

# U-Series Battery-Powered Three Channel Electricity Meter

## Key Features:

- RMS current and energy monitor with **three channels**.
- Works with either three-phase supplies or up to three separate single-phase circuits.
- LoRaWAN communication protocol for reliable long-range data transmission.
- Compact, indoor-rated design: **145 x 70 x 45 mm**, unobtrusive **IP50** enclosure.
- Simple to install:
  - Works with split-ring current transformers.
  - Sfe – no direct connection to power lines.
  - No need to cut power during installation.
- Low-power operation with a **3.6 V lithium battery**, offering at least **4 years of service life**.
- **Measures current over 10 A/C cycles every 30 seconds** and calculates energy using configured nominal power factor and voltage values.

## Sensor Specifications:

Specification	Value	Notes
Current Transformer Type	Output $\pm 0.333$ V at max rating	
Sensor Digital Resolution	10 bits (1024 steps)	This is the accuracy of the sensor. Accuracy of reported values also depends on the accuracy of the current transformer, the absence of harmonic distortion on the power line and the correctness of the configuration of voltage and power factor parameters.
Analogue Accuracy	Better than 1%	



## Power and Battery:

- **Battery Type:** Lithium Thionyl Chloride (Li-SOCl<sub>2</sub>).
- **Capacity:** 8500 mAh, 3.6 V.
- **Estimated Battery Life:** 4 years under typical usage conditions.

## Installation and Environment:

- **Mounting:** Indoor installation only (IP30).
- **Dimensions:** 145 x 70 x 45 mm (145 x 90 x 45 mm incl. gland for cables).
- **Integrated Cable Length:** 2 metres.
- **Number of Channels:** 3.
- **Weight:** < 180 g (radio module only).
- **Storage Temperature:** -40°C to +70°C.
- **Ambient Operating Temperature:** -40°C to +85°C.

## Approvals:

- EN 61326-1: 2013
- ETSI EN 301 489-3 V2.1.1
- ETSI EN 301 489-17 V3.2.4
- EN 61010-1:2010

## Data and Connectivity:

- **Protocol:** LoRaWAN for secure, long-range, low-power data transmission.
  - **Supports:** OTAA, ABP and ADR.
  - Adaptive frequency hopping and dynamic channel selection.

Region	Frequency Band	Supported Channel Plan
Europe	EU868 (863 – 870 MHz)	16 Uplink/downlink channels including primary channels: 868.1 MHz, 868.3 MHz, 868.5 MHz
USA	NA915 (902 – 928 MHz)	64 uplink channels: 902.3 MHz to 914.9 MHz 8 downlink channels: 923.3 MHz to 927.5 MHz
Australia	AU915 (915 – 928 MHz)	64 uplink channels: 915.2 MHz to 927.8 MHz 8 downlink channels: 923.3 MHz to 927.5 MHz