

# 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 connected around conductors. They greatly simplify AC current measurements of conductors 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 converted to a low-voltage (333.33 mVac) signal which is compatible with any WattNode meter.

## Complete Solution

Four standard models are offered covering various conductor sizes and currents up to 4000 Amps. Non-standard currents ranges are available as custom orders.

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## Specifications

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

- **Type:** Flexible Rogowski coil current transformer 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:**  $\pm 0.50$  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:** 10,000A
- **Safety standards:** CAT III, 600 Vac
- **UL Recognized:** file number E344623 (PICQ2), UL standard 61010B-1
- **Conditioning circuit output:** 333.33 mVac at rated current
- **Output wires:** 8 feet (2.4 m), 22 AWG, white / black twisted pair
- **Coil lead length:** 59 inches (150 cm)
- **Power requirements:** 10-30 Vdc (12 Vdc or 24 Vdc recommended) 50 mA typical, 70 mA maximum
- **Operating temperature:** -20° C to +60° 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**



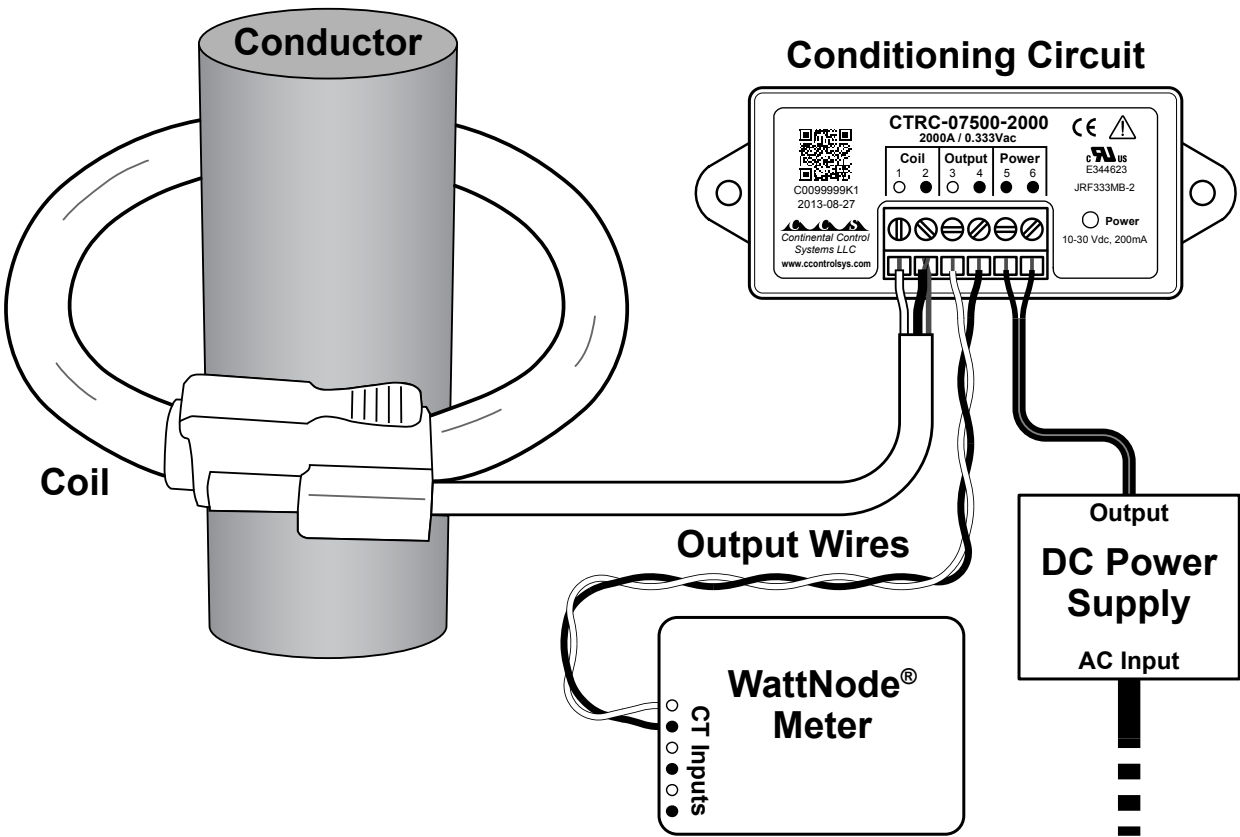
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CTRC-10.23.13: Specifications are subject to change

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 333.33 mVac 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 (for stock models)

Rogowski Coil with Conditioning Circuit (one required per phase)

Models	Nominal Diameter/Length	Amps Full Load	Nominal Weight
CTRC-03100-0400	3.1in./11.5in.	400	3.6 oz (102 grams)
CTRC-04500-1000	4.5in./15.5in.	1000	5.5 oz (155 grams)
CTRC-07500-2000	7.5in./23.0in.	2000	6.8 oz (192 grams)
CTRC-12000-4000	12.0in./38.8in.	4000	9.4 oz (265 grams)
Conditioning Circuit			2.2 oz (61 grams)

DC Power Supply

Models	Type	AC Input Voltage (Nominal)	Nominal Weight
FWA020012A-10B	Desktop power supply, For up to 24 CTRC Conditioning Circuits	85-264 Vac (100-240)@1.67 amps	11.5 oz (326 grams)
MDR-10-12	DIN-rail power supply, For up to 12 CTRC Conditioning Circuits	85-264 Vac (100-240)@0.84amps	6 oz (170 grams)



If you have questions or would like to order, contact us or visit our website  
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