

## 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. Rococoil™ should be used in applications in which the operating currents are in the 400A+ range, since using more of the output scale on the Rococoil™ provides increased resolution than when using to monitor low current circuits. The NSA-CT-Rxx-A4-U Series otherwise known as the flexible Rococoil™ CTs are designed for use in typical applications up to 5000 amps maximum dependent on the power meter in which they are used. The Rococoil™ 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 Rococoil™ 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 Rococoil 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

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

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

## Dimensional Drawing

Dimension and Weight Chart						
Model #	Window (I.D.)	Coil (O.D.)	Length	Locking Connector	Coil Diameter	Weights
NSA-CT-R16-A4-U	4.5" (11.5 cm)	5.5" (13.9 cm)	15.8" (40.0 cm)	0.80" (2.0 cm)	0.50" (1.2 cm)	0.30 lbs" (0.136 kg)
NSA-CT-R24-A4-U	7.0" (17.9 cm)	8.0" (20.3 cm)	23.6" (60.0 cm)			0.40 lbs" (0.181 kg)
NSA-CT-R36-A4-U	10.8" (27.5 cm)	11.8" (29.9 cm)	35.4" (90.0 cm)			0.50 lbs" (0.227 kg)
NSA-CT-R47-A4-U	14.6" (37.0 cm)	15.5" (39.4 cm)	47.2" (120.0 cm)			0.60 lbs" (0.272 kg)

## Standard View

Figure 1

## Installation

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

### Open CT



Figure 2

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

### Install CT around conductor

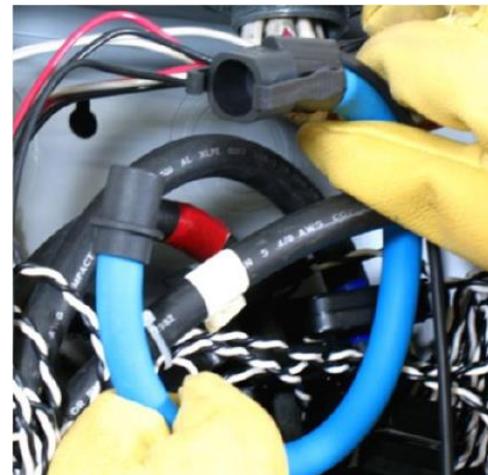


Figure 3

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

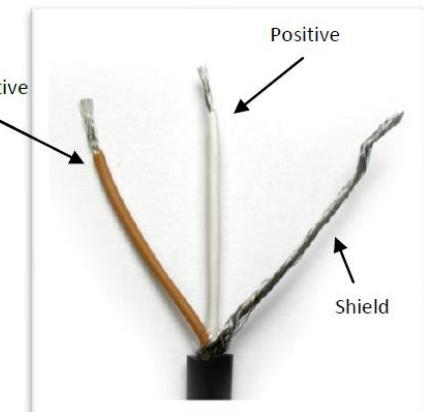


Figure 4