



# CURRENT TRANSFORMERS

## Revenue Grade CTs

The Revenue Grade Solid and Split Core Current Transformers are designed to convert an AC operating current into a low voltage AC signal for use with microprocessor based circuits that require maximum accuracy and precision. All of the Revenue Grade CTs come standard unterminated with ferrules for easy connection to any of the 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 upon 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 or greater range, since using more of the output scale on the Rocoil™ will provide increased resolution than when using to monitor low current circuits. The CT-RGT12 Series solid core current transformers should be used in applications

where exceptionally accurate signal transformation, low phase shift while exposed to harsh environmental operating conditions since it is epoxy encapsulated. The CT-SRS and CT-SRL Series current transformers include a split-core design and superior performance with a robust, easy to use shrouded snap, lock and tilt top for easy installation in retrofit applications. The 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 Model number of the power meter in which they will be used with. The Rocoil™ CTs have been 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 as discussed in the Current Transformer Lead Extension technical whitepaper or ordered from the factory for an additional cost and lead time.

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

**The Revenue Grade Current Transformers are covered by ACI's One (1) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's website, [www.workaci.com](http://www.workaci.com).**

## PRODUCT SPECIFICATIONS

<b>Monitored Current Type:</b>	AC Current
<b>Maximum Working Voltage:</b>	600 VAC, Category III   <b>CT-Rxx-A4-U:</b> 1000 VAC maximum
<b>Core Style:</b>	Solid-Core & Split-Core Versions available (See Ordering Grid)
<b>Dielectric Strength:</b>	<b>CT-SRS &amp; CT-SRL:</b> 7400 VAC   <b>CT-RGT12:</b> 5400 VAC   <b>CT-Rxx-A4-U:</b> 7400 VAC (around coil), 1000 VAC (Leads)
<b>Operating Frequency Range 2:</b>	<b>CT-SRS &amp; CT-SRL:</b> 40 to 400 Hz   <b>CT-RGT12-xxxx:</b> 50 to 400 Hz <b>CT-Rxx-A4-U:</b> 20 to 5 kHz (Based on Meter Compatibility)
<b>Sensor Amperage Range:</b>	See Ordering Grid
<b>Output Signal:</b>	See Ordering Grid
<b>Accuracy   Ratio Error 1:</b>	See Ordering Grid
<b>Accuracy Class<sup>1</sup>:</b>	<b>IEC 61869-2 Class 0.2:</b> All CT-SRS, CT-SRL & CT-RGT12 CTs   <b>IEC60044-1 Class 0.2:</b> All CT-SRS & CT-SRL CTs <b>IEEE C57.13 Class 0.3:</b> All CT-SRS, CT-SRL & CT-RGT12 CTs
<b>Phase Error:</b>	< 0.2° for all CTs except <b>CT-Rxx-A4-U (Rocoil™):</b> < 0.2° @ 50/60 Hz
<b>Phasing:</b>	<b>CT-Rxx-A4-U:</b> Arrow points towards load   <b>All Others:</b> Label points toward the source
<b>Temperature Sensitivity   Linearity:</b>	<b>CT-Rxx-A4-U:</b> 0.07% per °C (1.8°F)   +/- 0.2% (Rocoils™)
<b>Operating Temperature Range:</b>	<b>CT-SRS &amp; CT-SRL:</b> -4 to 158°F (-20 to 70°C)   <b>CT-RGT12:</b> -13 to 185°F (-25 to 85°C) <b>CT-Rxx-A4-U:</b> -4 to 158°F (-20 to 70°C)
<b>Operating   Storage Humidity Range:</b>	5 to 95%, non-condensing
<b>Case Material   Flammability Rating:</b>	<b>CT-SRS &amp; CT-SRL:</b> 120°C (248°F) UL Recognized Plastic   <b>CT-RGT12:</b> PBT Resin/UL94-V0, Epoxy Encapsulated
<b>Wiring Connections:</b>	Unterminated with Ferrules
<b>Lead Wire Colors:</b>	<b>CT-SRS, CT-SRL &amp; CT-RGT12:</b> White = Positive (+), Black = Negative (-) (Polarity Sensitive) <b>CT-Rxx-A4-U:</b> White = Positive (+), Brown = Negative (-)   Bare Wire: Shield (Polarity Sensitive)
<b>Wire Size   Lead Length:</b>	<b>CT-SRL &amp; CT-SRS:</b> 18 AWG (0.823 mm <sup>2</sup> ) MTW UL 1015, 600V, 105°C Double Insulated   9.84' (3.0m) <b>CT-RGT12:</b> 24 AWG, 600 VAC rated twisted pair   9.84' (3.0m) <b>CT-Rxx-A4-U:</b> 9.84' (3.0m)
<b>Agency Approvals:</b>	CE, RoHS2, WEEE, ISO 9001:2008 <b>CT-RGT12 &amp; CT-Rxx-A4:</b> UL Standard 61010-1 EN 60044-1   File # E186827 CAN/CSA STD C22.2 No. 61010-1 <b>CT-Rxx-A4-U:</b> 100% Verified to meet C57.13-2008 Class 1.2 Standard <b>CT-SRS &amp; CT-SRL:</b> UL Listed to 2808 (File# E477005); CSA STD C22.2 No. 61010-1
<b>Product Weight:</b>	<b>CT-SRS:</b> 0.500 lbs. (0.227 kg)   <b>CT-SRL:</b> 0.750 lbs. (0.340 kg)   <b>CT-RGT12:</b> 0.150 (0.068 kg) <b>CT-Rxx-A4-U:</b> See Dimensions (back)
<b>Product Dimensions (L x W x H):</b>	<b>CT-SRS:</b> 2.40" (60.96 mm) x 0.85" to 1.10" (21.58 to 27.94 mm) x 1.650" (41.91 mm) <b>CT-SRL:</b> 3.30" (83.81 mm) x 1.30" (33.04 mm) x 3.10" (78.74 mm) <b>CT-RGT12:</b> 1.445" (36.7 mm) x 0.559" (14.2 mm) x 1.516" (38.5 mm)   <b>CT-Rxx-A4-U:</b> See Dimensions (back)

**Note:** For best accuracy and resolution, Rocoil flexible CTs are recommended for use on circuits/services greater than 600 Amps





**DIMENSIONAL DRAWING**

**RGT**

- CT-RGT12-0005-U
- CT-RGT12-0020-U
- CT-RGT12-0050-U
- CT-RGT12-0100-U

**CT-SRS**

- CT-SRS-005-U
- CT-SRS-050-U

**CT-SRL**

- CT-SRL-100-U
- CT-SRL-200-U
- CT-SRL-400-U

**Front View**

**Top View**

**Side View**

**ROCOIL™**

- CT-R16-A4-U
- CT-R24-A4-U
- CT-R36-A4-U
- CT-R47-A4-U

**ROCOIL™ Dimension & Weight Chart**

ACI Model #	Window (I.D.)	Coil (O.D.)	Length	Locking Connector	Coil Diameter	Weights
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)
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)
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)
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)

Coil Available in 16", 24", 36", & 47" Lengths

**Standard View**

**STANDARD ORDERING**

Model # Example: **CT-R16-A4-U** -OR- **136954**

Model #	Item #	Solid Core	Split Core	Operating Current Range	Window Size	Output Signal At Rated Current	Ratio Error
<b>CT-RGT12-0005-U</b>	143154	•		0.05 to 10A	0.5" (12.8 mm)	333.3 mV @ 5A	+/- 0.2% @ 5A
<b>CT-RGT12-0020-U</b>	143155	•		0.2 to 40A	0.5" (12.8 mm)	333.3 mV @ 20A	+/- 0.2% @ 20A
<b>CT-RGT12-0050-U</b>	143156	•		0.5 to 100A	0.5" (12.8 mm)	333.3 mV @ 50A	+/- 0.2% @ 50A
<b>CT-RGT12-0100-U</b>	143157	•		1.0 to 200A	0.5" (12.8 mm)	333.3 mV @ 100A	+/- 0.2% @ 100A
<b>CT-SRS-005-U</b>	143158	•	•	0.05 to 10A	0.4" (10.17 mm)	333.3 mV @ 5A	+/- 0.2% @ 5A
<b>CT-SRS-050-U</b>	143159	•	•	0.5 to 100A	0.4" (10.17 mm)	333.3 mV @ 50A	+/- 0.2% @ 50A
<b>CT-SRL-100-U</b>	142971	•	•	1.0 to 200A	1.25" (31.75 mm)	333.3 mV @ 100A	+/- 0.2% @ 100A
<b>CT-SRL-200-U</b>	142972	•	•	2.0 to 400A	1.25" (31.75 mm)	333.3 mV @ 200A	+/- 0.2% @ 200A
<b>CT-SRL-400-U</b>	142973	•	•	4.0 to 500A	1.25" (31.75 mm)	333.3 mV @ 400A	+/- 0.2% @ 400A
<b>CT-R16-A4-U</b>	136954	•	•	5-5000A*	4.5" (11.5 cm)	131 mV / 1000A @ 60 Hz   109.2 mV / 1000A @ 50 Hz	< 0.6% Typical ?
<b>CT-R24-A4-U</b>	136955	•	•	5-5000A*	7.0" (17.9 cm)	131 mV / 1000A @ 60 Hz   109.2 mV / 1000A @ 50 Hz	< 0.6% Typical ?
<b>CT-R36-A4-U</b>	136956	•	•	5-5000A*	10.8" (27.5 cm)	131 mV / 1000A @ 60 Hz   109.2 mV / 1000A @ 50 Hz	< 0.6% Typical ?
<b>CT-R47-A4-U</b>	136957	•	•	5-5000A*	14.6" (37.0 cm)	131 mV / 1000A @ 60 Hz   109.2 mV / 1000A @ 50 Hz	< 0.6% Typical ?

**Note\*:** Dependent on Meter or Elite Pro Data Logger Model being used with | **Note ?:** 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