

# 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"<br>(40cm)                                    | 24"<br>(60cm)    | 36"<br>(90cm)     | 47"<br>(120cm)  |
|--------------------|--------------------------------------------------|------------------|-------------------|-----------------|
| Current Range      | 5-5000A*                                         |                  |                   |                 |
| Window Size        | 4.5"<br>(11.5cm)                                 | 7.0"<br>(17.9cm) | 10.8"<br>(27.5cm) | 14.6"<br>(37cm) |
| Output             | 131 mVAC/1000A @ 60 Hz<br>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<br>109.2 mV/1000A @ 50 Hz                     |
| Wire Colors             | White = (+) positive<br>Brown = (-) negative<br>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

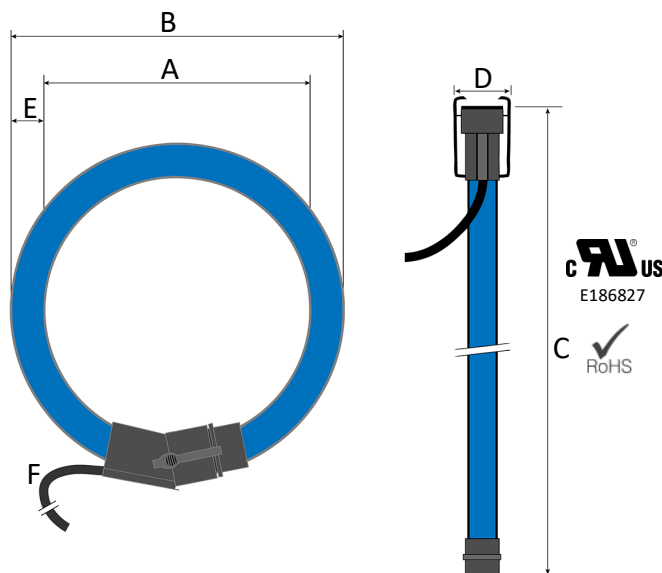
|                    |                                                               |
|--------------------|---------------------------------------------------------------|
| Coil Materials     | Blue thermoplastic rubber,<br>flame retardant UL 94 V-0 rated |
| Coupling Materials | PA6 UL 94 V-0 rated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

### SAFETY

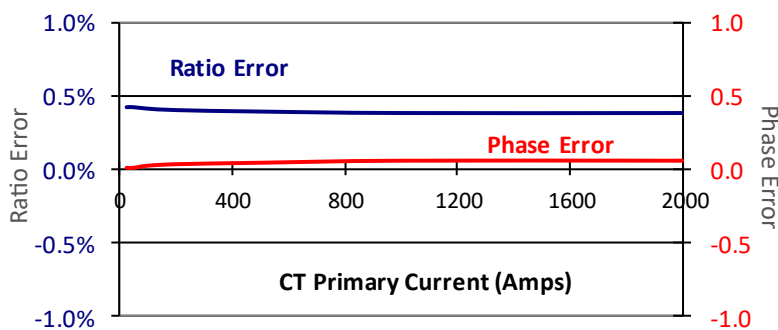
|                     |                                                  |
|---------------------|--------------------------------------------------|
| Working Voltage     | 1000 Vrms maximum                                |
| Dielectric Strength | 7400 VAC around coil<br>1000 VAC rated leads     |
| Certifications      | UL STD 61010-1<br>CAN/CSA STD C22.2<br>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<br>40 cm (16")                                              | R24<br>60 cm (24") | R36<br>90 cm (35") | R47<br>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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