Voltaware

Single Phase Energy Monitor

Installation guide

CE

single phase

Warning!

- Voltages dangerous to human health are involved in the installation of the Voltaware Energy Monitor. Follow all warnings provided in this pamphlet to ensure your own safety.

- A qualified electrician must install the Voltaware Energy Monitor. Voltaware will not be held responsible for failure to follow these guidelines.

- Do not install the Energy Monitor if the mains supply voltage is outside of the nominal operating voltage range.

- You should never, under any circumstances, install or allow your Voltaware Energy Monitor to be installed with the mains electricity switched on. There is a risk of explosion, fire and electric shock if this is ignored.

- Installation must comply with electrical standards and approved codes of practice for the country or region where the installation is taking place.

- The incoming cables feeding the main switch (marked 'X' in Fig. 3) always remain connected to the mains even when the switch is turned OFF. This means that the 'source' terminals (see terminals on the upper side) are always live. Do not attempt to connect the line and neutral magnetic connectors to these inputs. Connect the connectors on the load side of the main circuit breaker (see terminals on the lower side). These outputs are always inactive when the main switch is off.

- Do not tamper with the installation of the Energy Monitor while the mains electricity is switched on.

- Do not dispose of in fire.

- Do not allow the Energy Monitor to come into contact with water.

- Do not leave the Energy Monitor in direct sunlight or near sources of heat.

- Do not install the Energy Monitor if you see any apparent damage on the transceiver, cable or its parts.

EU Declaration of Conformity (DoC)

Company name	Voltaware Services Limited
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We declare that the DoC is issued under our sole responsibility and belongs to the following product:

Apparatus model:	VOLTA1P
Product Type:	Energy Monitor
Code no.	1PEU001
Hardware Revision	1.5

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Directive 2014/53/EU

The following harmonised standards and technical specifications have been applied:

Health & Safety (Directive 2014/53/EU Art. 3.1(a))

EN 60950-1	2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013
EN 61010-1	2010 (3rd Edition)
EN 62311	2008

EMC (Directive 2014/53/EU Art. 3.1(b))

EN 301 489-1	V2.1.1
EN 301 489-17	V3.1.1
EN 61326-1	2013

Radio Spectrum (Directive 2014/53/EU Art. 3.2)

EN 300 328	V2.1.1

Signed for and on behalf of Voltaware Services Limited
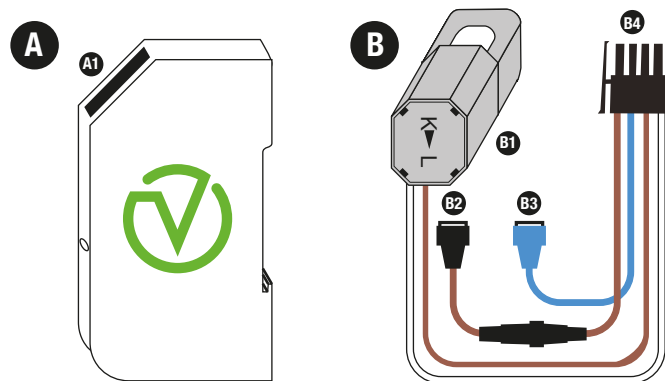London, 13/04/2018

Rishabh Jaipuria
COO


Consumer Unit Fig. 1
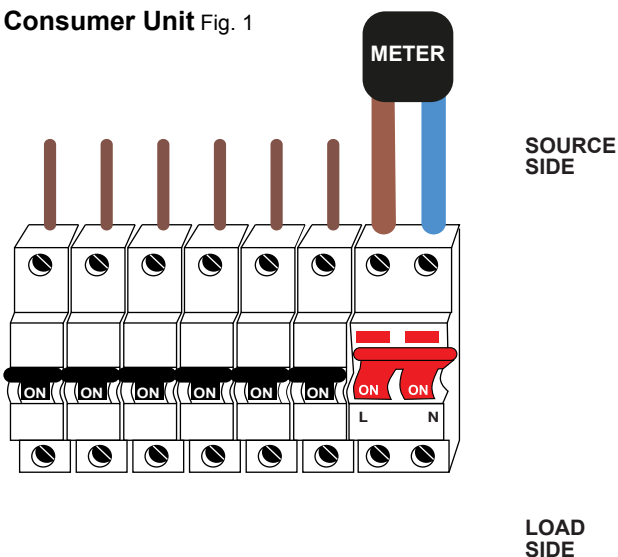
Consumer units can vary considerably. There will be differences between the consumer unit you are working on and the example presented in this guide.

Energy Monitor Components Fig. 2

A   Transceiver
A1 4-pin Female Connector
B   Cable Assembly
B1 Current Clamp

B2 Line voltage magnetic probe
B3 Neutral voltage magnetic probe
B4 4-pin Male Connector

Consumer Unit Fig. 3
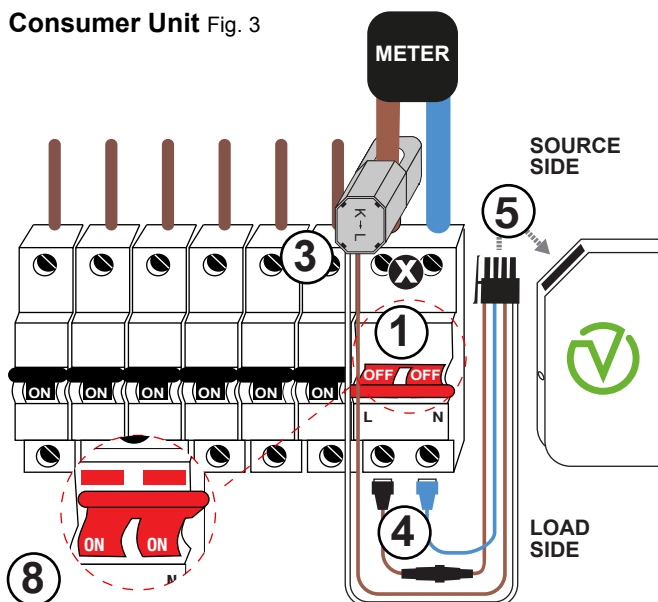
Before installation, please make sure you have read the installation guide and understood the instructions. Numbers correspond to steps in the *Installation Step-by-Step Guide*.

Please note

The Transceiver (A in Fig. 2) will be powered through the magnetic connectors (B2 and B3 in Fig. 2) connected respectively to the Line output and to the Neutral output of the main switch (see terminals with screws on load side).

Electrical Characteristics

Operating voltage	85 - 250 Vac
Operating frequency	50 - 60 Hz
Power consumption	Max 1.5 W
Operating Temperature	-20°C to +60°C

Requirements

WiFi connection supporting IEEE 802.11b/g/n and Open, WPA/WPA2 or WPA2 security.

Support

Additional support is available on at www.voltaware.com. To speak to a member of our technical team contact support@voltaware.com

Installation Step-by-Step Guide

1. Completely switch off the power.

2. Remove the cover from the consumer unit to gain full access to the electrical system.

3. Open the Current Clamp (B1 in Fig. 2) and install it around the Line cable (usually brown, black or grey). Make sure that the arrow on the back of the body of the clamp (between the letters "K" and "L") points in the direction of energy flow (source to load). The clamp must be completely closed for its correct operation.

4. Identify Line and Neutral outputs on the load of the main circuit breaker. Connect the blue magnetic connector on the screw of the Neutral terminal, then also the black magnetic connector (with a fuse on the wire) on the screw of the Line terminal. It is important that the magnetic connectors (B2 and B3 in Fig. 2) are connected the correct way around.
Note: If hard-wired installation is required, the magnetic connectors can be removed (cut off). Please follow relevant electrical wiring guidelines when connecting the wires to the installation.

5. Insert the 4-pin male connector into the 4-pin female connector on the Energy Monitor (A1 in Fig. 2).

6. We suggest to clip the Energy Monitor directly on the DIN rail if available.

7. Visually check that the installation of the Energy Monitor has been done correctly.

8. Switch the mains back on. If the Energy Monitor is correctly powered it will emit a blue light, which indicates that it is ready to be configured and connected to the WiFi network.

9. After completing the procedure of connecting to the desired WiFi network (steps 10 to 16), refit the cover on the electrical panel.

Connecting to the local network

Follow the steps below to connect your Energy Monitor to your WiFi network.

10. Make sure your router security is set to WPA2 or WPA/WPA2. Please consult your WiFi router manual for more information.

11. On your PC or connected mobile device, do a WiFi scan for the network: VOLTA_XXXX (where 'XXXX' represents the Device ID). The Device ID is shown inside the box and on the label of the Energy Monitor.

12. Select this network and connect using the password: byttwm2015

13. Open an internet browser and enter the IP address 192.168.10.1 in the address bar. Press Enter. Please note Mobile Data must be disabled.

14. The Voltaware 'Provisioning' web page will appear.

15. Select the local WiFi network and enter the WiFi password.

16. Once the previous steps have been successfully completed, the Energy Monitor will start working and its LED light will turn green.