Rogowski Coil Current Sensor

The YUANXING **iProbe** Series of flexible, split-core Rogowski Coil current sensors are designed for fast and easy installation on existing primary conductors/ BUS bars. The split design permits the non-contact AC current or DC current pulse measurement without requiring that the primary conductor be taken offline and disconnected for the current sensor installation. This method provides for the safe, easy, and portable measurement of current.

A current sensor that is based upon the Rogowski Coil principle offers significant advantages over the standard magnetic core current transformer products.

- The sensor does not incorporate a magnetic core. Therefore, magnetic core saturation is not applicable (e.g. magnetic core saturation is the point at which the incremental increase in magnetic flux is not reflected in a proportional increase in secondary signal output).
- Energy is not stored in the sensor, eliminating the danger of stored energy discharge from an open secondary circuit.

Features:

Wide AC measurement operating range and DC pulse measurement.

Specifications:

Measurement Range: 0.1A to 100kA

Frequency: 10 Hz to 1MHz

Operating Voltage: 600V_{RMS} maximum

Dielectric Withstand: 5,000 VAC (coil)

Operating Temperature: -25ºC to +70ºC

Construction:

- Coil – Thermoplastic rubber coating
- Coupling – PA6, polyamide (Black), flame retardant rating UL 94 V-0

Output Cable: 3.00m (9.8FT), 600V. PVC insulated reinforced coaxial cable

Cable Termination: BNC connector or Stripped & tinned

IP66

CAT III, 600V
Safety Standards: EN61010-1, EN61010-2-032

RoHS Compliant.

Performance:

Sensor Output: 0.088mV/ A @ 50Hz
0.105mV/ A @ 60Hz

Accuracy: 0.5%

Linearity: 0.2%

Primary Conductor Position ± 1.5%

Temperature Drift: ± 0.08%/ °C maximum (-25 °C to +70 °C)

Voltage Integrator Option Available:

Application Notes are available by contacting Application Engineering at engineering@tichenassociates.com or at the address below

Technical Support: For a no obligation technical evaluation of specific performance requirements, please provide the specific requirements to ApplicationEngineering@tichenassociates.com or the address below.

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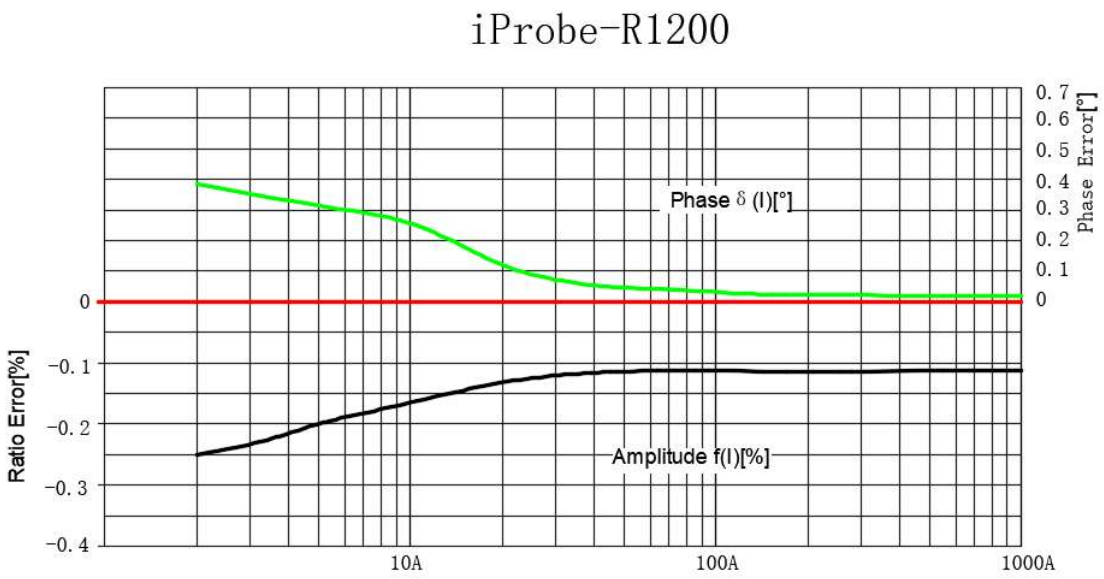
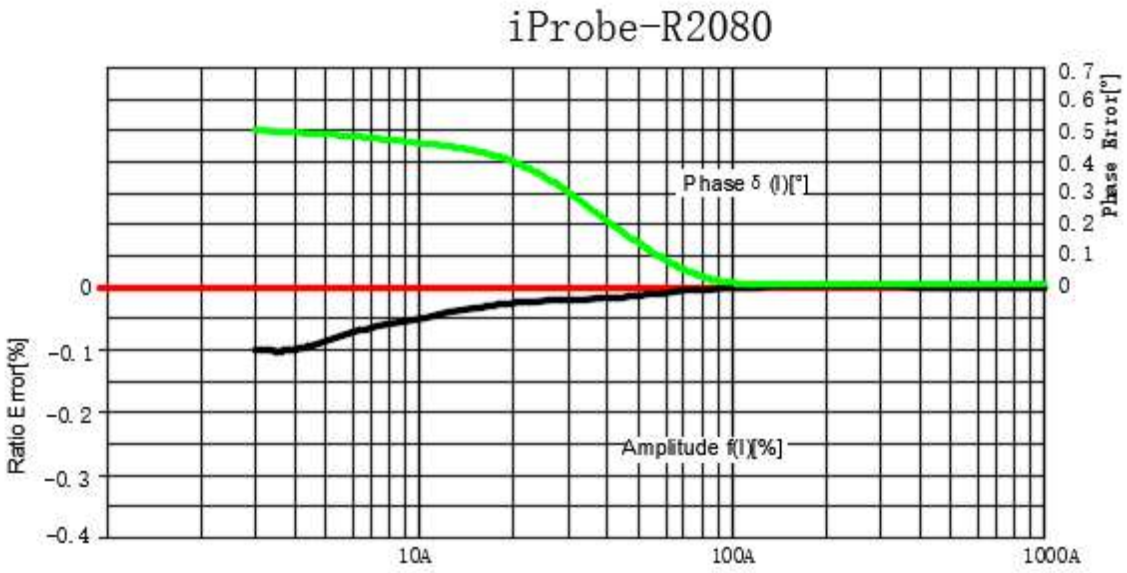
Performance iProbe-R1200 (12mm OD Coil)



Performance iProbe-R2080 (7.8mm OD Coil)



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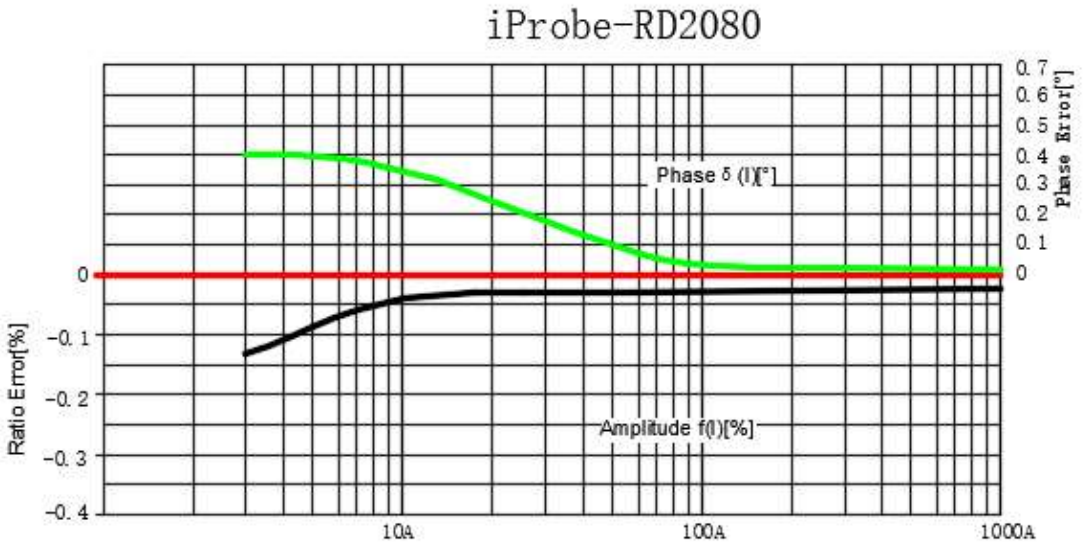
Performance iProbe-RD2080 (7.3mm OD Coil, double coil)



Primary Conductor Position Sensitivity

Position	Error
	Around the center < 0.5%
	Near the inner diameter < 1%