### IED102TC



# Sub-metering of energy through Current Transformers



### **Main Characteristics**

- Measurement of electrical quantities via Current Transformers (CTs) and recording of the reading at configurable intervals with information storage (up to 30 days, according to the reading schedule) even when there is a power outage
- Sending data using the MQTT protocol (via 3G or Ethernet) and Modbus TCP/IP (via Ethernet)
- Remote configuration of APN, server IP, DNS servers, firmware update
- Local Web interface for monitoring and setting remote parameters (APN, IP, DNS)
- Monitoring and alarm generation, voltage sags, overcurrent, overvoltage, phase loss and phase sequence error

### Applications

- Management and monitoring of the local electrical grid
- Power distribution companies
- Cost apportionment. Distribution by cost center
- Measured quantities:
- RMS voltage and current
- Active / Reactive / Apparent power
- Power factor
- Phase angle (average and instantaneous)
- Frequency: 45-65 Hz
- Fundamental active power
- Harmonic active power
- Current, voltage per harmonic and THD (Total Harmonic Distortion)

### **General Vision**

IED102TC is a device that collects power consumption data when coupled to Current Transformers (CT's). The collected data is transmitted to the MQTT server via 3G interface or Ethernet network.

It is ideal for telemetry systems, monitoring energy consumption from any point in the plant, and can be installed in the distribution panel or even directly on the load to be monitored. It is capable of measuring single-phase, two-phase, or three-phase systems. It is capable of monitoring power quality, measuring the intensity of harmonics in the network up to the 32nd order.

### **Technical specifications**

#### Physical/Environmental

- Power Source:
- Input: 110-240 VAC, 50/60 Hz
- Maximum Power Consumption: 6 W
- Dimensions (LxWxH): 204x112x29 mm
- Operating temperature: -10 to 60 °C
- Storage temperature: -30 to 85 °C
- Operating/Storage Humidity: Up to 90% non-condensing

#### Wired interfaces

- Two RJ45 fast Ethernet 10/100 Mbps ports
- One interface for connecting Neutral (N) and up to 3 phases (L1, L2, and L3)
- Three interfaces for Current Transformers\* (TC - 1, TC - 2 and TC - 3)

#### **UMTS Interface**

- 1 SIM card slot for mobile cellular telephony
- Supports SIM card from different carriers
- Available bandwidth:
- 3G: 800 / 850 / 900 / 1900 / 2100 MHz
- 2G: 850 / 900 / 1800 / 1900 MHz
- SIM card size: mini SIM (2FF)
- SMS sending/receiving
- 1 3 dBi antenna included

#### Warranties and certifications

- Total warranty (legal + Khomp warranty): 1 year
- Legal guarantee: 90 days
- Khomp Warranty: 9 months
- ISO 9001 industry certified

\* Optional accessory, the use of another model may damage the product.

### TCs provided by Khomp

The nomenclature of the TCs provided by Khomp follows the pattern observed below:



All CTs have a nominal output of 333 mV and an accuracy of 0.5%. The following table indicates the standard TC models available, along with their main features:

| Model       | Rated current (A) | Window Type | Window Size  |
|-------------|-------------------|-------------|--------------|
| PowCT-T10   | 5 a 80            | Circle      | 10 mm        |
| PowCT-T16   | 5 a 150           | Circle      | 16 mm        |
| PowCT-T24   | 100 a 250         | Circle      | 24 mm        |
| PowCT-T36   | 200 a 630         | Circle      | 36 mm        |
| PowCT-T0750 | 100 a 200         | Rectangle   | 19,1x19,1 mm |
| PowCT-T1250 | 300 a 600         | Rectangle   | 31,8x31,8 mm |
| PowCT-T2000 | 600 a 1500        | Rectangle   | 50,8x50,8 mm |
| PowCT-T3050 | 400 a 5000        | Rectangle   | 127x76,2 mm  |

\* For other TC configurations, please consult the responsible team at Khomp for evaluation.

## **Application model**



"Incorporates product approved by Anatel under number 06237-18-07968"



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