eGauge ECS09, ECS20, ECT20, ECS36 UL 2808 Split-Core Current Transformer (CT) Installation Guide

ECS09, ECT20, ECS20, and ECS36 CTs may be field installed within distribution and control equipment such as panelboards, switchboards, industrial control equipment, energy monitoring and energy management equipment to measure current on insulated branch circuit conductors. ECT20, ECS20, and ECS36 may also be used to measure current on bare (non insulated) conductors and on service entrance conductors. The sensors are used with electric energy meters such as the eGauge EG4xxx for current and power measurement purposes.

WARNING If this equipment is used in a manner not specified by eGauge Systems LLC, the protection provided by the equipment may be impaired.

Cautions

- ECS09 CTs may be installed on insulated conductors only and must be maintained away from all live parts.
- The CTs may not be installed in equipment where they exceed 75% of the wiring space of any cross-sectional area within the equipment.
- Do not install CTs where they may block ventilation openings.
- Do not install CTs in the area of breaker arc venting.
- Not suitable for Class 2 wiring methods.
- Not intended for connection to Class 2 equipment.

Checklist

- The CT's rated current should be the smallest available rating that is at least as high as the maximum current of the measured circuit.

Installing the CT

1. **WARNING** To reduce the risk of electric shock, always open or disconnect circuits from the power distribution system (or service) of the building before installing or servicing CTs.
2. Open the CT by gently pulling on the latch and then rotating the top open. Do not touch the polished ferrite core surfaces. Any oils or debris in that area worsens accuracy.
3. Slide the CT over the conductor of the circuit to be measured. Make sure the arrow on the CT points in the direction of the primary current flow (the current flow that should yield a positive power reading).
4. Close the CT by gently pushing down on the top of the CT until the latch engages.
5. Verify that the CT is fully closed by squeezing together the top and bottom parts of the CT.
6. Optional: secure the CT to the conductor with a cable tie.
7. Route the twisted pair wires of the CT to the meter such that they do not directly contact live terminals or bus bars.
8. Plug the terminal at the end of the twisted pair wires into an unused port on the meter.
9. When connected to an EG4xxx meter, use the CTid® scanning feature to automatically detect the sensor type and its current rating.

Electrical Ratings

Model	Max primary voltage / frequency	Overvoltage category	Max primary current	Max output voltage
ECS09	250V AC 50 to 60 Hz	CAT III Basic Insulation	80 A	333 mV
ECT20	600 VAC 50 to 60 Hz	CAT III	100 A 200 A	
	250 VAC 50 to 60 Hz	CAT IV Service Entrance		
ECS20	600 VAC 50 to 60 Hz	CAT IV Service Entrance	300 A	
ECS36			600 A	

Environmental Ratings

Pollution degree	2	
Indoor use	Suitable for indoor use	
Operating ambient temperature range	ECS09 ECS20	−40 to 75° C (−40 to 167° F)
	ECT20 ECS36	−40 to 60° C (−40 to 140° F)
Relative humidity	5 to 95% RH at 50° C (non-condensing)	
Max operating altitude	3000 m (9843 ft)	

Additional Information

For additional documentation, including tutorial videos, please visit the eGauge Support Center at:

https://www.egauge.net/support/

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