter module

FSS12-12V DC

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%.

Wireless energy meter transmitter module for connecting to the SO interface of many two-phase energy meter and three-phase energy meter. Only 0.5 watt standby loss. With load shedding relay 1 NO contact potential free 4A/250V and with exchangeable antenna. If required, a wireless antenna FA250 can be connected.

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

The energy meter transmitter module FSS12 evaluates the signals from the energy meter SO interface and transmits wireless telegrams containing consumption and meter reading to the Eltako wireless building for evaluation on a computer using the Visualisation and Control Software GFVS 3.0 and GFVS Energy. On three-phase energy meters, the data sent includes normal rate (HT) or off-peak (NT) energy tariff data, provided the E1/E2 terminals on the three-phase energy meter are connected to E1/E2 on the FSS12. From production week 42/2012 also with adjustable pulse rate.

GFVS-Energy support up to 100 transmitter modules and GFVS 3.0 up to 250 transmitter modules.

The 12V DC power supply for the entire RS485 bus usually follows with a 1 to 2 modules wide switching power supply unit FSNT12-12V DC with 12W or 24W. If the relay of the FSS12 is switched on, 0.6 watts are required.

The setting and display screen is subdivided into 3 fields:

■ **Field 1:**

The normal display is the unit of the meter reading currently displayed in Field 3.

This alternates every 4 seconds with either kilowatt hours kWh (KWH in display) or megawatt hours MWh (MWH in display).

The display in Field 1 is supplemented by a + sign after the reading to indicate that the off-peak tariff rate is applied to E1/E2.

■ **Field 2:**

Instantaneous values of energy consumption (active power) in watt (W) or kilowatt (kW). The left-pointing arrow in Field 1 indicates an automatic switchover from 0 to 99W to 0.1 to 65kW.

■ **Field 3:**

The meter reading is the normal display. Every 4 seconds the display alternates between 3 whole numbers and 1 decimal point (from 0.1 to 999.9kWh) and 1 or max 3 whole numbers (from 0 to 999MWh). At freely chosen pulse rates whose last digit is not 0, the meter reading is displayed without decimal place in increments of 1 kWh.

Press the left button MODE to access Setting mode. **Press the right button SET** to browse through the setting options, enter or edit settings as required and finally confirm by pressing MODE.

1. HT flashes to indicate **normal rate meter reading**. Confirm by pressing MODE again and MWH flashes. SET changes the meter reading from 0 to 999 in Field 3. Press SET briefly to increment by 1; hold down to increment rapidly. Release and press again to change direction. Confirm by pressing MODE even if nothing was entered.
2. KWH flashes and SET changes the meter reading from 0.1 to 999.9 in Field 3, as before with MWH. Also confirm the correct entry by pressing MODE.

3. NT flashes and the **off-peak meter reading** may be displayed as described under HT above.
4. SO flashes and after confirming with MODE, the number of SO pulses (pulse rate) in box 3 of the energy meter are entered per kWh. This will be provided by the energy meter imprint. 0010, 0100, 0200, 0500, 0800, 1000 or 2000 are settable with SET. If the MODE and SET keys are pressed mutually, SO + flashes on the display and the impulse rate can be chosen freely with SET. MODE confirms the entry.
5. LRN flashes and after confirming by pressing MODE, a **wireless teach-in telegram** is transmitted by pressing SET. If a smart metering display is already installed, it is used to teach-in the transmitter ID, provided the receiver was set to LRN shortly before. To transmit further wireless telegrams, confirm the flashing LRN again by pressing MODE and transmit by pressing SET.
6. PSW flashes and after confirming by pressing MODE, press SET to set the power threshold from 0 to 60kW for the load shedding relay NO contact and a corresponding wireless telegram. The left pointing arrow in Field 1 indicates kW. Confirm by pressing MODE.

In the setting 0.0, the relay contact closes after switching over from normal rate HT to off-peak NT. At the same time, a wireless telegram EIN (ON) is transmitted. When the device is switched over from NT to HT, AUS (OFF) is transmitted and the relay contact opens.

With any other value from 1 to 60, the load shedding relay switches on when the set threshold value is overshoot and switches off when the set threshold value is undershot at a hysteresis of 25%. At the same time, a wireless telegram EIN or AUS is transmitted.

Lock settings: Press MODE and SET together briefly and lock the flashing LCK in Field 1 by pressing SET. To unlock, press MODE and SET together for 2 seconds and confirm the flashing UNL in Field 1 by pressing SET.

Wireless telegrams: Maximum every 130 seconds a performance telegram will be sent and the display will be updated. Otherwise a telegram will be sent within 20 seconds if the power changed by at least 10%. A switchover from HT to NT is transmitted immediately in the same way as a meter reading change. A full telegram comprising meter reading HT, meter reading NT and power is transmitted 20 seconds after the power supply is switched on and then every 10 minutes. The LED lights up briefly when a telegram is transmitted.

The power display in Field 2 depends on the number of SO pulses per kWh from the meter and is updated every 130 seconds.

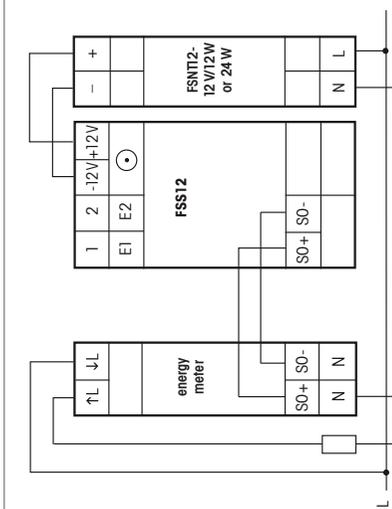
The minimum load displayed is 14 watts at 2000 pulses per kWh, 28 watts at 1000 pulses/kWh, 35 watts at 800 pulses/kWh, 56 watts at 500 pulses/kWh, 140 watts at 200 pulses/kWh, 280 watts at 100 pulses/kWh and 2800 watts at 10 pulses/kWh.

Technical data

Rated switching capacity	4A/250V AC
Incandescent lamp and halogen lamp load ^{b)}	1000W / 230V
Standby loss (active power)	0.5 W

^{b)} Applies to lamps of max. 150W.

Typical connection



Must be kept for later use!

We recommend the housing for operating instructions GBA12.

Eltako GmbH

D-70736 Fellbach
+49 711 94350000
www.eltako.com