

RIK 1AR

Protective Relay Rogowski Integrator Datasheet



Rogowski Coil and Power supply sold separately

The Accuenergy Relay Class Rogowski Integrator Kit is engineered to be an installer-friendly, plug-and-play solution for use with any protection relay or power meter with a 1A nominal input. Ideal for installations where spacial constraints or conductor size prohibit the use of rigid-body current transformers, flexible Rogowski coils streamline the installation process for exceptionally rapid deployment.

Features

- 0-1A rated output works with any protection relay or meter with a 1A nominal current transformer input
- Protection Class: 5P20 (IEC 61869-2)
- Pairs with a flexible Rogowski current sensor, designed to easily fit into crowded electrical panels and weighs 95% less than traditional relay class CTs (*sold separately*)
- Current sensing range from 0.25A to 100kA for compatibility across any system
- Five field-configurable CT ratios: 50A, 200A, 500A, 2000A, and 5000A
- Compatible with both 50Hz and 60Hz systems

Specifications

RATED CURRENT	
Current Range	0.25A - 100000A
Sensing Range	50A, 200A, 500A, 2000A, 5000A User Selectable
Integrator Output	0-1A
Integrator Accuracy	1% at 1A, 5% at 20A
Phase Maximum Error	1 degree
Class	5P20 (IEC 61869-2)
Continuous Thermal Current	150% (1.5A)
Short-Time Thermal Current	20A
Short-Time Thermal Current Max Duration	4 seconds
Settling Time to Full Scale	<100µs

MECHANICAL/ENVIRONMENTAL	
Integrator Kit Size	199.0mm x 125.2mm x 113.5mm 7.83" x 4.93" x 4.47"
Input/Output Wire Connection	14 - 30 AWG
Operating Temperature	-25°C to 70°C -13°F to 158°F
Operating Humidity	Non-condensing, 0 to 95% RH
Integrator Enclosure Material	ABS, UL 94V-0
Mounting	DIN TS-35/7.5 or 15 (DIN 43880) or Panel
Weight	0.8 lbs / 362.9g

ELECTRICAL	
Measurement Channels	1
Frequency Range	50/60Hz
Power Supply	100-240Vac
Burden	0.25Ω

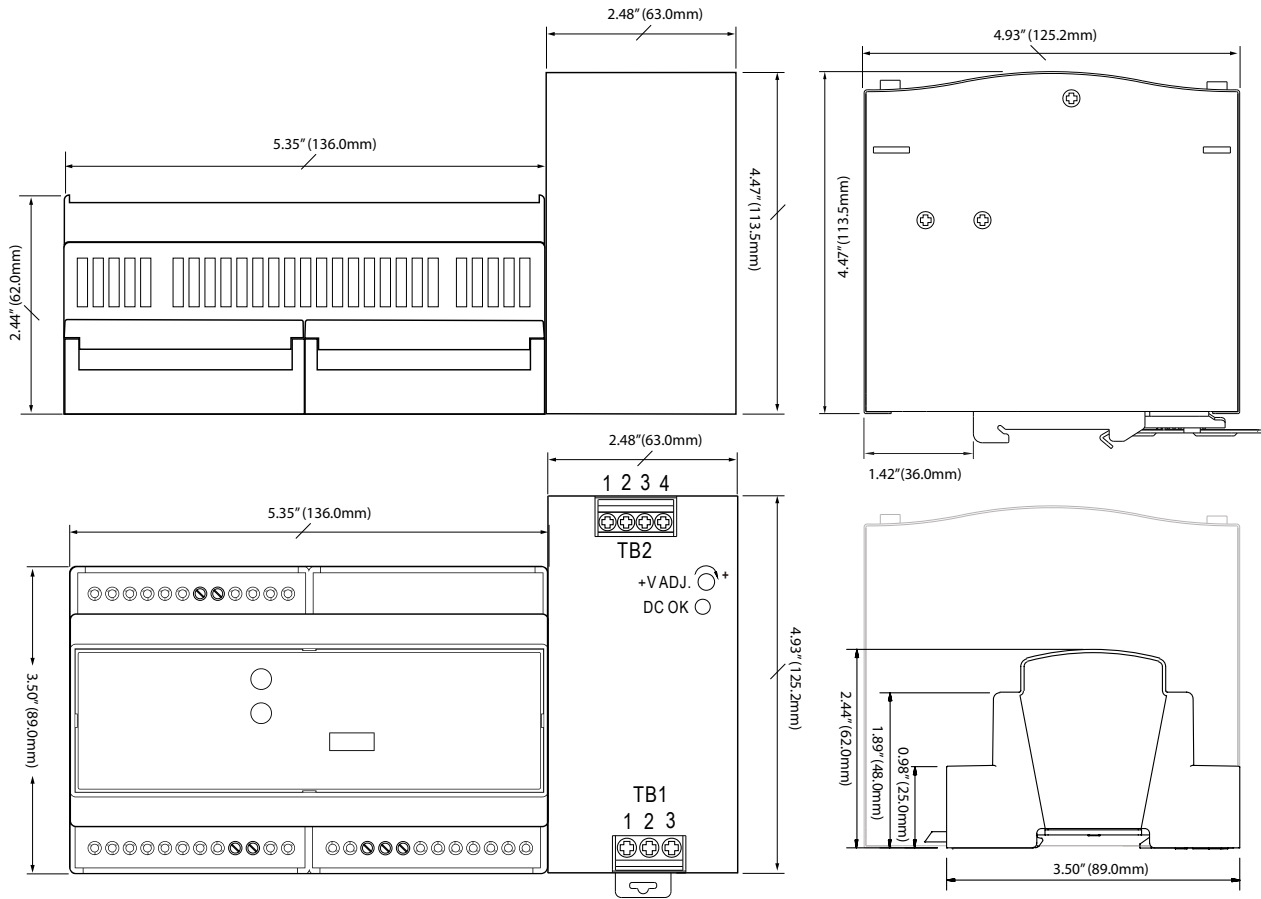
SAFETY/COMPLIANCE	
Overload Protection	Thermal
Certifications	CE, UL Listed (E359521), RoHS

ROGOWSKI COIL OPTIONS:	
Window Size	<i>Rogowski coil sold separately</i> RCT16-1000 - 106.0mm (4.17") RCT24-1000 - 178.0mm (7.01") RCT36-1000 - 271.0mm (10.67") RCT47-1000 - 369.0mm (14.53")
Length of Coil	RCT16-1000 - 400.0mm (15.75") RCT24-1000 - 600.0mm (23.62") RCT36-1000 - 900.0mm (35.43") RCT47-1000 - 1200.0mm (47.24")
Coil Material	Orange thermoplastic rubber UL 94V-0 rated flame retardant
Lead Wires	1000V UL Style 20940, 26AWG
Wire Polarity	White=Positive, Brown=Negative, Bare=Shield
Phase Orientation	Arrow Points Towards Load

Integrator's Current Range Settings

PRIMARY INPUT (A _{RMS})	SENSING RANGE (A)	OUTPUT	RELAY CLASS OUTPUT	CT RATIO
50	0.25 to 1000	1A @ 50A	20A @ 1kA	50:1
200	1 to 4000	1A @ 200A	20A @ 4kA	200:1
500	2.5 to 10000	1A @ 500A	20A @ 10kA	500:1
2000	10 to 40000	1A @ 2000A	20A @ 40kA	2000:1
5000	25 to 100000	1A @ 5000A	20A @ 100kA	5000:1

Dimensions



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 Specs Subject To Change Without Notice.

Ordering Information

	Model	Integrator Output
Ordering Number	RIK	-
Ordering Example	RIK	1AR
		1AR
	PSU	
Ordering Example	PSU-240-24	
	PSU-240-24: 24Vdc	Power Supply

ATR-120MV Series

ATR-120MV

The ATR-120MV is Aim Dynamics' Thin Rogowski coil series. It outputs 120 mV per kA at 60 Hz, and 100 mV per kA at 50 Hz, yet is significantly thinner than similar Rogowski coils out there. The diameter of the coil is a mere 8 mm, making it much easier than other Rogowski coils to thread through crowded areas in a panel.

The coil cannot be damaged by large overloads, and can measure up to 100 kA! The coil is completely shielded and has temperature compensation built-in, making it more accurate than competing coils. In addition, the coil is IP67 rated, such that it can be immersed in liquid without damaging the coil. Each unit is calibrated and test reports are available upon request. UL Listed ATR-120MV units are available, upon request.



▲ SPECIFICATIONS

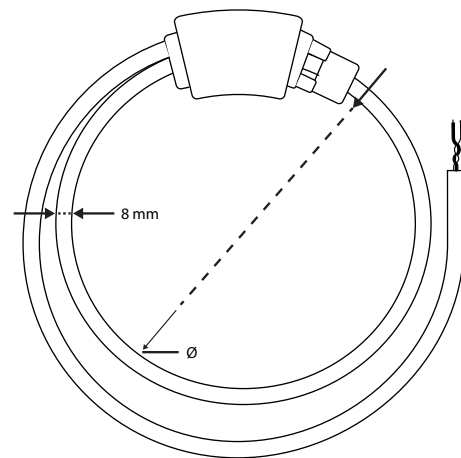
Max Current	500 mA – 100 kA
Input Type	AC
Output @ 60 Hz	120 mV per kA
Output @ 50 Hz	100 mV per kA
Accuracy	0.5 Class per IEC 61869-2
Linearity	0.2%
Positioning Error	Better than 1% of reading
Coil Resistance	Between 70 and 900 Ω
Protection Degree	IP67
Working Voltage	1000 V CAT III 600V CAT IV Pollution Degree 2
Withstand Voltage	7400 Vrms / 1 min
Operating Temperature	-30 °C to 80 °C
Safety	UL 61010-1, UL 61010-031, UL 61010-2-031, UL 61010-032
Material	Thermoplastic UL94-V0
Coil Thickness	8.3 mm ±0.2 mm
Lead Type	3 meters of shielded 5 mm cable
Operating Frequency	40 to 14 kHz (3dB)
Mechanical Clasp Strength	77 N
Origin	Made in Italy

▲ APPLICATIONS

- Power monitoring & control systems
- DC ripple measurement
- Harmonics and transients monitoring
- Wide range current monitoring
- Measuring devices, lab instrumentation
- Underground/wet applications



▲ PRODUCT DIMENSIONS



▲ MODEL BUILDER (COIL ONLY)

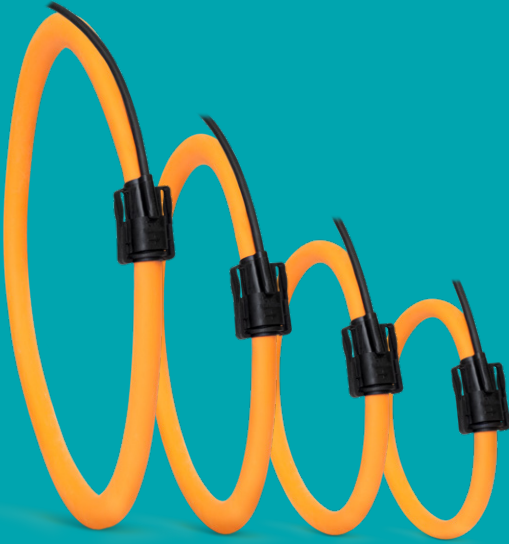
ATR-120MV – XX

Diameter

XX: 04 = 4"
07 = 7"
11 = 11"

AcuCT Flex Series

Rogowski Coil CT Datasheet



Accuenergy's AcuCT Flex Series Rogowski coil current transformers are engineered for high-accuracy measurements of AC current. Ideal for precision power metering, PQ analysis, or general energy monitoring applications, the versatile AcuCT Flex is essential when space is limited and rigid-body current transformers won't fit. The rope-like form factor can easily wrap around irregularly shaped conductors in crowded panels or switchgear.

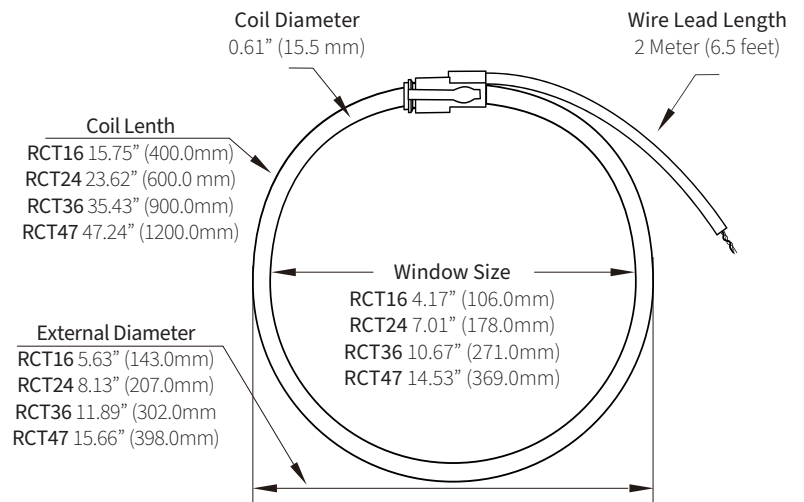
Features

- High accuracy measurements for rigorous applications
- Broad frequency range is well-suited for measuring harmonics & power quality
- Current input range: 5A – 50,000A AC
- Available in four, standard lengths: 16", 24", 36" or 47"
- Does not require an external power supply or integrator when used with Accuenergy meters
- Fully customize output ratio, input ratio, and length to adapt to any project

Specifications

RATED CURRENT	
Current Range	5A-50,000A
Accuracy	0.5% - IEEE C57.13 class 0.6
MECHANICAL/ENVIRONMENTAL	
Form Factor	Flexible Rope Like CT
Window Size	RCT16 - 106.0mm (4.17") RCT24 - 178.0mm (7.01") RCT36 - 271.0mm (10.67") RCT47 - 369.0mm (14.53")
External Diameter	RCT16 - 143.0mm (5.63") RCT24 - 207.0mm (8.13") RCT36 - 302.0mm (11.89") RCT47 - 398.0mm (15.66")
Length of Coil	RCT16 - 400.0mm (15.75") RCT24 - 600.0mm (23.62") RCT36 - 900.0mm (35.43") RCT47 - 1200.0mm (47.24")
Case Material	Orange thermoplastic rubber UL 94V-0 rated flame retardant
Lead Wires	1000V UL Style 20940, 26AWG
Operating Temperature	-20°C to 70°C / -4°F to 158°F
Temperature Drift	+/- 0.07% per °C
Operating Humidity	Non-condensing, 0 to 95% RH
Installation Conditions	IP61
ELECTRICAL	
Wire Polarity	White=Positive, Brown=Negative, Bare=Shield
Phase Orientation	Arrow Points Towards Load
Frequency Range	45Hz - 65Hz
Frequency Response	10Hz - 20KHz
SAFETY/COMPLIANCE	
Working Voltage	1000V CAT III, 600V CAT IV
Dielectric Strength	7400Vac @ 50/60Hz for 1 minute
Certifications	CE, RoHS, cURus (E359521)

Dimensions



mV/kA Output Standard & Custom Output

Multiple output ratio options are available such as 100mV/1000A, 40mV/1000A, 25mV/1000A, 10mV/1000A.

Model ¹	Output /1000A @60Hz	Output /1000A @50Hz	Calibrated Range with "RCT" input devices ²
RCTxx-200	600mV	500mV	1A-240A
RCTxx-500	240mV	200mV	2.5A-600A
RCTxx-1000	120mV	100mV	5A-1200A
RCTxx-2500	48mV	40mV	12.5A-3000A
RCTxx-5000	24mV	20mV	25A-6000A
RCTxx-10000	12mV	10mV	50A-12000A
RCTxx-50000	2.4mV	2mV	250A-60000A
RCTxx-Custom	Output any ratio of signal per your requirement. Contact Us at 1-877-721-8908 or email marketing@accuenergy.com		

¹"xx" denotes length of current transformer coil.

²When used with Accuenergy meters. Performance and range may vary when used with non-Accuenergy power meters or devices.

Accessories

BNC Connector

For a fast, secure, and reliable connection to devices, the AcuCT Flex Rogowski Coils comes with a BNC Connector option. It's ring-lock mechanism firmly secures the lead wire in place for peace of mind installation.

Part Number Example: **RCT36-5000-BNC**

Extended Temperature Rating

The Extended Temperature Rating is designed for the AcuCT Flex Series to perform continuously under extreme temperature environments ranging from -45C to 125C (-49 to 257F) without sacrificing high precision.

Part Number Example: **RCT24-2500-ET**

IP68 Environmental Protection

When environmental conditions are challenging, the AcuCT Flex IP68 Rated option confidently protects its electrical components from dust, dirt, and solid ingress and provides total water protection with its waterproof enclosure.

Part Number Example: **RCT16-1000-IP68**



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Ordering Information

	Model	Current Range	Lead Length
Ordering Number	-	:	
Ordering Example	RCT24	- 5000	: 25m
	RCT16	1000: 5A-1200A	Blank - 2 Meters/6.5ft
	RCT24	2500: 12.A-3000A	5m - 5 Meters/16.4ft
	RCT36	5000: 25A-6000A	10m - Meters/32.8ft
	RCT47	10000: 50A-12000A	25m - 25 Meters/82ft
		50000: 250A-50000A	50m - 50 Meters/164ft