

CTRC Series Rogowski Coil Current Transformers

Flexible, Opening-type AC Current Sensor



Easier AC Current Measurement

The CTRC Rogowski coil current transformers are accurate, flexible, rope-like current sensors that can be installed around conductors. They greatly simplify AC current measurements of circuits where traditional split-core and solid-core CTs are difficult to use. With its flexible design, the CTRC is perfect for large bus bars and irregular-shaped conductor bundles. In addition, the coil's small profile allows it to fit into tight spaces where rigid CTs won't fit.

Fully Compatible with WattNode[®] Meters

Sold individually, the CTRC coils can be used for single-phase and three-phase services. The output of the CTRC's flexible coil is connected to a conditioning circuit, where it is integrated and amplified to a 0.333 Vac signal which is compatible with all WattNode meters.

Complete Solution

Four standard lengths are offered covering various conductor sizes and currents up to 6000 Amps. The 3 inch diameter coil is only 0.3 inches thick which makes it ideal for crowded residential panels.

WattNode and Accu-CT are registered trademark of Continental Control Systems, LLC.

Specifications

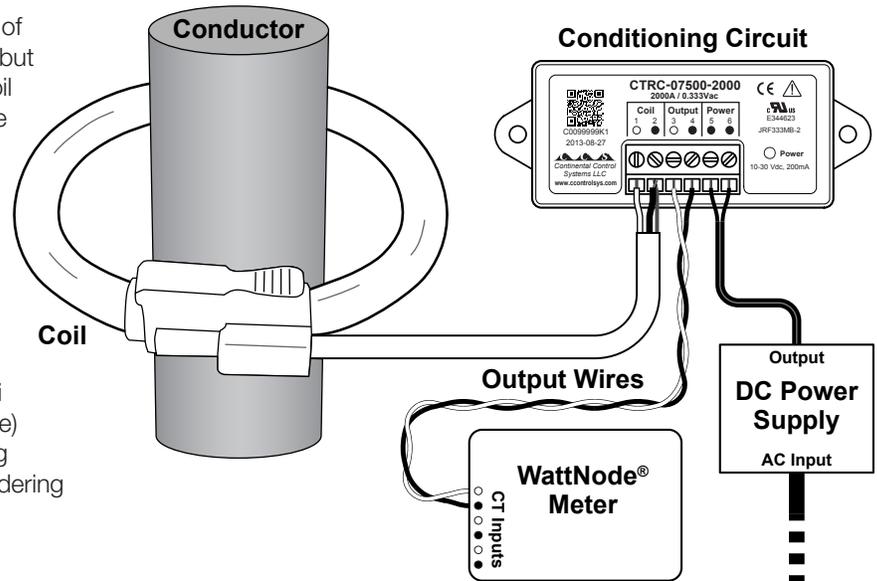
All measurements at 25° C and 60 Hz unless otherwise noted

- **Type:** Flexible Rogowski coil current transformer supplied with conditioning circuit
- **Accuracy:** $\pm 1.0\%$ of reading from 5% to 120% of rated current
- **Conductor Position Sensitivity:** $\pm 1.5\%$ at edge
- **Phase Angle:** ± 0.50 degrees (30 minutes) from 5% to 120% of rated current
- **Frequency:** 50/60 Hz nominal, (safe to operate at any frequency)
- **Maximum Voltage:** 600 Vac
- **Maximum Over Range Current:** 10,000 amps
- **Safety Standards:** CAT III, 600 Vac
- **UL Recognized:** file number E344623 (PICQ2), UL standard 61010B-1
- **Conditioning Circuit Output:** 0.333 Vac at rated current
- **Output Wires:** 8 feet (2.4 m), 22 AWG, white / black twisted pair
- **Coil Lead Length:** 8 feet (2.4m)
- **Power Requirements:** 10-30 Vdc (12 Vdc or 24 Vdc recommended) 50 mA typical, 70 mA maximum
- **Operating Temperature:** -20° C to $+60^{\circ}$ C (-4° F to 140° F)
- **Suitable for indoor use, suitable for outdoor use when mounted in a NEMA 3R or 4 (IP 66) enclosure**

Rogowski Coil Technology

Rogowski coil current sensors can be used in place of traditional ferromagnetic current transformers (CTs), but operate on different principles. When a Rogowski coil is installed around a conductor, current flowing in the conductor creates a magnetic field which induces a voltage in the coil proportional to the rate of change of the current in the conductor. The coil is connected to a conditioning circuit that integrates, amplifies, and scales this signal to output 0.333 Vac at the full scale current rating of the coil.

Each single-phase assembly of the CTRC Rogowski coil consists of the flexible coil (various sizes available) and the signal conditioning module. The conditioning circuit requires an external 10-30 Vdc power (see ordering information).



Ordering Information

Rogowski Coil with Conditioning Circuit (one required per phase)

Part Number	Amps at Full Load	Nominal Diameter
CTRC-03100-0250	250	3.1 inches (79 mm)
CTRC-03100-0400	400	3.1 inches (79 mm)
CTRC-03100-0600	600	3.1 inches (79 mm)
CTRC-03100-1000	1000	3.1 inches (79 mm)
CTRC-04500-1000	1000	4.5 inches (114 mm)
CTRC-04500-1600	1600	4.5 inches (114 mm)
CTRC-04500-2000	2000	4.5 inches (114 mm)
CTRC-07500-1000	1000	7.5 inches (190 mm)
CTRC-07500-1600	1600	7.5 inches (190 mm)
CTRC-07500-2000	2000	7.5 inches (190 mm)
CTRC-07500-3200	3200	7.5 inches (190 mm)
CTRC-07500-4000	4000	7.5 inches (190 mm)
CTRC-12000-2000	2000	12 inches (305 mm)
CTRC-12000-3200	3200	12 inches (305 mm)
CTRC-12000-4000	4000	12 inches (305 mm)
CTRC-12000-5000	5000	12 inches (305 mm)
CTRC-12000-6000	6000	12 inches (305 mm)



⚠ WARNING

This product can expose you to chemicals including Antimony Trioxide, which is known to the State of California to cause cancer.

For more information go to:

www.P65Warnings.ca.gov

DC Power Supply

Part Number	Type	AC Input Voltage (Nominal)	Dimension
MDR-10-12	DIN-rail power supply, For up to 12 CTRC Conditioning Circuits	85-264 Vac (100-240)@0.84amps	0.9x3.5x3.9 inches (22.5x90x100 mm)



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