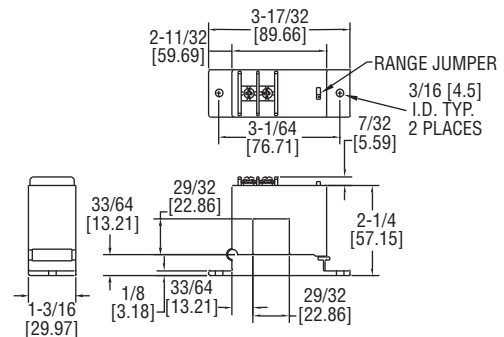




## Series CT Current Transformers

### Specifications - Installation and Operating Instructions



The Series CT40/50 Current Transformers combine a current transformer and a signal conditioner into a single package. Units are designed for applications on linear on sinusoidal loads. Series CT60/70 provide true RMS outputs on distorted AC waveforms — ideal for nonlinear loads or noisy environments. Transformers feature jumper selectable ranges and split-core case.

#### INSTALLATION

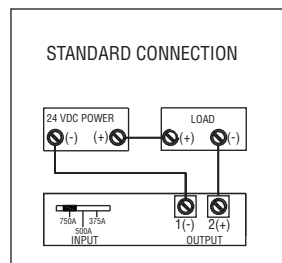
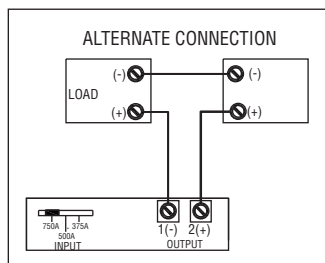
- Press the tab toward the sensor to open.
- After placing the wire in the opening, press the hinged portion down firmly until a definite click is heard and the tab pops out fully.
- Sensors can be mounted in any position or hung directly on wires with a wire tie.

**NOTICE** Keep split-core sensors clean. Silicone grease is factory applied on the contacts. Be careful not to allow grit or dirt onto the grease. Operation can be impaired if the mating surfaces do not have good contact. 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 up to 14 AWG copper wire.
- Tighten terminals up to 5 inch-pounds torque.
- Be sure the output load or loop power requirements are met (see diagram).



#### Loop Power Requirements:

CT40/50: Minimum loop voltage = 5 VDC + (loop resistance x 20 mA);  
 CT60/70: Minimum loop voltage = 12 VDC + (loop resistance x 20 mA).

#### RANGE SELECTION

- 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.

#### SPECIFICATIONS

**Range:** Option of 10/20/50 A or 100/150/200 A (depending on model).

#### Output Signal:

- CT40/50-100: 4 to 20 mA;
- CT40/50-102: 0 to 5 VDC;
- CT60/70-100: 4 to 20 mA true RMS.

#### Power Requirements:

- CT40/50-100: 12 to 40 VDC, loop powered;
- CT40/50-102: Self powered;
- CT60/70-100: 24 VDC, loop powered.

#### Accuracy:

- CT40/50-100: 0.5% FS;
- CT40/50-102: 1.0% FS;
- CT60/70-100: 0.8% FS.

**Temperature Limits:** -4 to 122°F (-20 to 50°C).

#### Response Time:

- CT40/50-100: 300 ms;
- CT40/50-102: 100 ms;
- CT60/70-100: 600 ms.

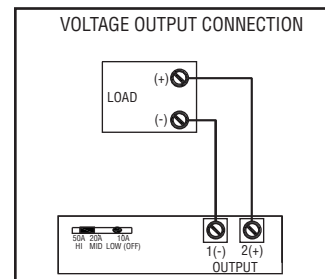
**Isolation Voltage:** 1270 VAC.

#### Frequency:

- CT40/50-100: 20 to 100 Hz (sinusoidal waveforms only);
- CT40/50-102: 50 to 60 Hz (sinusoidal waveforms only);
- CT60/70-100: 10 to 400 Hz.

**Enclosure Rating:** UL 94V-O flammability rated.

**Agency Approval:** CE.



#### Output Load Requirements:

1 MΩ recommended;  
 100 kΩ acceptable (allow for 1.3% error).

## TROUBLESHOOTING

| Symptom                             | Solution  |
|-------------------------------------|---|
| Sensor has no output.               | <ul style="list-style-type: none"><li>• Polarity is not properly matched. Check and correct wiring polarity.</li><li>• For Model CTXX-102: Monitored load is not AC or is not on. Check that the monitored AC load is on.</li><li>• The core contact area may be dirty. Open the sensor and clean the contact area.</li><li>• For Model CTXX-100: Power supply is not properly sized. Check power supply current and voltage rating.</li></ul>  |
| Output signal is too low.           | <ul style="list-style-type: none"><li>• The jumper may be set in a range that is too high for current being monitored. Move the jumper to the correct range.</li><li>• Monitored current is below minimal current required. Loop the monitored wire several times through the opening until the sensed current rises above the minimum. Sensed Amps=Actual Amps x Number of Loops. Count the loops on the inside of the opening.</li><li>• For Model CTXX-102: Output load is too low. Check output load; be sure it is at least 100kΩ and preferably 1 MΩ.</li><li>• For Model CTXX-100: The load current is not sinusoidal. Select a true RMS transformer (Series CT60/70) that works on distorted waveforms.</li></ul> |
| Output signal is always at maximum. | <ul style="list-style-type: none"><li>• For Model CTXX-102: The jumper may be set in a range that is too low for current being monitored. Move jumper to the correct range.</li></ul>   |
| Sensor is always at 4 mA.           | <ul style="list-style-type: none"><li>• For Model CTXX-100: Monitored load is not AC or is not on. Check that the monitored AC load is on.</li></ul>  |
| Output signal is always at 20 mA.   | <ul style="list-style-type: none"><li>• For Model CTXX-100: The jumper may be set in a range that is too low for current being monitored. Move jumper to the correct range.</li></ul>   |

## MAINTENANCE

Upon final installation of the Series CT Current Transformers, no routine maintenance is required. A periodic check of system calibration is recommended. The Series CT 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.