Energy harvesting wireless sensor

*harvi* is a clever little device that enables the *zappi* and *eddi* products to be installed without using a wired current transformer (CT) for measuring the grid and generation power - instead the CT is connected to *harvi*. No power source is needed for *harvi* - the energy from the CT is harvested and used to transmit the measurement signal to the *zappi* or *eddi*. This means batteries or electrical wiring are eliminated!

### Installation
- Can be wall mounted
- Up to 3 CT’s can be connected
- Multiple *harvi* devices can be used on one site
- Batteries or power supply not required!

1. The CT should be clipped around the cable to be monitored – make sure the arrow on the bottom of the CT is pointing towards the consumer unit.
2. Connect 1, 2 or 3 CT’s to the CT input(s), the red wire should be connected to the (+) terminal and the black wire to the (-) terminal of the *harvi* device.
3. After a few seconds the Status LED will flash green.

**Note:** Refer to the instruction manual of the *eddi* or *zappi* unit for more details about CT sensor installation.

### Pairing with *eddi* or *zappi*
1. Press the pair button briefly.
2. The LED will flash blue a number of times to indicate the channel number.
3. Then the LED will flash red to indicate the *harvi* is in pairing mode.
4. On the *eddi* or *zappi* unit, select “Add Device” in the “Advanced/Linked Devices” menu.

**Note:** If pairing the *harvi* to a network of already paired devices, it will only need to be paired with one device on the network.

### Changing channel (optional)
The default channel is no.1 and normally this will not need to be changed, however, there may be a situation where there is some other device causing interference on a particular channel.

To change channel:
1. Press and hold the pair button until the LED flashes blue, the LED will flash rapidly to indicate the channel number from 1 to 8.
2. Release the button when the the chosen channel is shown.
3. Make sure the *eddi* or *zappi* unit is also set to the same channel.

**Note:** Channels 4-8 are the same as 1-4 but at a higher power level.

### Configuration
After pairing the *harvi*, the *eddi* or *zappi* device will need to be configured to use the *harvi*. The function of the CT’s connected to the *harvi* are also configured via the *eddi* or *zappi* unit.

1. On the *eddi* or *zappi* device, go to the “Advanced Settings” menu and then “CT Inputs”.
2. Disable the relevant CT input(s) for that device – this ‘tells’ the unit to use the *harvi* CT instead of the wired CT.
3. Next go to the “Linked Devices/Devices” menu option which is also in the “Advanced Settings” menu.
4. Highlight the *harvi* device and press 
5. Configure the CT’s according to the installation.
Technical Specifications

CT Inputs: 3 inputs enable 3-phase or multi-point power measurement
Measurement Range: 25W to 15kW (50Hz AC, import and export)
Energy Harvesting Range: 0.2A to 65A (including reactive current)
Accuracy: 2.0% typical
Transmission Rate: 1s @ 1A+, <10s @ 0.5-1A, <30s @ <0.5A
Wireless Interface: 868 MHz (proprietary protocol)
Mounting Location: Indoor only (can be housed in an IP rated plastic box if required)
Operating Temperature: -30°C to +50°C
Dimensions: 86 x 86 x 25.5mm

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harvi

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