

Smart Current Transformer

Featuring LoRaWAN®

CT10x



◆ Introduction

CT10x is a LoRaWAN® Smart Current Transformer for monitoring the energy and analyzing consumption remotely. CT10x provides multiple current options to suit energy monitoring and support sending threshold alarms. CT10x is detachable, the compact size and clamp design allow it to be installed in any indoor space quickly and safely without de-energizing a facility, simplifying the installation and saving the cost. Compliant with Milesight LoRaWAN® gateway and Milesight Development Platform solution, CT10x can be monitored via webpage remotely.

CT10x is widely used for energy motoring of smart buildings, machine failure detection and prevention, etc.



CT101/CT103 (Detachable Design)



CT105



Myriad Electronic Solutions Inc. d.b.a. ES Canada
Unit 221 - 2323 Quebec St - Vancouver, BC V5T 4S7



+1 800-495-4321



info@es-canada.com
www.es-canada.com

◆ Features

- Report the RMS current and accumulated current data by minutes
- High measuring accuracy with a sampling frequency of up to 3.3 kHz
- Self-powered, free from batteries or external wires
- Utilize a sampling rate of up to 1s for real-time monitoring and quick alarm response
- Compact size allows for installation in narrow scenarios
- Support flexible detachable design to accommodate various installation environments
- Non-invasive clamp design ensures easy and safe installation without the need for power de-energizing
- Equipped with LED indicator to indicate working status and alarms
- Support to connect to a temperature sensor via USB for cable temperature measurement
- Compliant with standard LoRaWAN® gateways and network servers
- Compliant with Milesight Development Platform
- Support Firmware Update Over the Air (FUOTA) feature

◆ Specifications

| Model | CT101 | CT103 | CT105 |
|-------------------------------|---|--|---|
| Electrical Measurement | | | |
| Detection Parameter | RMS Current | | |
| Sampling Frequency | 3.3 kHz | | |
| Working Frequency | 50~60 Hz | | |
| Rated Primary Current | 100 A _{rms} | 250 A _{rms} | 500 A _{rms} |
| Rated Secondary Current | 100 mA _{rms} | 125 mA _{rms} | 150 mA _{rms} |
| Minimum Reporting Current* | 6A _{rms} (1min Interval) 4A _{rms} (10min Interval) | 12A _{rms} (1min Interval) 6A _{rms} (10min Interval) | 30A _{rms} (1min Interval) 10A _{rms} (10min Interval) |
| Accuracy | ±1 % (>5A _{rms}), ±3 % (≤ 5A _{rms}) | | |
| Resolution | 1 mA | | |
| Temperature Sensor | Sensor type: NTC Measuring range: -20°C ~ 100°C | | |

| | | |
|---------------------------------|---|---|
| | Measuring accuracy: $\pm 1\%$ | |
| Wireless Transmission | | |
| Protocol | LoRaWAN® | |
| Antenna Connector | 1 × 50 Ω SMA Connector (Center PIN: SMA Female) | |
| Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 | |
| Tx Power | 16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz) | |
| Sensitivity | -137dBm | |
| Mode | OTAA/ABP Class A | |
| Others | | |
| Button | 1 × Reboot Button | |
| LED Indicator | 1 × Status/Alarm Indicator | |
| Port | 1 × USB Type-C for Power Supply, Configuration, Console or Cable Temperature Sensor Connection | |
| Software | | |
| Configuration | USB Type-C or Downlink | |
| Advanced Feature | Threshold Alarm, Overrange Alarm, FUOTA | |
| Physical Characteristics | | |
| Power Supply | 1. Induced current power supply 2. 5V by USB Type-C Port | |
| Insulation Voltage | 2.5kV _{ac} (r.m.s)(1mA/1min) | |
| Color/ Material | Blue, PBT+PC (UL94 V0) | |
| Extension Cable Length | 1m | |
| Operating Temperature | -20°C~70°C (-4°F~158°F) | |
| Storage Temperature | -25°C~80°C (-13°F~176°F) | |
| Relative Humidity | ≤ 95% (Non-condensing) | |
| Ingress Protection | IP30 | |
| Dimensions | 86.5 × 31 × 37.4 mm (3.4 × 1.22 × 1.47 in) | Transceiver: 38 × 34.5 × 16 mm (1.5 × 1.36 × 0.63 in) CT Clamp: 68 × 86 × 41.8 mm |

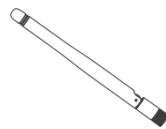
| | | |
|------------------|---|--|
| | | (2.68 × 3.39 × 1.65 in) |
| | Wire Hole: Φ 16 mm (Φ 0.63 in) | Wire Hole: Φ 36.5 mm (Φ 1.44 in) |
| Weight | 85.65 g | Transceiver: 13.05 g CT Clamp: 276.75 g |
| Installation | Transceiver: Cable-tie Mounting (under integrated mode) CT Clamp: Suspended on the Testing Conductor | |
| Approvals | | |
| Regulatory | CE, FCC, UL508 | |

* The minimum current to report data under different reporting intervals when the device is powered by the testing conductor. To measure lower currents, the device must be powered via USB.

◆ Antenna Options



Mini Stubby Antenna
(50mm)



Stubby Antenna
(108mm)



Magnetic Antenna

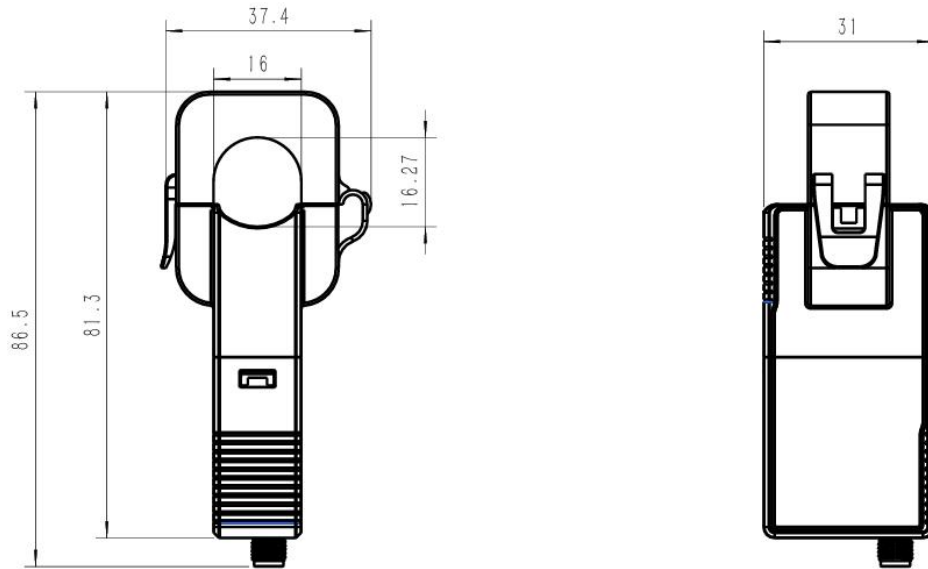
Note:

*Contact us if you need any other special accessories or customized accessories.

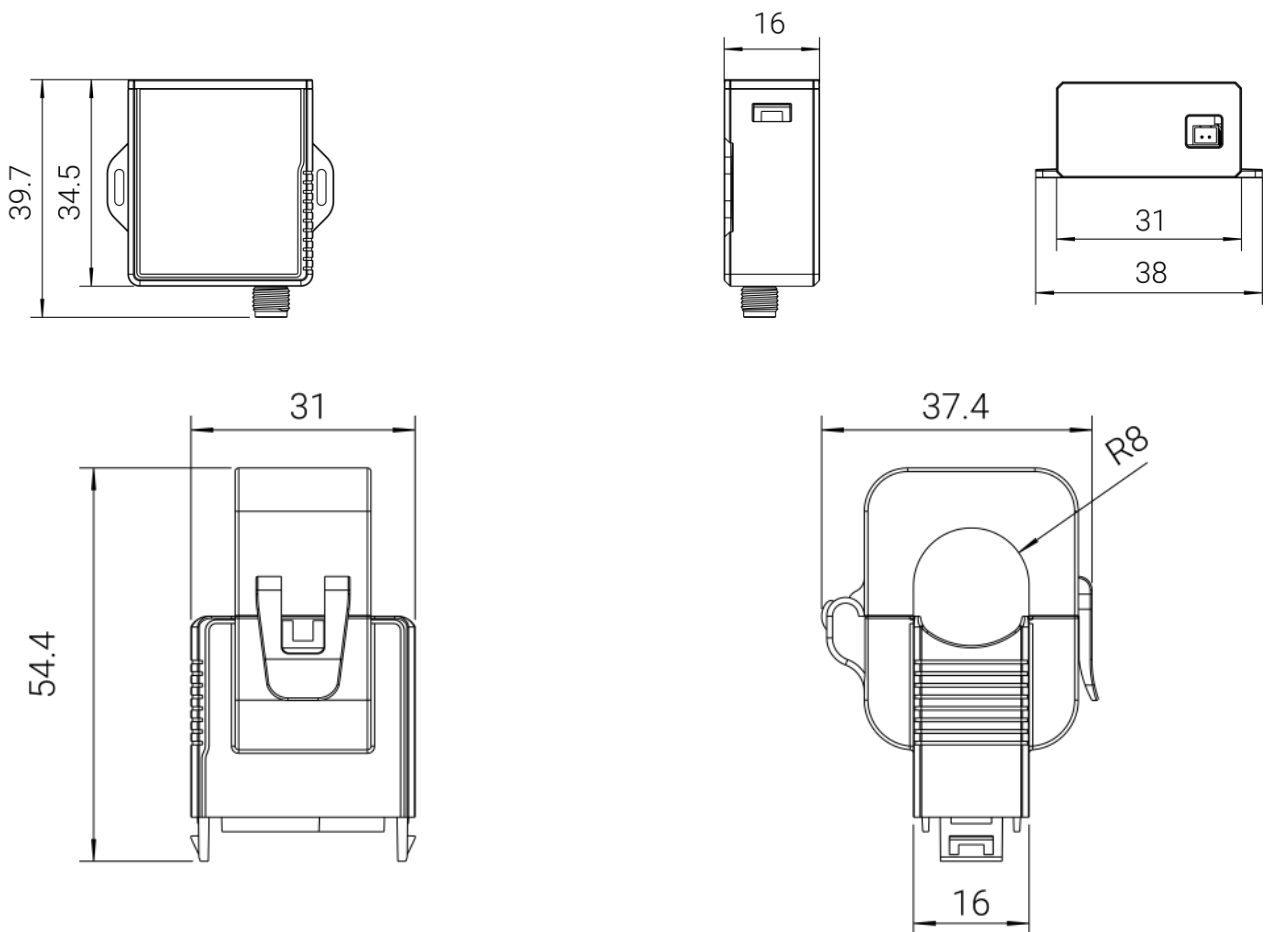
**Only one type of antenna is provided as standard accessory, while the others can be offered as optional accessories.

◆ Dimensions(mm)

CT101/CT103



CT101/CT103 (Detachable Design)



CT105

