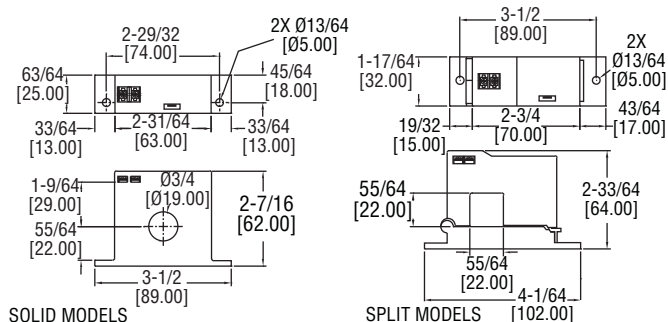




Series CCT Current Transformers

Specifications - Installation and Operating Instructions



The Series CCT40/50 Current Transformers are a low cost alternative for measuring power and monitoring the operation of fans, pumps, and other equipment. Series CCT60/70 True RMS Current Transformers provide true RMS outputs on distorted AC waveforms. Split core models can be installed without disconnecting cables. Each model offers three jumper selectable ranges and a choice of three different outputs.

OPERATING INSTRUCTIONS

NOTICE

The Series CCT Current Transformers are intended to provide an input to equipment under normal operating conditions.

Where failure or malfunction of the current transformer could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the CCT.

RISK OF SHOCK

DANGER

Disconnect power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.

QUICK SETUP

1. Run the wire you are monitoring through the opening in the sensor.
2. Mount the sensor to a surface if needed.
3. Connect output wiring.
4. Select the correct range by positioning the jumper.

INSTALLATION

Solid core Versions:

- Run wire to be monitored through opening in the sensor.
- Sensor can be mounted using screw holes in any position or hung directly on wires with wire ties.

Split core Versions:

- Press the tab toward the sensor to open.
- After placing the wire in the opening, press the hinged portion down firmly until a definite click is heard and the tab pops out fully.
- Sensor can be mounted using screw holes in any position or hung directly on wires with wire ties.

SPECIFICATIONS

Amperage Range: Field selectable; up to 200 A (depending on model).

Output: 0 to 5 V, 0 to 10 V, 4 to 20 mA, 4 to 20 mA true RMS (depending on model).

Power Requirements: Self powered; 15 to 42 VDC, loop powered; 24 VDC nominal (depending on model).

Accuracy: 1%.

Operating Temperature: -22 to 158°F (-30 to 70°C).

Operating Humidity: 0 to 95% (non-condensing).

Response Time: 250 ms to 90%.

Isolation Voltage: 2000 V.

Frequency: 10 to 40 Hz.

Enclosure Rating: UL, 94 V-O flammability rated, ABS plastic housing.

Agency Approvals: CE, UL.

NOTICE

Keep split core sensors clean. Be careful not to allow grit or dirt to build up on contacts. Operation can be impaired if the mating surfaces do not have a connection. Always check visually, before closing.

NOTICE

Leave at least one inch distance between the sensor and other magnetic devices.

OUTPUT WIRING

- Connect control or monitoring wires to the sensor.
- Use 14 to 22 AWG copper wire.
- Tighten terminals securely.
- Be sure the output load or loop requirements are met.

RANGE SELECTION

For models that feature field selectable ranges:

- Determine the normal operating amperage of the monitored circuit.
- Select the range that is equal to or slightly higher than the normal operating amperage.
- Place the range jumper in the appropriate position according to selection.

TROUBLESHOOTING

Symptom	Solution
Sensor has no output.	<ul style="list-style-type: none"> • Polarity is not properly matched. Check and correct wiring polarity. • For Model CCT40/50-102/202/203: Monitored load is not AC or is not on. Check that the monitored AC load is on. • For Model CTXX-100/200: Power supply is not properly sized. Check power supply current and voltage rating. • For Model CCTXX-100/102: The core contact area may be dirty. Open the sensor and clean the contact area.
Output signal is too low.	<ul style="list-style-type: none"> • The jumper may be set in a range that is too high for current being monitored. Move the jumper to the correct range. • Monitored current is below minimal current required. Loop the monitored wire several times through the opening until the sensed current rises above the minimum. $\text{Sensed Amps} = \text{Actual Amps} \times \text{Number of Loops}$. Count the loops on the inside of the opening. • For Model CCT40/50-102/202/203: Output load is too low. Check output load; be sure it is at least 100kΩ and preferably 1 MΩ. • For Model CCTXX-100/200: The load current is not sinusoidal. Select a true RMS transformer (Series CCT60/70) that works on distorted waveforms.
Output signal is always at maximum.	<ul style="list-style-type: none"> • For Model CCT40/50-102/202/203: The jumper may be set in a range that is too low for current being monitored. Move jumper to the correct range.
Sensor is always at 4 mA.	<ul style="list-style-type: none"> • For Model CCTXX-100/200: Monitored load is not AC or is not on. Check that the monitored AC load is on.
Output signal is always at 20 mA.	<ul style="list-style-type: none"> • For Model CCTXX-100/200: The jumper may be set in a range that is too low for current being monitored. Move jumper to the correct range.

MAINTENANCE

Upon final installation of the Series CCT Current Transformers, no routine maintenance is required. A periodic check of system calibration is recommended. The Series CCT is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return of goods authorization number before shipping.