

| Specifications                    |   |
|-----------------------------------|---|
| <b>Current Measurement</b>        | CTF-5 – 0-400 A (AC)<br>CTF-7 – 0-1000 A (AC)   |
| <b>Output Signal</b>              | 0-5 A (AC)  |
| <b>Accuracy</b>                   | 50A and 100A models – ±2% @ 60Hz<br>150A to 1000A models – ±1% @ 60Hz   |
| <b>Frequency Range</b>            | 50-400 Hz   |
| <b>Primary Circuit Voltage</b>    | 0.6 kV (600V) maximum   |
| <b>Temperature Range</b>          | -20° to +75°C [-4° to +167°F]   |
| <b>Dimensions</b>                 | CTF-5: 1.56 in (39.62 mm) window<br>CTF-7: 2.50 in (63.50 mm) window  |
| <b>Case</b>                       | UL 94V-0 flammability rated thermoplastic   |
| <b>Thermal Rating Factor (RF)</b> | 1 @ 30°C  |
| <b>Environmental Ratings</b>      | Insulation class: 600V<br>Insulation voltage max: 3500VAC/1min<br>Pollution degree 2<br>Overvoltage category II |
| <b>Approvals</b>                  | UL recognized component<br>File E488023<br>Meets IEEE 57.13 and IEEE C57.13.2                                   |

## Part Number Key

# CTF - 5RL - 0050

**RANGE**  
 0050 – 50:5 A Ratio  
 0100 – 100:5 A Ratio  
 0150 – 150:5 A Ratio  
 0200 – 200:5 A Ratio  
 0400 – 400:5 A Ratio  
 0600 – 600:5 A Ratio  
 0800 – 800:5 A Ratio  
 1000 – 1000:5 A Ratio

5 – 1.56 in [39.6 mm] Sensing Window  
 7 – 2.50 in [63.5 mm] Sensing Window  
 RL – Pass-Through Conductor Mounting  
 SFT – Panel Mounting

**SENSOR TYPE**  
 CTF – AC Current Transformer



# CTF-5 or -7 SERIES INSTALLATION INSTRUCTIONS

## QUICK START GUIDE

1. Pass the conductor through the sensing window.
  - Use NEC table 310.15 to select copper wire size based on current ratings.
  - Make sure that the output load does not exceed product specifications.
  - Observe polarity. The side marked H1 must face the source, and terminal X1 must connect to the "positive" on the load.
  - Terminating the CT secondary on a block to allow shorting the secondary is advised.
2. Energize the monitored circuit.
3. Verify that the display or controller is reading the output correctly.



### Caution! Risk of electric shock or personal injury

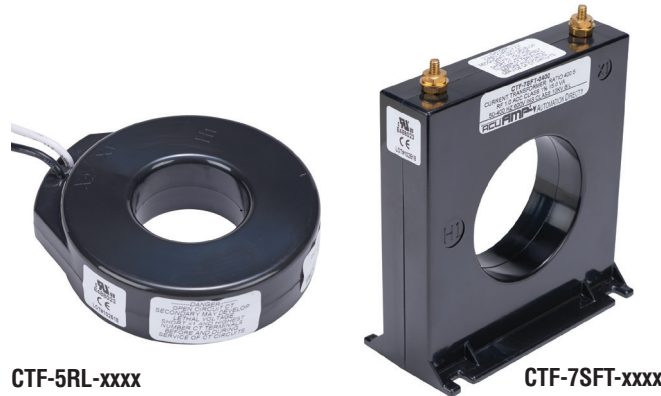


Safe operation can only be guaranteed if the transformer is used for the purpose for which it was designed and within the limits of the technical specifications. When this symbol is used, it means you should consult all documentation to understand the nature of potential hazards and the action required to avoid them.

### Caution! Risk of hazardous voltage



When operating the transformer, certain parts may carry hazardous live voltage (e.g., primary conductor, secondary terminals). The transformer should not be put into service if the installation is not complete.



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## Description

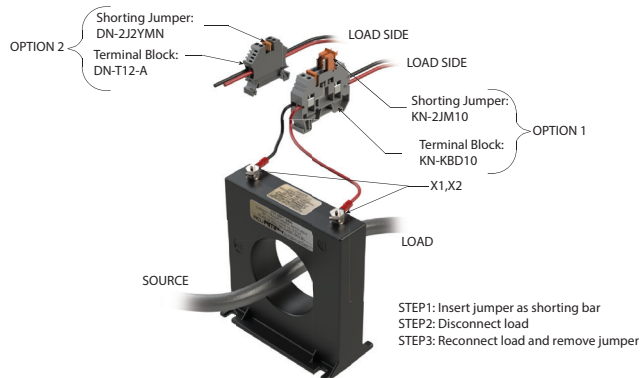
CTF-5 or -7 Series current transformers produce an output of current in proportion to the monitored circuit current. The wave shape of the output is nearly identical to the monitored circuit wave shape.

## Installation

Place wire or bus bar to be monitored through the sensing window. Be sure that the H1 side of the CT faces the power source.

CTF-5 or -7 Series transformers shall be installed within equipment that will provide an acceptable enclosure, such as switchboards, panelboards, and the like. They can be mounted in any position or hung directly on wires with a wire tie. Leave at least one inch of space between the sensor and other magnetic devices.

| Ratio  | Burden (CTF-5 Series) | Burden (CTF-7 Series) |
|--------|-----------------------|-----------------------|
| 50:5   | 1.0 VA                | –                     |
| 100:5  | 2.0 VA                | –                     |
| 150:5  | 5.0 VA                | –                     |
| 200:5  | 5.0 VA                | –                     |
| 400:5  | 12.5 VA               | 15 VA                 |
| 600:5  | –                     | 30 VA                 |
| 800:5  | –                     | 35 VA                 |
| 1000:5 | –                     | 30 VA                 |



## Output Wiring

Connect control or monitoring wires to the sensor. Terminal X1 connects to the positive of the load. On SFT models, use up to 14AWG copper wire and tighten terminals to 10 lb-in [1.13 N·m] torque. Be sure the output load total burden does not exceed unit burden rating.

### Connection Notes:

#### RL Models

- 16AWG stranded wire leads, 24in. long

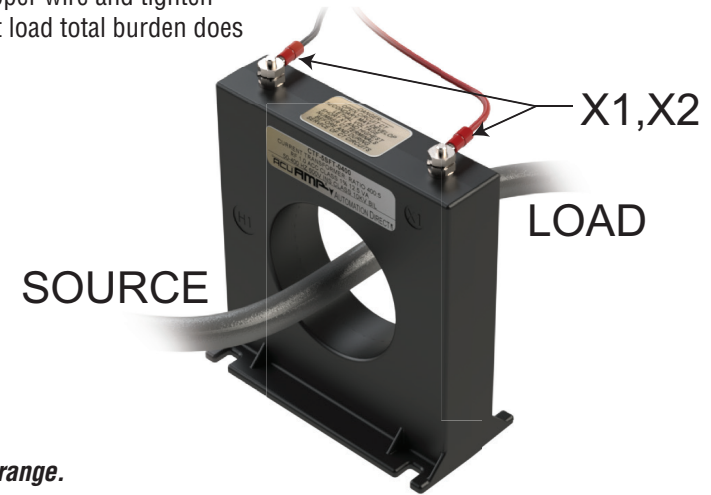
#### SFT models

- M4x0.70 threaded terminal studs (use #8 [M4] ring terminals)
- 14-22 AWG solid or stranded copper wire
- Tighten terminals to 10 lb-in [1.13 N·m] torque

#### All models

- Observe polarity

**\*See ordering information and label for monitored circuit range.**



## Model Range Select

CTF Series transformers feature factory calibrated ranges. Select a model with a range higher than the normal running current of the load.

1. Determine the normal operating amperage of your monitored circuit using load specifications or a test ammeter.
2. Select the model with a range that is equal to or slightly higher than the normal operating amperage.

## Troubleshooting

### Transformer has no output

- A. The load is not energized, is not AC, or there is more than one phase passing through the sensing window. Check if there is AC current being used and that all conductors through the sensing window are connected to the same phase.
- B. Polarity is reversed. Check and correct output wiring polarity.

### Output signal too low

- A. The range may be too high for current being monitored. **Exercise care when selecting the model range. Use a model with a ratio near the actual load being monitored.**

## Caution



A current transformer (CT) should never be energized (AC current through the sensing window) with no load connected to the output terminals. Best practice is to terminate the current transformer secondary on a terminal block with the ability to short between two points before extending the leads to the load. If it is ever necessary to remove the load from the CT while it is or could become energized, place a shorting bar between the secondary leads. This will allow the load to be removed safely. See drawing on the left.