

RōCOIL SERIES

ROGOWSKI COIL FLEXIBLE CURRENT SENSORS



The DENT RōCoil™ Current Sensors, known as "Flexible Ropes", have been designed for accurate, non-intrusive measurement of AC current, pulsed DC or distorted waveforms where conventional rigid core sensors are unsuitable. This type of sensor may be used to measure AC current over a wide dynamic range and from 20 Hz to 5 kHz. Note: Some applications may require use of integrator/amplifier.

KEY SPECIFICATIONS

| Length Options | 16" (40cm) | 24" (60cm) | 36" (90cm) | 47" (120cm) |
|--------------------|--|------------------|-------------------|-----------------|
| Current Range | 5-5000A* | | | |
| Window Size | 4.5" (11.5cm) | 7.0" (17.9cm) | 10.8" (27.5cm) | 14.6" (37cm) |
| Output | 131 mVAC/1000A @ 60 Hz 109.2 mV/1000A @ 50 Hz | | | |
| Accuracy (typical) | < 0.6%** | | | |
| Accuracy Class | IEEE C57.13 Class 1.2 | | | |

ELECTRICAL



All accuracies specified at 20°C (±2°C) with RōCoil™ centered on conductor.

| | |
|-------------------------|--|
| Output Signal | 131 mV/1000A @ 60 Hz 109.2 mV/1000A @ 50 Hz |
| Wire Colors | White = (+) positive Brown = (-) negative Bare wire = shield |
| Phase Shift | < 0.2° at 50/60 Hz |
| Frequency Range | 20 Hz to 5 kHz* |
| Linearity | ± 0.2% |
| Temperature Sensitivity | 0.07% per °C |

MECHANICAL

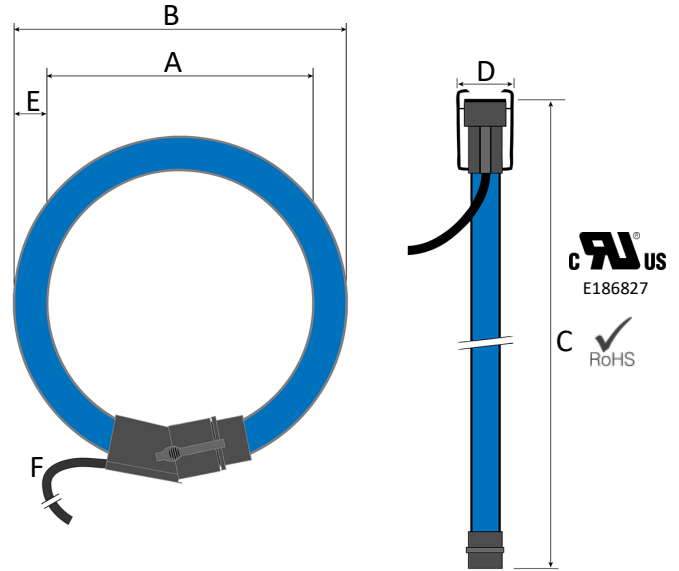
| | |
|--------------------|--|
| Coil Materials | Blue thermoplastic rubber, flame retardant UL 94 V-0 rated |
| Coupling Materials | PA6 UL 94 V-0 rated |
| Shielding | 100% transducer, 100% output lead |
| Operating Temp | -20 °C to +70 °C (-4° to +158 °F) |

SAFETY

| | |
|---------------------|--|
| Working Voltage | 1000 Vrms maximum |
| Dielectric Strength | 7400 VAC around coil 1000 VAC rated leads |
| Certifications |   UL STD 61010-1 CAN/CSA STD C22.2 No. 61010 |

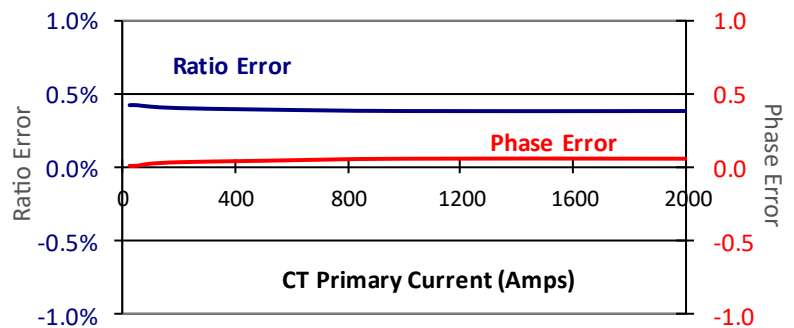
*Depending on meter compatibility. RōCoil CTs UL Rated to 100KA AC.

**Installed using best practices with conductor centered in the CT window and ensure any external conductors are a minimum distance of > 2X the diameter of the RōCoil. Accuracy below 20A rated at 1.5% +/- 0.5A when used with DENT ELITEpro/PowerScout meters.



DIMENSIONS

| | R16 40 cm (16") | R24 60 cm (24") | R36 90 cm (35") | R47 120 cm (47") |
|--------------------------|---|--------------------|--------------------|---------------------|
| A Window Size | 11.5 cm (4.5") | 17.9 cm (7.0") | 27.5 cm (10.8") | 37 cm (14.6") |
| B Sensor Coil O.D. | 13.9 cm (5.5") | 20.3 cm (8.0") | 29.9 cm (11.8") | 39.4 cm (15.5") |
| C Sensor Length | 40 cm (15.8") | 60 cm (23.6") | 90 cm (35.4") | 120 cm (47.2") |
| D Locking Connector O.D. | 2.0 cm (0.78") | | | |
| E Sensor Coil Diameter | 1.2 cm (0.47") | | | |
| F Wire Lead Total Length | 3 m (118") Standard (See Part Numbers below for other lengths.) | | | |



CT testing performed with 16" RōCoil. Conductor used filled 90% of RōCoil window.

RōCoil™ PART NUMBERS

| | 3 M Leads | 7 M Leads | 15 M Leads† |
|----------------------|-------------|----------------|-----------------|
| 40 cm (16") RōCoil™ | CT-R16-A4-U | CT-R16-A4-U-7M | CT-R16-A4-U-15M |
| 60 cm (24") RōCoil™ | CT-R24-A4-U | CT-R24-A4-U-7M | CT-R24-A4-U-15M |
| 90 cm (35") RōCoil™ | CT-R36-A4-U | CT-R36-A4-U-7M | CT-R36-A4-U-15M |
| 120 cm (47") RōCoil™ | CT-R47-A4-U | N/A | N/A |

†Special order. Contact factory for details.

CONTACT US

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