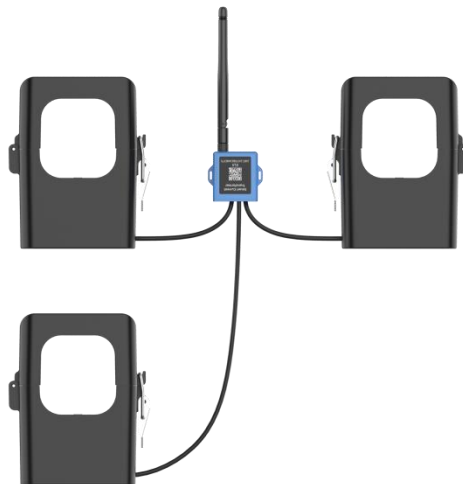# Smart Current Transformer

**Featuring LoRaWAN®**

## CT3xx

![Milesight]

## ◆ Introduction

CT3xx is a LoRaWAN® Smart Current Transformer for monitoring energy consumption and analyzing usage remotely. CT3xx provides multiple current options to suit energy monitoring and supports sending threshold alarms. Its compact size enables quick and safe installation in any indoor space without de-energizing facilities, thereby simplifying the installation and saving costs. Compliant with Milesight LoRaWAN® gateway and Milesight Development Platform solution, CT3xx can be conveniently monitored via webpage remotely.

CT3xx is widely used for energy monitoring in smart buildings, machine failure detection and prevention, etc.

## ◆ 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

➢ 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 external wire temperature sensor for cable temperature measurement

➢ Enable simultaneous detection of three phases with a significantly wide optional detection range of either 500A or 1000A

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Compliant with Milesight Development Platform

## ◆ Specifications

| Model | CT305 | CT310 |
|---|---|---|
| **Electrical Measurement** | | |
| Detection Parameter | RMS Current | |
| Sampling Frequency | 3.3 kHz | |
| Working Frequency | 50~60 Hz | |
| Rated Primary Current | 500 $A_{rms}$ | 1000 $A_{rms}$ |
| Rated Secondary Current | 150mA | |
| Start Current | 30 $A_{rms}$ | 60 $A_{rms}$ |
| Accuracy | ±1 % | |
| Resolution | 1 mA | |
| Temperature Sensor | Sensor type: 1 × NTC Sensor<br>Measuring range: -20°C ~ 100°C<br>Measuring accuracy: ±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)/20 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, Console or Cable Temperature Sensor Connection | |
| Configuration | USB Type-C or Downlink | |
| **Physical Characteristics** | | |
| Power Supply | Induced current power supply | |
| Insulation Voltage | $3kV_{ac}$(r.m.s)(1mA/1min) | |
| Color/ Material | Blue, PBT+PC (UL94 V0) | |
| Cable Length | 1m | |
| Operating Temperature | Transceiver: -20°C~70°C (-4°F~158°F) CT Clamp: -40°C~55°C (-40°F~131°F) | |
| Storage Temperature | Transceiver: -25°C~80°C (-13°F~176°F) CT Clamp: -40°C~55°C (-40°F~131°F) | |
| Relative Humidity | ≤ 95% (Non-condensing) | |
| Ingress Protection | IP30 | |
| Dimensions | Transceiver: 38 × 39.7 × 16 mm (1.5 × 1.56 × 0.63 in) CT Clamp: 65.52 × 90 × 43 mm (2.58 × 3.54 × 1.69 in) Wire Hole: Φ 36.6 mm (Φ 1.44 in) | Transceiver: 38 × 39.7 × 16 mm (1.5 × 1.56 × 0.63 in) CT Clamp: 97.9 × 119 × 60mm (3.85 × 4.69 × 2.36 in) Wire Hole: Φ 51 mm (Φ 2.01 in) |
| Weight | Transceiver: 13.05 g Per CT Clamp: 276.75 g | Transceiver: 13.05 g Per CT Clamp: 855.55 g |
| Installation | Transceiver: Cable-tie Mounting (under integrated mode) CT Clamp: Suspended on the Testing Conductor | |