

EnergyBoard_1x16



Description

The EnergyBoard_1x16 module allows the measurement of active and apparent energy of 1-phase consumption connected at the grid, rated at 230V, 16A, 50Hz.

The module continuously accumulates the energy consumption and transfers the data to the network gateway connected to a PC and then to the internet WT dashboard application. If the distance between the module and the gateway is big, the module will automatically seek other, closer modules to send its data. If they are not available, in between relaying modules will be necessary.

Features

The module includes a 802.15.4 transceiver on 868MHz, an Msp430 microprocessor and an energy metering IC. The microprocessor runs a firmware for energy sampling and data routing. The module configuration options (e.g. sampling frequency) are done from the management software and transferred wirelessly to the module. The firmware of the module can be updated either through a USB connection or Over-The-Air (AirFlash).

The module is encased in a DIN rail box suitable for installing only in electrical boards.

Specifications

Name of the Product	EnergyBoard_1x16
Brief Description	Wireless device for energy measurement
Rated Supply voltage (V, Hz, A)	230V, 50Hz, 16A
Weight	100gr
Size (H x L x W)	58mm X 90mm X 53mm
Connections	IN, OUT, N (x2)
Max. clock frequency	16MHz
Data transmission distance	500m (open air) to 10- 20m (within buildings)
Standards	LVD EN 61010-1 EMC/ RTTE (ETSI 301 489-3, ETSI 301 489-1, EN 61326-1, EN 300-220-1)
Operating Temperature	- 10 Celsius to 40 Celcius
Enclosure	DIN rail box in grey color

Environmental conditions for which the equipment is designed:

- Indoor use
- Altitude up to 2000 m
- Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C
- Mains supply voltage fluctuations up to $\pm 10\%$ of the nominal voltage;

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- Transient overvoltage up to the levels of overvoltage category II
- Pollution degree 2

Connections

IN: current conductor from grid

OUT: current conductor to consumption

N: (x2 connected internally) neutral conductor

Connection data:

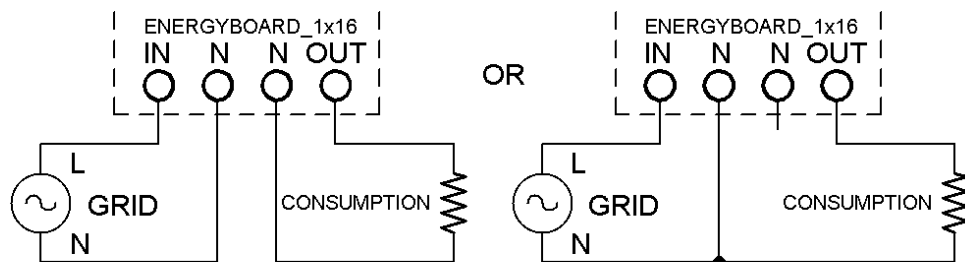
Conductor cross section solid min: 0.14 mm^2

Conductor cross section solid max: 2.5 mm^2

Conductor cross section stranded min: 0.14 mm^2

Conductor cross section stranded max: 1.5 mm^2

Stripping length: 6.5 mm



Coding

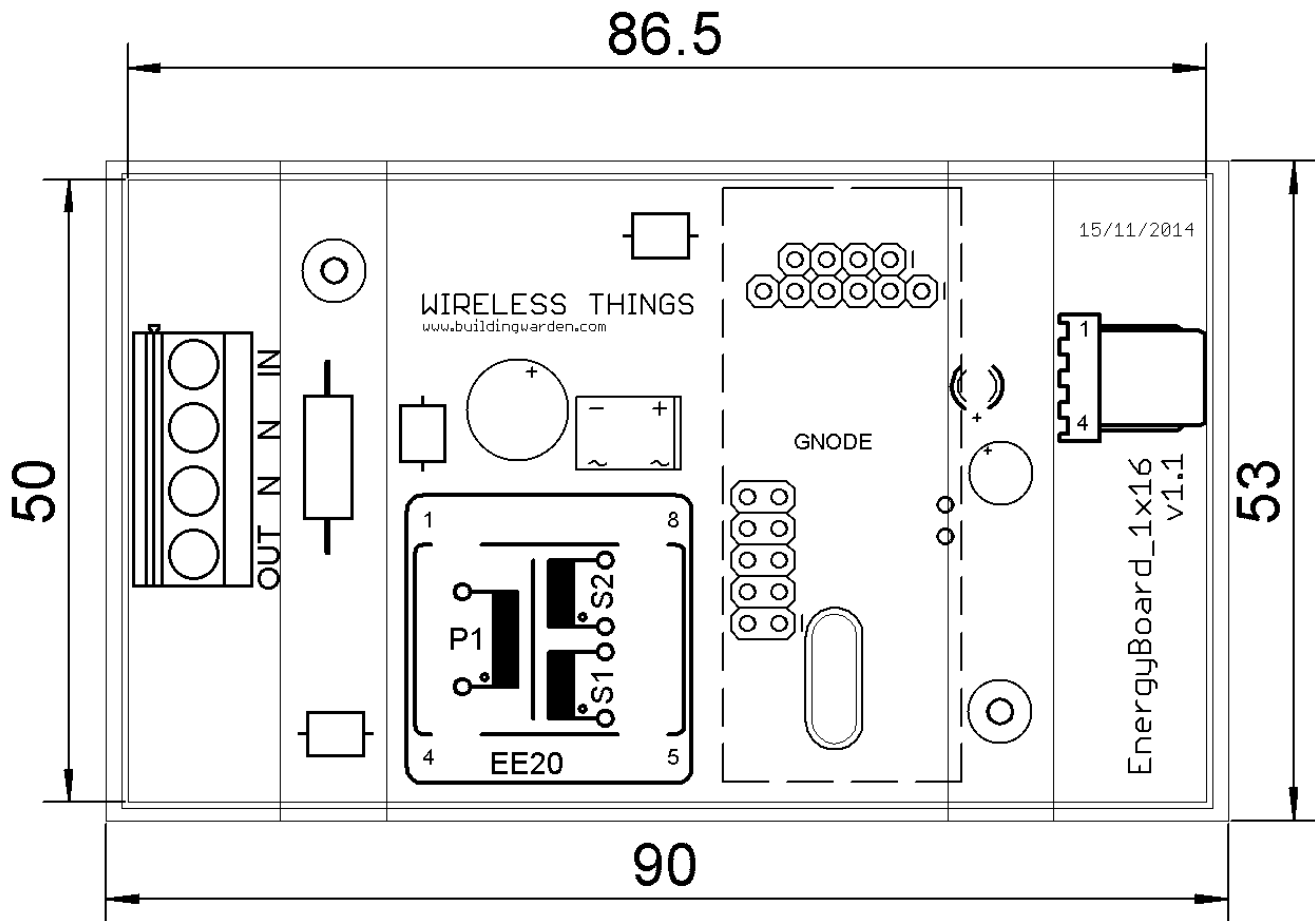
EnergyBoard_1x16 modules are coded as **WT E1016 DINxxx**

where:

xxx = version of EnergyBoard_1x16

Layout

Dimensions in mm.



Assembly, location and mounting requirements

To install, hang the device from the upper part onto the rail and push the lower part of the device against the rail until locked. With the power disconnected, connect the cables according to the drawings above. Then you can enable the power.

To uninstall the device, disconnect the power and remove the cables. Then, with a flat screwdriver pull down the black tab until released and remove the device.

Safety issues

The installation of the equipment shall include a switch or circuit breaker, preferably within the electrical cabinet and near the module, which interrupts the operation. This switch or circuit breaker shall be marked as the disconnecting device for the equipment. Maintenance or inspections procedures shall start after turning the switch/ circuit breaker mentioned above in the OFF position.

***If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired**

For any technical issue please contact with us:

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