Smart Current Transformer

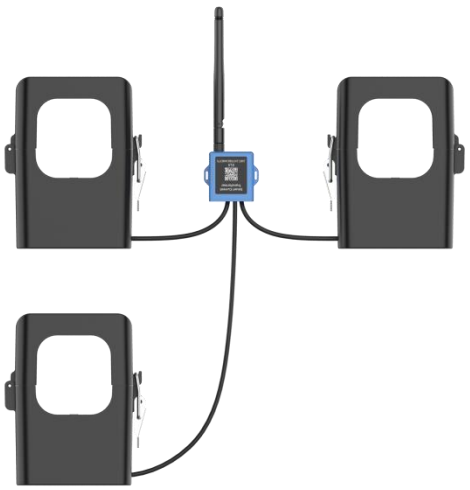
Featuring LoRaWAN®

CT3xx

◆ 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
- Support optional accumulated energy consumption reporting
- 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 300A, 500A or 1000A
- Compliant with standard LoRaWAN® gateways and network servers
- Compliant with Milesight Development Platform
- Support Firmware Update Over the Air (FUOTA) feature

◆ Specifications

Model	CT303	CT305	CT310
Electrical Measurement			
Detection Parameter	RMS Current		
Sampling Frequency	3.3 kHz		
Working Frequency	50~60 Hz		
Rated Primary Current (Per CT)	300 A_{rms}	500 A_{rms}	1000 A_{rms}
Rated Secondary Current	150 mA_{rms}		
Minimum Reporting Current[1]	3A_{rms} (1min Interval) 2.5A_{rms} (10min Interval)	5A_{rms} (1min Interval) 4.5A_{rms} (10min Interval)	10A_{rms} (1min Interval) 8.5A_{rms} (10min Interval)
Accuracy	±1 %		
Resolution	1 mA		
Temperature Sensor	Sensor type: 1 × NTC Sensor Measuring range: -20°C ~ 100°C		

	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, 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] 2. 5V by USB Type-C Port		
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 × 34.5 × 16 mm (1.5 × 1.36 × 0.63 in)		
	CT Clamp: 56.5 × 36.5 × 68.5 mm (2.24 × 1.44 × 2.70 in)	CT Clamp: 68 × 86 × 41.8 mm (2.68 × 3.39 × 1.65 in)	CT Clamp: 97.1 × 119 × 59.5 mm (3.82 × 4.69 × 2.34 in)
	Wire Hole: Φ 24.2 mm (Φ 0.95 in)	Wire Hole: Φ 36.5 mm (Φ 1.44 in)	Wire Hole: Φ 51 mm (Φ 2.01 in)
Weight	Transceiver: 13.05 g		

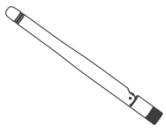
	Per CT Clamp: 250 g	Per CT Clamp: 276.75g	Per CT Clamp: 855.55 g
Installation	Transceiver: Cable-tie Mounting (under integrated mode) CT Clamp: Suspended on the Testing Conductor		
Approvals			
Regulatory	CE, FCC, UL508		

[1]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.
[2]When the device is powered by the testing conductor, it can only be powered by phase A wire.

◆ Antenna Options



Mini Stubby Antenna (50mm)



Stubby Antenna (108mm)



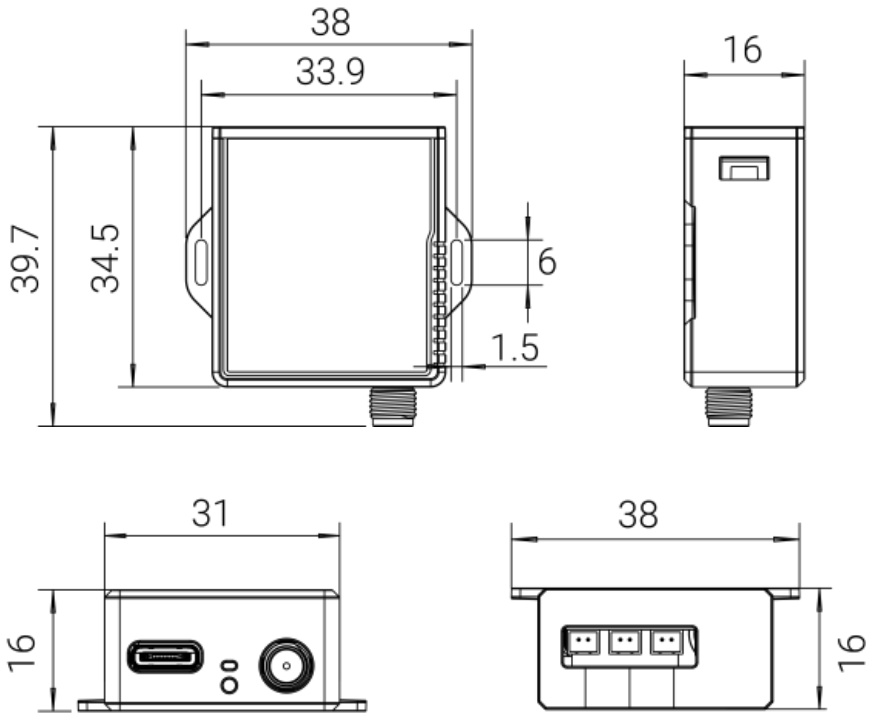
Magnetic Antenna

Note:

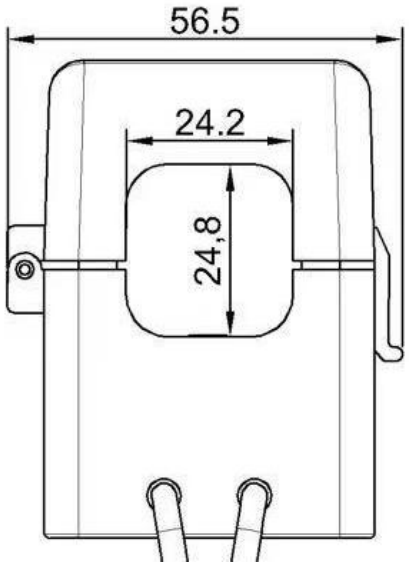
*Contact us if you need any other special accessories or customized accessories.

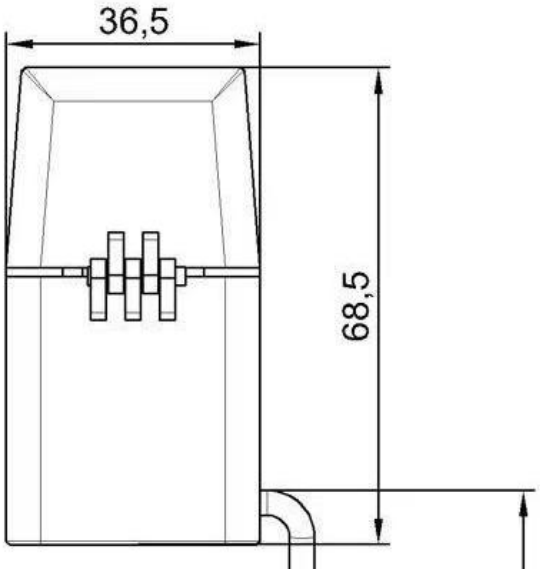
**Only one type of antenna is provided as standard accessory, while the others can be offered as optional accessories.

◆ Dimensions (mm)

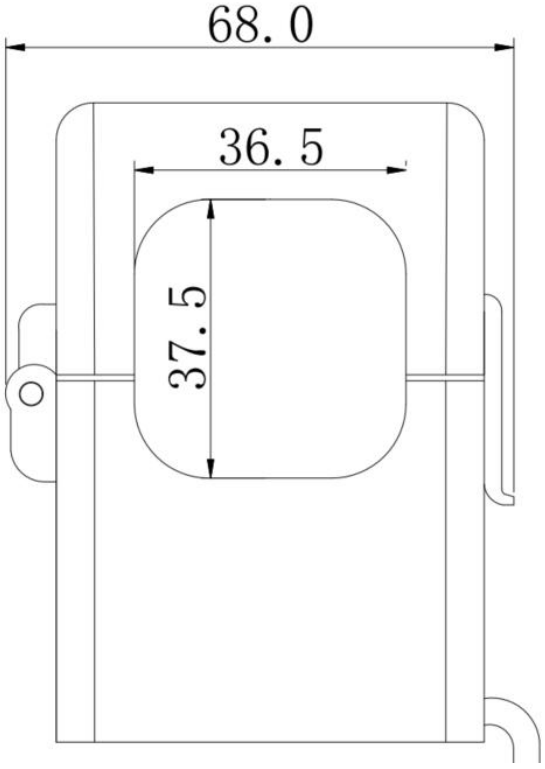


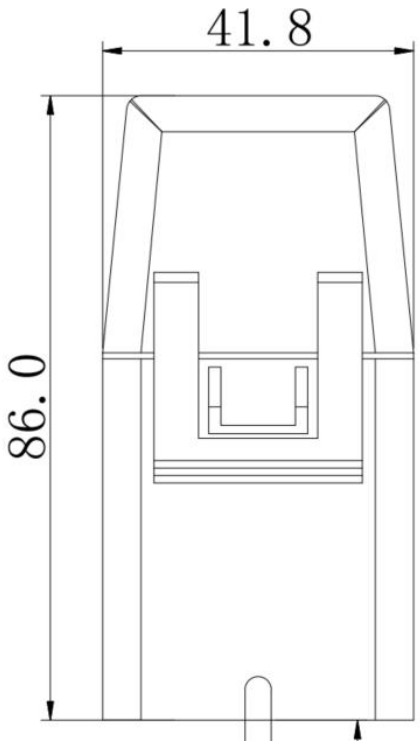
CT303





CT305





CT310

