The enclosed small antenna can be replaced with an external antenna M3-FA250 or M3-FA200 with magnetic base and cable.

**Typical Connection**

Wireless energy meter transmitter module for connection to S0 interface of the MES single-phase and three-phase energy meter. Only 0.4 watt standby loss. With load shedding relay 1 NO contact potential free 4A/120V. With exchangeable antenna. If required, a wireless antenna M3-FA250 can be connected.

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

The energy meter transmitter module M3-FFS12 evaluates the signals from the energy meter S0 interface and transmits wireless telegrams containing consumption and meter reading to the MES wireless network for evaluation on a Computer or mobile device using the VenergyUI Software. 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 M3-FFS12.

The 12 V DC supply voltage of the complete RS485 bus is mainly powered at 6 W, 12 W or 24 W by a switch mode power supply unit WNT12-12 V DC that is only 1 or 2 pitch units wide. If the relay of the M3-FFS12 is switched on, a power of 0.6 watts is 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 999 W to 0.1 to 65 kW.
- **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 999.9 kWh) and 1 or max. 3 whole numbers (from 0 to 999 MWh).

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. S0 flashes and the number of S0 pulses per kWh on the meter is entered in Field 3. This is specified on the meter sticker. 0010, 0100, 1000 or 2000 can be set by pressing SET. Press MODE to confirm your 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 teach-in telegrams, confirm the flashing LRN again by pressing MODE and transmit by pressing SET.
6. PSW flashes and after confirming by pressing MODE, SET to set the power threshold from 0 to 60 kW 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 overshot 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:** A power telegram is transmitted every 130 seconds and the display is updated. Otherwise a telegram is transmitted within 20 seconds if the power changes by minimum 10 percent. 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 S0 pulses per kWh of the meter. The minimum load displayed is 14 watts at 2000 pulses per kWh, 28 watts at 1000 pulses/kWh, 280 watts at 10 pulses/kWh and 2800 watts at 10 pulses/kWh.

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<th>PRODUCT NO.</th>
<th>DESCRIPTION</th>
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<tr>
<td>M3-FA200-M3-FA250</td>
<td>Wireless Meter</td>
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