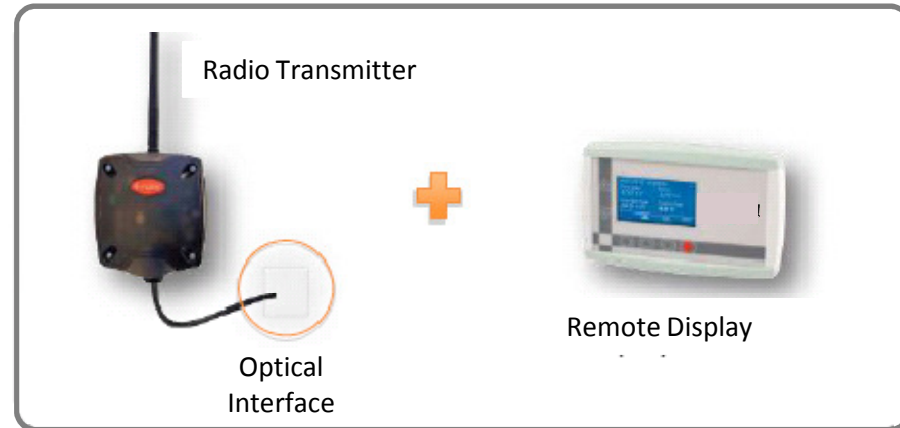
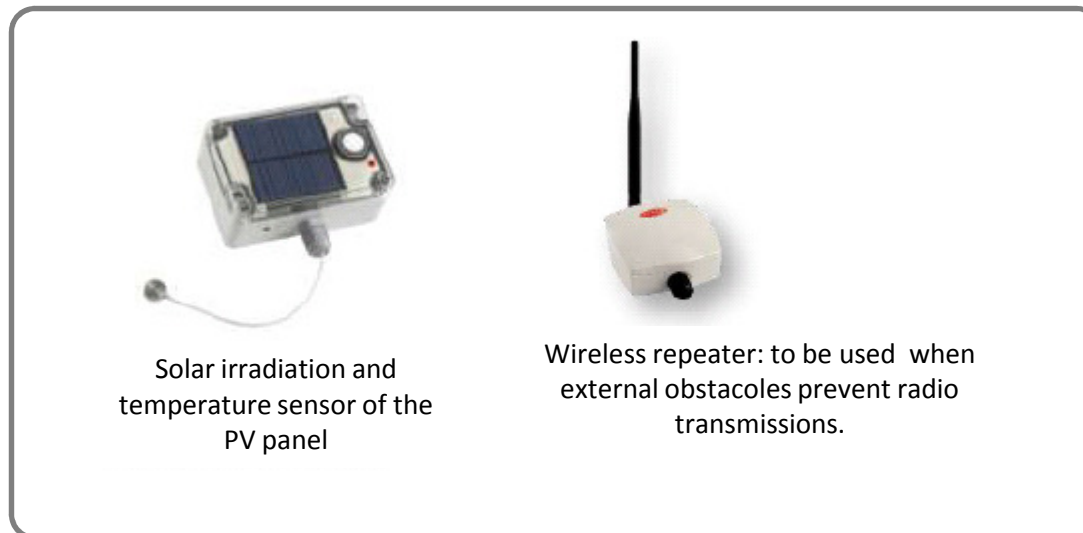




## Enermonitoring Basic Kit



## Optionals



<i>Cod. Articolo</i>	<i>descrizione</i>
<b>PVMB0001</b>	Enermonitoring Basic Kit made of optical interface applied on the meter, wireless repeater and remote display.
<b>PVST0001</b>	Solar irradiation and temperature sensor of the PV panel
<b>PVWTR001</b>	Wireless repeater
<b>PVSTRR0001</b>	Kit made of Solar irradiation and temperature sensor of the PV panel and wireless repeater



## Basic Kit: Remote Display

Backlit, to be positioned into the house.

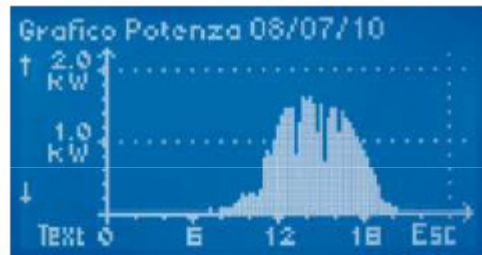
It allows you to monitor:

- how much euro you are earning thanks to your installation
- the power produced in real time
- the power picks
- the energy produced
- the output per hours
- the data up to two years
- possibility to download the data for analyses on an electronic sheet thanks to an USB interface

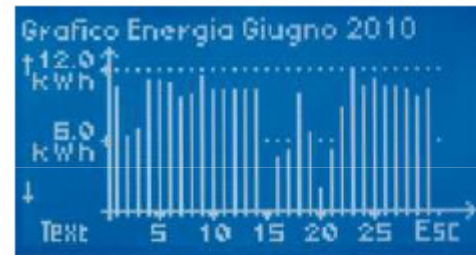


<b>Technical Specs</b> <b>SOLAR IRRADIATION AND TEMPERATURE SENSOR OF THE PV PANEL</b>	
<b>Technical Specs</b>	Chip Ember EM250 Compatible IEEE 802.15.4 Stack ZigBee Pro Ember 3.x Modbus/RTU
<b>RF characteristics</b>	Frequency: 2405 MHz ÷ 2480 MHz Modulation: DSSS Nominal transmission power: 2mW (3 dBm) Reception sensitivity: -95dBm Internal Antenna Gain: 3 dB Coverage outdoor/indoor: 100m/30m
<b>Supply</b>	PV Cell 5 V 100 mA with lithium backup battery 2.4 Ah Battery Operation Time: 5 years

## Graphics



Power produced in Real Time and in the previous 30 days



Daily Energy Production during the last 24 months

## Alarms

### Possibility of remoting the inverter alarm



Alarm signal with audible warning alarm



Alarm signal after audible warning alarm waiting for intervention

## Basic Kit: Optical Interface

An optical interface applied on the meter, without any additional installation, to measure the energy produced by counting the flashes of the meter (1 flash per Wh).

Suitable for PV systems up to 200 Kw.

## Basic Kit: Radio Transmitter

A 2,4 GHz wireless repeater connected to the optical interface that communicates to the remote display how much energy has been produced; it has in addition a digital input to remote an alarm (from the inverter)

### **Optional: PVST0001**

Solar irradiation and temperature sensor of the PV panel

**It is provided of a probe to be applied to the photovoltaic panels to detect the temperature.**

It communicates the measurements to the remote display via radio by ZigBee technology at 2,4 Ghz . The sensor is supplied with a solar cell and a back up of 5 years life battery. Supplied with a radio transmitter.

## Solar irradiation and temperature Sensor

With the Solar irradiation and temperature Sensor of the PV panel (optional) it is possible to see on the display the system efficiency and possible alarms of insufficient performance



## Alarm Display with PVST0001

With the Solar irradiation Sensor it is possible to define the threshold of performance below which the system gives an alarm



Automatic Alarm with visual and acoustic signal

## Optional: Radio Transmitter



Data can be transmitted at a distance of about 25 m indoors and 200 m outdoors.

When natural obstacles (walls, houses, trees...) prevent radio transmission, the wireless repeater (optional) can improve the covering distance.

## Technical Specs – REMOTE DISPLAY

<b>Technical Specs</b>	<p>Chip Ember EM250 Compatible IEEE 802.15.4 Stack ZigBee Pro Ember 3.x</p>
<b>RF characteristics</b>	<p>Frequency: 2405 MHz ÷ 2480 MHz Modulation: DSSS Nominal transmission power: 2mW (3 dBm) Reception sensitivity: -96dBm External Antenna Gain: 0 dB</p>
<b>Display</b>	<p>Internal unit 5Vdc. Supply 100 mA Graphic display 128x64 pixel</p>
<b>Visualized measurements</b>	<p>Power in real time, energy produced by day and by the day before Production hours by day and by the day before Energy and production hours by week and by week before Energy and production hours by month and by month before Total energy production and amount of the energy calculation due With the Solar irradiation and temperature sensor of the PV panel (optional) also the efficiency of the PV system. Possible alarms from remote input on the radio transmitter</p>
<b>Memory</b>	Data up two years
<b>Connections</b>	USB to download the data on the display



## Technical Specs – RADIO TRANSMITTER

<b>Technical Specs</b>	<p>Chip Ember EM250          Compatible IEEE 802.15.4          Stack ZigBee Pro Ember 3.x          Modbus/RTU</p>
<b>RF characteristics</b>	<p>Frequency: 2405 MHz ÷ 2480 MHz          Modulation: DSSS          Nominal transmission power: 10mW (10 dBm)          Reception sensitivity: -97dBm          External Antenna Gain: 5,5dB          Coverage outdoor/indoor: 200m/50m</p>
<b>Supply</b>	<p>Meter interface 12-24 Vdc/Vac with adapter or external transformer          Supply 100mA</p>
<b>Alarm management</b>	<p>Input on the optical interface for clean contact</p>
<b>Connections</b>	<p>Terminal for alarm input</p>





<b>Technical Specs</b> <b>SOLAR IRRADIATION AND TEMPERATURE SENSOR OF THE PV PANEL</b>	
<b>Technical Specs</b>	Chip Ember EM250 Compatible IEEE 802.15.4 Stack ZigBee Pro Ember 3.x Modbus/RTU
<b>RF characteristics</b>	Frequency: 2405 MHz ÷ 2480 MHz Modulation: DSSS Nominal transmission power: 2mW (3 dBm) Reception sensitivity: -95dBm Internal Antenna Gain: 3 dB Coverage outdoor/indoor: 100m/30m
<b>Supply</b>	PV Cell 5 V 100 mA with lithium backup battery 2.4 Ah Battery Operation Time: 5 years