



## Overview

The Revenue Grade Split Core Current Transformers are designed to convert AC operating current into a low voltage AC signal for use with microprocessor based circuits that require maximum accuracy and precision. All Revenue Grade CTs come standard unterminated with ferrules for easy connection to any Single or 3 Phase power meters. The Revenue Grade CTs should only be used with the Powerscout™ PS3037, PS24, PS12HD, PS48HD Power Meters in Revenue Grade or Tenant Billing Applications. For best accuracy, the CTs should be selected based on the actual Window Size and the minimum and maximum operating currents for the circuits being monitored. Rocoils™ should be used in applications in which the operating currents are in the 400A+ range, since using more of the output scale on the Rocoil™ provides increased resolution than when using to monitor low current circuits. The NSA-CT-Rxx-A4-U Series otherwise known as the flexible Rocoil™ CTs are designed for use in typical applications up to 5000 amps maximum dependent on the power meter in which they are used. The Rocoil™ CTs are designed for accurate and non-intrusive installation of AC current, pulsed DC or distorted waveforms where conventional rigid core CTs are unsuitable. The Rocoils™ provide excellent frequency response over a dynamic range and do not require the use of an external VDC power source due to the on-board signal integrator/amplifier in each of the power meters. Extending the leads on all of the Flexible Rocoils and Revenue Grade CTs can be done in the field or ordered from the factory for an additional cost and lead time.



**Applications:** Energy and Demand Metering, Tenant Submetering, Load Surveys, LEED/Green Projects

## Part Numbers

NSA-CT-R16-A4-U

NSA-CT-R24-A4-U

NSA-CT-R36-A4-U

NSA-CT-R47-A4-U

## Specifications

<b>Monitored Current Type:</b>	AC Current
<b>Maximum Working Voltage:</b>	1000 VAC maximum
<b>Core Style:</b>	Split
<b>Dielectric Strength:</b>	7400 VAC (around coil), 1000 VAC (Leads)
<b>Operating Frequency Range<sup>1</sup>:</b>	20 to 5 kHz (Based on Meter Compatibility)
<b>Sensor Amperage Range:</b>	5-5000A2
<b>Output Signal:</b>	131 mV / 1000A @ 60 Hz   109.2 mV / 1000A @ 50 Hz
<b>Accuracy   Ratio Error<sup>2</sup>:</b>	< 0.6% Typical <sup>1</sup>
<b>Phase Error:</b>	< 0.2° @ 50/60 Hz
<b>Phasing:</b>	Arrow points towards load
<b>Temperature Sensitivity   Linearity:</b>	0.07% per °C (1.8°F)   +/- 0.2% (Rocoils™)
<b>Operating Temperature Range:</b>	-4 to 158°F (-20 to 70°C)
<b>Operating   Storage Humidity Range:</b>	5 to 95%, non-condensing
<b>Wiring Connections:</b>	Unterminated with Ferrules
<b>Lead Wire Colors:</b>	White = Positive (+), Brown = Negative (-)   Bare Wire: Shield (Polarity Sensitive)
<b>Wire Size   Lead Length:</b>	9.84' (3.0m)
<b>Agency Approvals:</b>	CE, RoHS2, WEEE, ISO 9001:2008, 100% Verified to meet C57.13-2008 Class 1.2 Standard
<b>Product Weight:</b>	See <b>Dimensional Drawing</b> below
<b>Product Dimensions (L x W x H):</b>	See <b>Dimensional Drawing</b> below

<sup>1</sup>Accuracy below 20A rated at 1.5% +/- 0.5A when used with PS3037/PS12HD/PS48HD/Elitepro Power Meters. Installed using best practice with wire centered in window and minimum distance of > 2x the diameter of the Rocoil™ between the external conductors

<sup>2</sup>Dependent on Meter or Elite Pro Data Logger Model being used with.

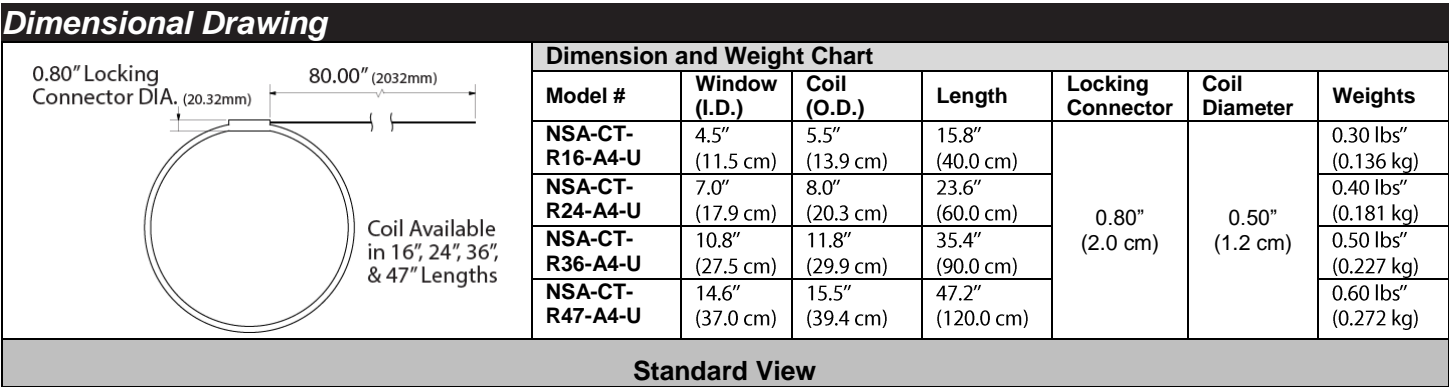


Figure 1

Installation

**CAUTION** All work must be performed by a qualified electrician using proper safety equipment.

Open CT

- 1. Open the CT by squeezing the connector and pulling apart.



Figure 2

Install CT around conductor

- 2. Connect CT around the load conductor to be measured. Make sure the maximum current of the conductor does not exceed CT's rating. Arrow points towards load.
- 3. Push the connector back together. The conductor should be in the inside of the CT window, see Figure 3.)
- 4. Repeat Steps 1-3 if you are using more than one CT.



Figure 3

5. Connect the brown wire on the CT to the negative terminal on the measuring device, see Figure 4.
6. Connect the white wire on the CT to the positive terminal on the measuring device, see Figure 4.
7. Connect bare wire to shield. This reduces interference and improves accuracy of the CT.
8. You are now ready to begin your monitoring session.

### Connect wires

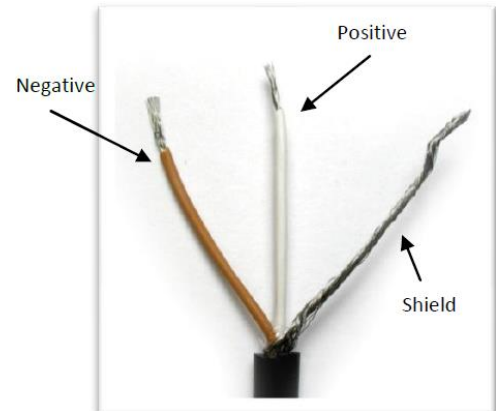


Figure 4