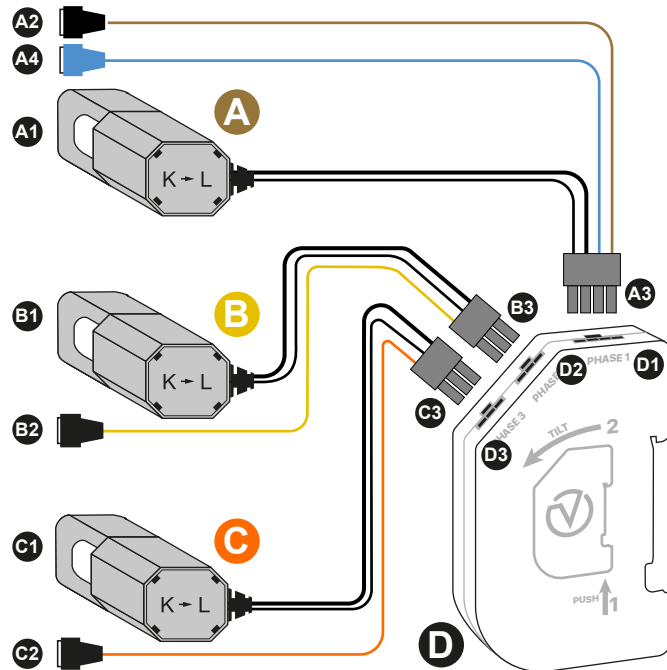


3 Phase Sensor Installation guide

Please visit www.voltaware.com for further support



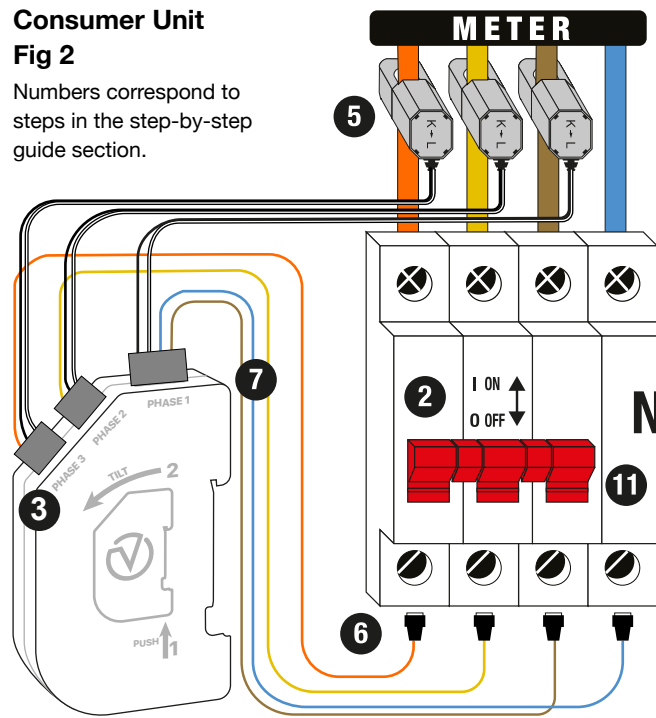
Sensor Components Fig. 1



Consumer Unit

Fig 2

Numbers correspond to steps in the step-by-step guide section.



Sensor components Fig 1

- A Phase 1 Cable
- A1 Phase 1 Current Clamp
- A2 Phase 1 Line voltage magnetic probe
- A3 Phase 1 Male connector
- A4 Phase 1 Neutral voltage magnetic probe
- If you are installing on single phase you will only need to fit the Phase 1 Clamp and Cable
- B Phase 2 Cable
- B1 Phase 2 Current Clamp
- B2 Phase 2 Line voltage magnetic probe
- B3 Phase 2 Male connector
- C Phase 3 Cable
- C1 Phase 3 Current Clamp
- C2 Phase 3 Line voltage magnetic probe
- C3 Phase 3 Male connector
- D Transceiver
- D1 Phase 1: 4-pin Female Connector
- D2 Phase 2: 3-pin Female Connector
- D3 Phase 3: 3-pin Female Connector

Before you start

Warning!

Voltagages dangerous to human health are involved in the installation of the Voltaware sensor.

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

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

Do not install the sensor in any supply voltage outside the rated voltages: 110 - 240 V AC.

You should never, under any circumstances, install or allow your Voltaware sensor to be installed with the mains electricity switched on. There is a risk of explosion, fire and electrocution if this is ignored. Voltaware will not be held responsible for failure to follow these guidelines.

Do not tamper with the installation of the sensor while the mains electricity is switched on.

Never attempt to disassemble and reassemble the sensor. Doing so will void your sensor's warranty.

Do not dispose of in fire.

Do not allow the sensor to get wet/ handle near water.

Do not leave the sensor in a moist environment or in direct sunlight.

Do not allow children to play with the sensor or let them anywhere near the consumer unit.

Caution!

Do not install the sensor in any supply voltage outside the rated voltages: 110 - 240 V AC.

Installation step-by-step guide:

Please refer to Figure 2 for steps 2 to 9. Consumer units can vary considerably, please note there may be differences between the consumer unit you are working on and the example presented in this guide.

IMPORTANT

Before installation, please make sure you have read through the entire installation guide and understood the instructions.

Warning!

The four bolts directly beneath the line and neutral cables on the consumer unit are often upstream of the mains power switch (bolts marked 'x' on Figure 2). This means they are not switched off when you switch off the mains. **DO NOT ATTEMPT TO INSTALL THE LINE AND NEUTRAL VOLTAGE MAGNETIC PROBES ON THESE BOLTS.** Always install the magnetic probes downstream of the mains; which is inactive after the main circuit breaker is switched off.

Please note:

The line and neutral magnetic probes of the device connect to the line and neutral bolts respectively. These cables are also used to power the sensor. If you are installing on single phase you will only need to fit the Phase 1 Clamp and Cable.

- 1 Turn on your torch. Voltaware recommends you free your hands by placing the torch where it can illuminate the consumer unit.
- 2 Switch off the electricity mains completely on the consumer unit.
- 3 Remove the cover from the consumer unit to have full access to the wiring.
- 4 Take the cable with two magnetic voltage probes and current clamp (4-pin connector). Release the latch on the current clamp and visually check that the magnetic core of the clamp is not damaged*. Make sure there is not any debris on the opposing faces of the core as this could affect the current readings. Identify the mains phase where the clamp will be installed. Attach the current clamp around the line cable – this can be upstream or downstream of the main power switch, as the clamp is not electrically connected to the mains. Please observe the direction marked K→L – the arrow must follow the direction of the mains supply (from source towards the load). Installation of the clamp must not require actions other than closing and locking the clamp around the cable. *If the clamp is damaged the sensor is not fit for installation.
- 5 Visually identify three line and one neutral bolts downstream of the main switch, on the part that is not powered. Connect the blue neutral magnetic voltage probe to the identified neutral bolt.

Then connect the line magnetic voltage probe to the bolt identified on the same phase where the current clamp has been installed. Plug the 4-pin connector of the cable into the transceiver at the position marked "PHASE 1".

- 6 Repeat steps 4 & 5 for phase 2 and phase 3 with the remaining cables. Please note these only provide connections for line voltage as the neutral is already supplied from the first cable.
- 7 Visually check over the installation to ensure the sensor has been installed correctly.
- 8 Please re-fit the consumer unit cover now.
- 9 On the consumer unit, switch the mains electricity back on. If the sensor is powered it will emit a light according to its operational state.

Connecting to the local network (wifi sensors only)

Follow the steps below to connect your sensor to your Wi-Fi network. The sensor will emit blue light if the WiFi is enabled.

- 10 On your PC or connected mobile device, do a Wi-Fi scan for the network: VOLTA_XXXX_ABC (where 'XXXX' represents the Sensor ID and ABC represents an internal number for Voltaware). You should have been provided with your Sensor ID by Voltaware.
- 11 Select this network and login with the password: byttwm2015
- 12 Open an internet browser and enter the IP address 192.168.10.1 in the search bar. Press enter;
- 13 The Voltaware 'Provisioning' web page will appear.
- 14 Select the local Wi-Fi network and enter the Wi-Fi password.
- 15 On successful completion of these steps, the sensor will proceed to connect to the selected Wi-Fi network.

Please note the sensor only supports WPA2 or mixed WPA/WPA2 security. Please consult your WiFi router manual for more information.

Additional Information

Electrical Characteristics:

Operating voltage:	110 – 240 V AC
Operating frequency:	50 – 60 Hz
Power consumption (typical):	1 W for WiFi, up to 4 W for 3G
Wireless connectivity:	IEEE 802.11n/g/b 2.4 GHz, 3G
Supported current transformers:	100 A
Maximal power measured:	25 kW per channel

Support

Additional support is available at www.voltaware.com or speak to a member of our technical team, contact enquiries@voltaware.com.

EU Declaration of Conformity (DoC)

Company name Voltaware Services Limited
Postal address 282 Earls Court Road
Postcode and City London, UK, SW5 9AS
Telephone +44 (0) 20 74601521
E-Mail address support@voltaware.com

I declare that the DoC is issued under our sole responsibility and belongs to the following product:

Connectivity	Apparatus model	Product Type	Code no.
WiFi Only	VOLTA3P-V2	Power Meter	3PW002
3G:	VOLTA3P-V2-3G	Power Meter	3P3G001
Hardware Revision 1.0			

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:

Title *Reference of the standard*

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

EN 60950-1	2006/A1:2010/A12:2011/A1:2010+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 301 489-52	V1.1.0
EN 61326-1	2013

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

EN 300 328	V2.1.1
EN 301 908-2	V11.1.2

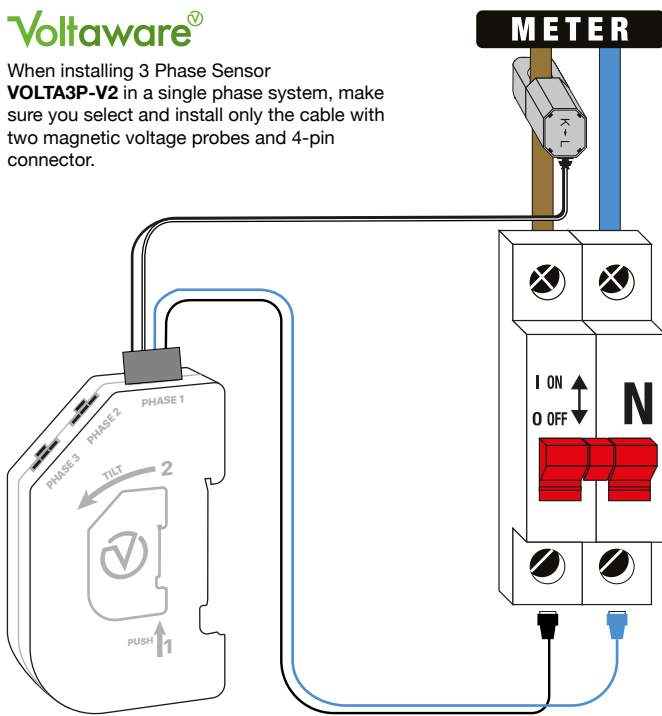
Signed for and on behalf of Voltaware Services Limited
London, 11/12/2018

Rishabh Jaipuria
COO



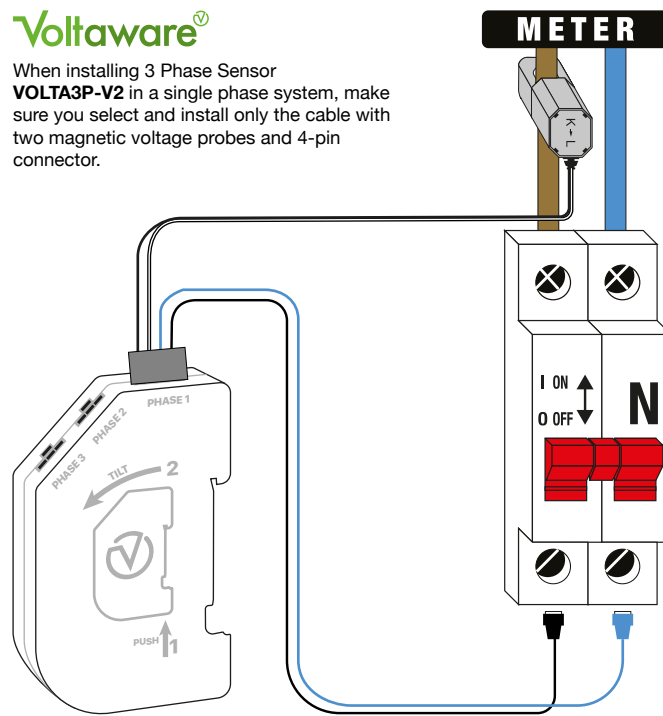
Voltaware[®]

When installing 3 Phase Sensor **VOLTA3P-V2** in a single phase system, make sure you select and install only the cable with two magnetic voltage probes and 4-pin connector.



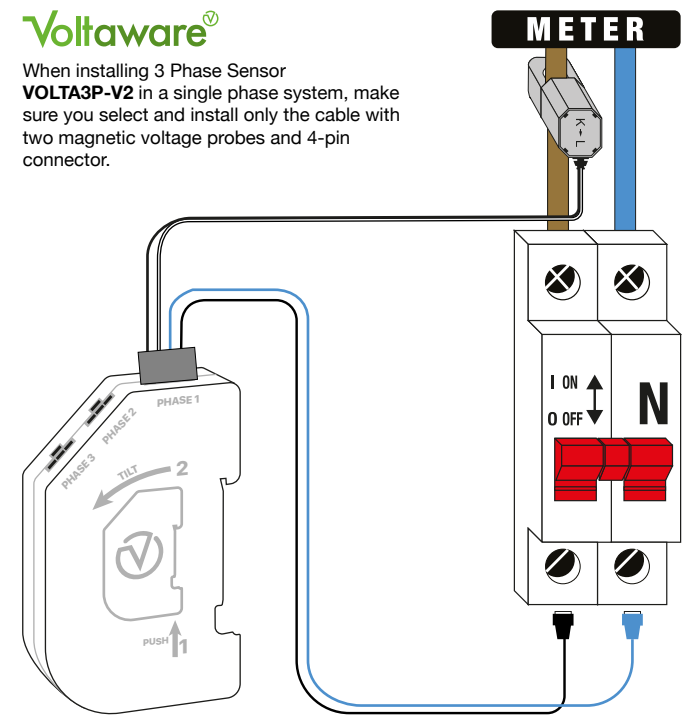
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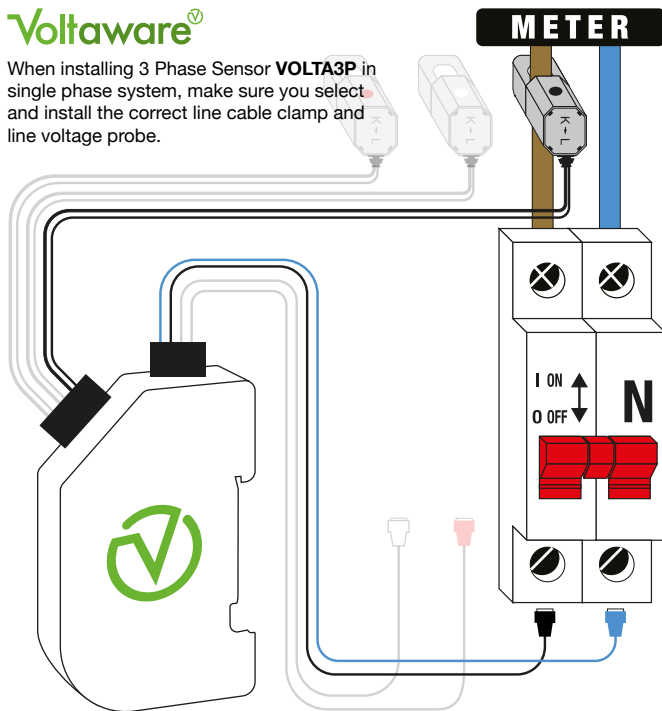
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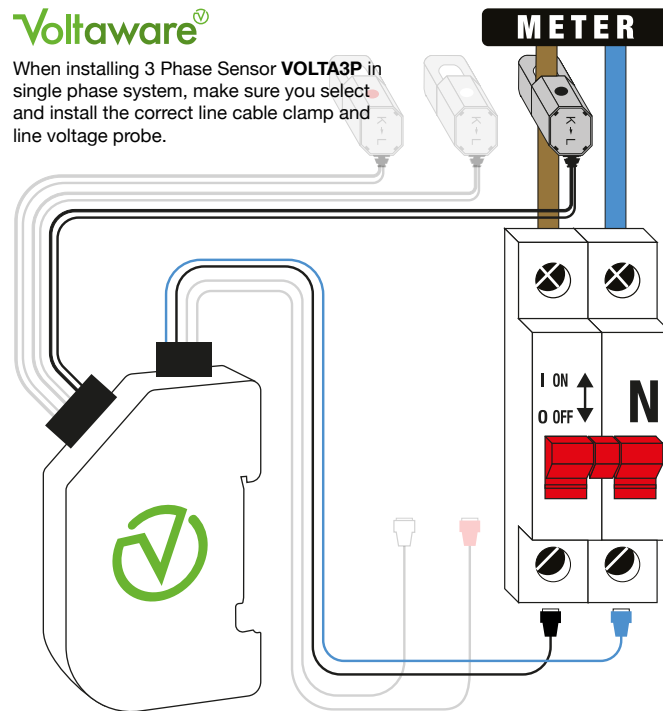
Voltaware[®]

When installing 3 Phase Sensor **VOLTA3P** in single phase system, make sure you select and install the correct line cable clamp and line voltage probe.



Voltaware[®]

When installing 3 Phase Sensor **VOLTA3P** in single phase system, make sure you select and install the correct line cable clamp and line voltage probe.



Voltaware[®]

When installing 3 Phase Sensor **VOLTA3P** in single phase system, make sure you select and install the correct line cable clamp and line voltage probe.

