

futurehome

Energy Sensor Tag 3PN TN

User Guide

Product Description

The Energy Sensor Tag 3PN TN, when integrated with the Futurehome Smarthub, enables real-time monitoring of your home's electricity usage. This device accurately measures voltage, current, power, energy, and frequency on a three-phase electrical circuit. Connected to the Futurehome system, it facilitates the automation of power consumption using the system's software services.

Safety Precautions

Professional Installation: This device should only be installed by a certified electrician, adhering to local laws and regulations.

Inspect Before Installation: If the product shows any physical damage before installation, return it for a replacement at the point of sale.

Compatibility Note: The device is compatible exclusively with TN grid installations (3-phase and neutral).

Getting Started

- 1 **Preparation:** Ensure the main protective breaker is switched off before installation.
- 2 **Installation:** Follow the mounting instructions provided in this manual.
- 3 **Powering the Device:** After installation, turn on the breaker. A constant green light on the LED diode indicates a successful power-up.

4 Device Inclusion:

- a. Activate Zigbee inclusion mode in the Futurehome app.
- b. Put the device in inclusion mode by pressing the action button until the LED blinks green, indicating it is searching for a network.
- c. Once the app shows the device has been discovered, the LED will turn solid green again.

5 Device Configuration:

Finalize setup in the app by assigning the device to a room and selecting its type in the device settings.

Placement

Top Mounting (Default): Place the device on top of the breaker with current flowing from bottom to top, aligning with the directional arrow.

Bottom Mounting: If the breaker's current flow is top to bottom, mount the device upside down below the breaker. For accurate phase mapping, ensure correct phase wiring through the X, Y, and Z coil openings.

If the current flows in the opposite direction of the oriental arrow the device will report a negative value for the current measurements.

Mounting

Safety First: Ensure no electricity is flowing by turning off and disconnecting wiring from the breaker.

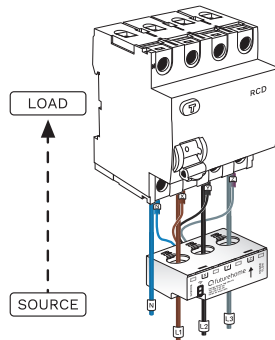
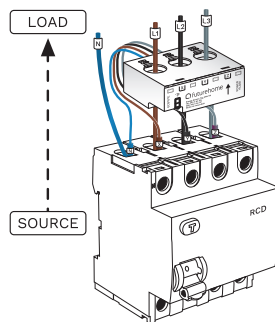
Phase Wiring: Route the phases through the X, Y, and Z coil openings, following L1-X, L2-Y, and L3-Z mapping for accurate phase identification.

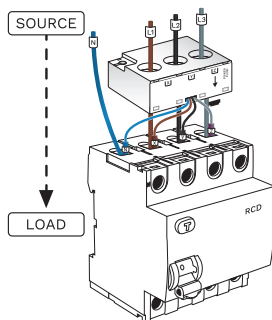
Voltage Connections: Connect the coloured wires to the corresponding terminals:

1. Brown: Line X voltage
2. Black: Line Y voltage
3. Grey: Line Z voltage
4. Blue: Neutral connection

Resetting

To reset the Energy Sensor Tag 3PN TN to factory settings, press and hold the action button until the LED blinks red. It is now ready for inclusion in a new Zigbee network.





Fault finding

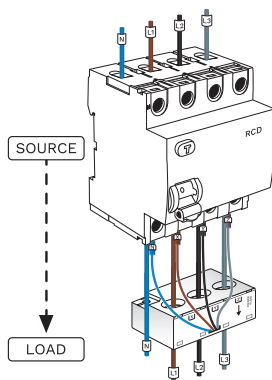
- If the device doesn't send data immediately after setup, allow a few minutes for initialization.
- Verify wiring and signal strength in the app if data transmission issues persist.
- A physical reboot (power cycling) by turning off and on the main breaker may resolve issues.

Visit <http://support.futurehome.no> for further fault-finding guidance if needed.

CE certification

The CE mark affixed to this product confirms its compliance with the European Directives. A complete EU declaration of conformity can be found at <http://futurehome.io/products>.

CE certification 



In accordance with the directives:

1. RoHS Directive 2011/65/EU
2. Radio Equipment Directive 2014/53/EU
3. EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
4. EN IEC 62311:2020 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)
5. EN IEC 62368-1:2020+A11:2020 Audio/video, information and communication technology equipment - Part 1: Safety requirements
6. EN 301 489-1 V2.2.3:2019 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility

7. EN 301 489-17 V3.2.4:2020

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband and Wideband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility

8. EN 300 328 V2.2.2:2019 Wideband

transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum

9. EN 62056-21 Electricity metering – Data exchange for meter reading, tariff and load control – Part 21: Direct local data exchange

10. EN 62056-61 Electricity metering - Data exchange for meter reading, tariff and load control – Part 61: OBIS Object Identification System

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