

RCSL / RCLL Series Rogowski Coil Current Transformers

**Flexible Split-Core AC Current Sensor
with Integrated Signal Conditioner**



New Sizes, New Design, Easier Installation

The RCSL (small) and RCLL (large) series flexible Rogowski coil current sensors are ideal for applications where regular current transformers will not fit. The RCSL coil end cap is only 0.408 inch (10.35 mm) diameter so the coil can fit through narrow openings. The flexible coil is designed to fit around multiple conductors or irregular bundles where rigid CTs will not fit.

Five diameters and rated currents from 200A to 5000A allow the RCSL and RCLL to be used anywhere from residential monitoring to high-current three-phase industrial or commercial applications. This new line of flex-style CTs feature the smallest diameter coil on the market today. The 1.5" diameter coil is specifically designed for residential split-phase installations and retrofits.

The RCSL and RCLL has an internal integrator signal conditioning circuit, eliminating the need for an external circuit.

Features

- Flexible coil for easier installation
- Rated currents: from 200 to 5000 amps
- Shielded coil and cable for noise immunity
- Opening diameters: 1.5 to 11.8 inches (40 to 300 mm)
- Excellent linearity and low phase-angle error
- Built-in conditioning circuit
- UL Listed

Specifications

All measurements at 25° C from 50 to 60 Hz unless otherwise noted

- **Type:** Flexible Rogowski coil current sensor with built-in integrator circuit
- **Accuracy:** $\pm 1.0\%$ from 3% to 120% of rated current
- **Conductor Position Sensitivity:** typical $\pm 0.5\%$, max $\pm 1.0\%$
- **Phase-Angle:** ± 0.10 degrees (6 minutes) from 3% 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 IV (service entrance), pollution degree 2
- **UL:** UL listed, XOBA, UL 2808, CAN/CSA C22.2 No. 61010-1-12, 3rd Edition, E363660
- **Output at Rated Current:** 0.33333 Vac
- **Coil Cable:** 8 feet, 24 AWG, shielded, 4 conductor
- **Power Requirements:** 3.5-13.5 Vdc, 6 mA typical, 20 mA max
- **Operating Temperature:** -40° F to 167° F (-40° C to 75° C)
- **Suitable for indoor use, suitable for outdoor use when mounted in a NEMA 4 or 4X (IP 66) enclosure**

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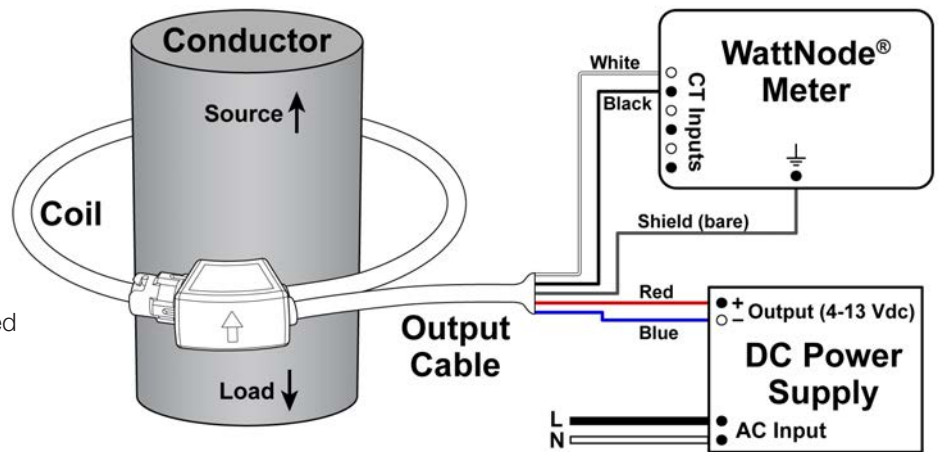
Socomec Group

2150 Miller Drive, Suite A • Longmont CO 80501 • USA
sales@ctlsys.com • www.ctlsys.com
(888) 928-8663 • Fax (303) 444-2903

RCSL-RCLL-5.23.22: 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 current change in the conductor. The coil's built-in conditioning circuit integrates, amplifies, and scales the signal to output 0.333 Vac at the full scale rated current of the coil.



Ordering Information

Models and Options

The RCSL and RCLL models output a 0.333 Vac which is compatible with WattNode meters. The model number scheme is RCSL-yy.y-xxxx for the smaller housing with a thinner coil and RCLL-yy.y-xxxx for the larger housing with a thicker coil. "yy.y" is the opening (inside) diameter in inches and "xxxx" is the rated current in amps.

Part Number	Rated Amps	Nominal Opening (Inside) Diameter
RCSL-1.5-0200	400 A	1.5 in (40 mm)
RCSL-3.1-0250	2000 A	3.1 in (80 mm)
RCSL-3.1-0600	2000 A	3.1 in (80 mm)
RCSL-3.1-1000	2000 A	3.1 in (80 mm)
RCLL-4.7-1000	2000 A	4.7 in (120 mm)
RCLL-4.7-2000	2000 A	4.7 in (120 mm)
RCLL-7.8-1000	5000 A	7.8 in (200 mm)
RCLL-7.8-2000	5000 A	7.8 in (200 mm)
RCLL-11.8-5000	5000 A	11.8 in (300 mm)



DC Power Supply

Part Number	Type	AC Input Voltage (Nominal)	Dimension
HDR-15-12	Din Rail 12Vdc power supply (can power 6 coils)	85-264 Vac (100-240) @0.84 amps	0.7 x 2.3 x 3.5 in. (18 x 59 x 90 mm)

We recommend the HDR-15-12 to power 1-6 RCSL / RCLL Series Rogowski Coil Current Transformers

