

Capabilities:

- 25- 40Mhz Bandwidth
- Standard Temperature >120°C
- High Temperature >200°C
- 3000VDC Insulation Withstand
- Up to 0.1% Accuracy
- High CMRR

- Use with 50Ω Instruments

Micro Rogowski Coil

**The Athena Energy Rogowski Coil System:**

High bandwidth pulse current measurements are simplified with the Rogowski Coil system from Athena Energy. Rogowski coils provide a low insertion-loss, flexible current measurement solutions for DC-pulse and high frequency AC by the use of an air-core solenoid. The capture of current is accomplished by high-speed integration of the coil signal.

Our Standard Temperature (up to 120°C) and High Temperature (up to 200°C) offerings provide the most flexibility of any Rogowski coil system on the market. We offer the only removable coil solution for current measurement and the ability to replace coils without affecting the accuracy of the system.

Athena Energy also provides the smallest coil diameter possible: 1.2mm. This geometry assures simplified insertion of the current sensor and ideal measurement solution for the smallest structures.

Full-PTFE construction with Kapton® internal winding insulation provides typically at least 3000VDC Insulation withstand on our standard systems with higher voltage withstand available as requested. Rogowski coil systems can provide excellent signal to noise ratio with offering up to 0.1% accuracy and linearity.

Our systems use a fully differential integrator for high CMRR and output compatibility with 50Ω Instruments.

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Electrical Specifications

Parameter	min	variation	max
Current 25A	10ma		26A
Current 50A	20ma		55A
Current 100A	40mA	-	110A
Current 200A	80mA	-	220A
Current 500A	200mA	-	550A
Frequency	100 Hz (400 Hz extended)	3dB	25 MHz 3dB cutoff (40Mhz extended)
Droop	1ms	linear	10%
Temperature coefficient	0	linear	>1% @ 100C
Signal to Noise	68 dB		70dB
Voltage isolation	3000VDC	1-minute test	

Mechanical Specifications

Standard Coil (2.1mm dia.)

75mm active coil length (can be increased to 150mm)

Ultra-Miniature (1.2mm dia.)

55mm active coil length

Total length of coil and cable:

Standard Freq 1m

Extended Freq 0.4m

Ultra-Miniature 0.4m

Integrator:

155mm x 84mm x 30mm



Integrator Specifications

Up to 50Mhz Bandwidth

Operation: 8 hours 9VDC battery
(automatic shutoff on weak battery)

External 5V – 9VDC AC adaptor

Up to 0.1% Accuracy

SNR: 70dB (typ.)

Rated for 50Ω and 1MΩ terminations



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Ordering Options for Systems

AEC + Current +Total Cable Length(m) + Pickup Coil Diameter(mm) + ET (Extended Temperature)

Micro Rogowski Coil (1.2mm diameter)

AEC0200-0.3-1.2 200A Current Probe, 100Hz- 25MHz, 0.3m Cable, 55mm Coil

AEC0400-0.3-1.2 400A Current Probe, 100Hz- 25MHz, 0.3m Cable, 55mm Coil

STANDARD or EXTENDED TEMPERATURE (2.1 mm dia.)

AEC0050-1-2.1 50A Current Probe, 100Hz-25MHz, 1m Cable, 75mm Coil

AEC0100-1-2.1 100A Current Probe, 100Hz-25MHz, 1m Cable, 75mm Coil

AEC0200-1-2.1 200A Current Probe, 100Hz-25MHz, 1m Cable, 75mm Coil

AEC1000-1-2.1 1200A Current Probe, 100Hz-25MHz, 1m Cable, 75mm Coil

HIGH FREQUENCY (with EXTENDED TEMP. OPTION 2.1mm)

AEC0200-0.5-2.1-ET 200A Current Probe, 400Hz- 35MHz, 0.5m Cable, 75mm Coil with Extended Temperature Option

COMMON MODE ROGOWSKI SYSTEM (9.1mm dia.)

AEC0060-1-550, 65Apeak ,100Hz-15MHz, 1m Cable, 550mm Coil

AEC0120-1-550, 130Apeak ,100Hz-15MHz, 1m Cable, 550mm Coil

AEC0120-1-550, 130Apeak ,100Hz-15MHz, 1m Cable, 550mm Coil

