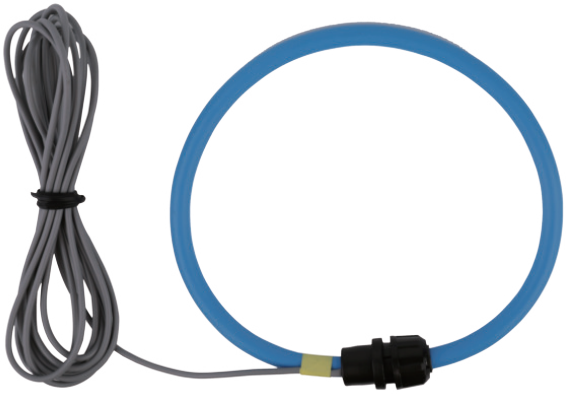
FQ-RCT02

EXCELLENT LINEARITY 0.2% 3000A/6000A FLEXIBLE ROGOWSKI COIL

The FQ-RCT02 flexible current sensor is an AC current sensor composed of a flexible rogowski coil. The flexible rogowski coil permits measurements on conductors where standard clamp-on sensors cannot be used. In particular, it can be installed in tight spaces, around cable bundles, around wide or large bus bars, or even wrapped around irregular shapes. It is suitable for large current measuring.

They combine the benefits of a thin, flexible, clip-around Rogowski (sensor) coil with a signal conditioner providing accurate, true RMS measurement, of voltage output 100mV/kA. Models range from 1A to 100,000Arms with an accuracy of 1% of reading. Rated EN 61010, 600V CAT IV, 1000V CAT III. Low cost AC current measurement probe designed to plug into digital multimeters, oscilloscopes, power quality analysis and power or harmonic meters. The length of the rogowski coil current sensor can be selected from 40cm to 100cm or more. Fits around large or small conductors. Capable of getting into tight or difficult spaces. Ideal for measuring AC current in a group of conductors.



All of our rogowski coil are strictly comply IEC60044-1, IEC 61869-2, ANSI/IEEE C57.13, IEC/EN61010-2-032, IEC/EN 61010-2-031.

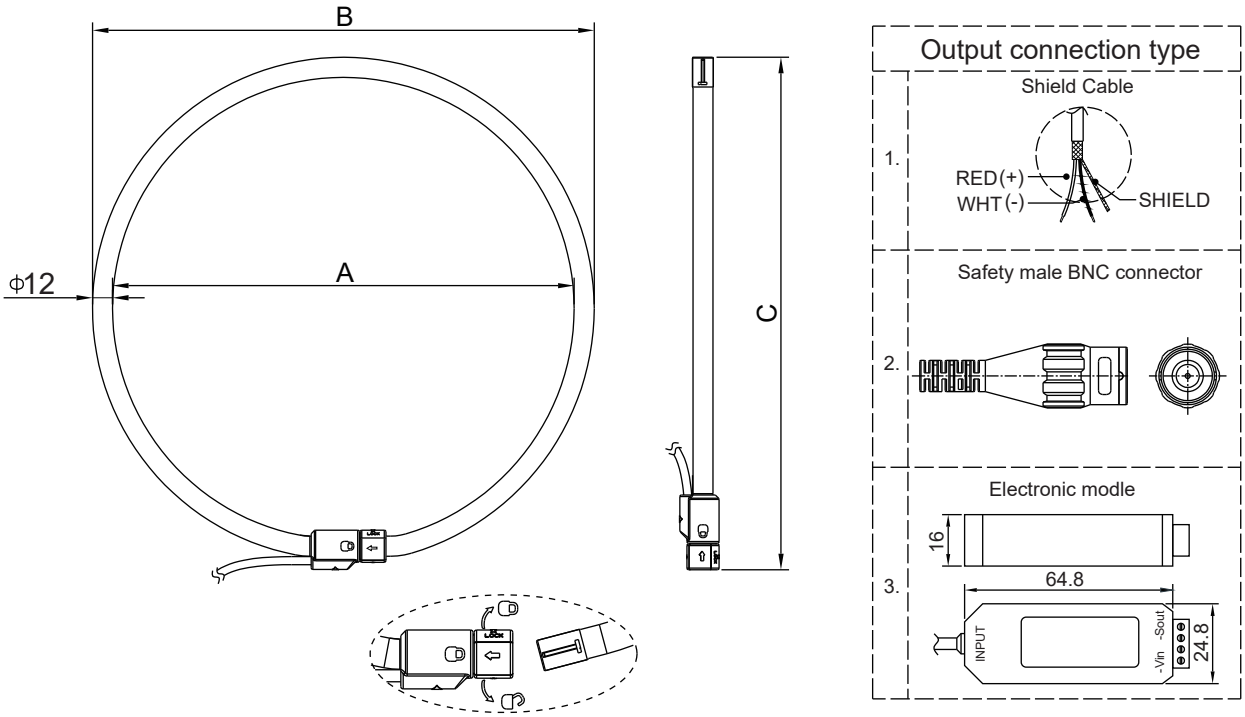
Features

1. CNAS, UL, CE mark;
2. Minimal positional error;
3. Zero power consumption;
4. IP68 protection level design;
5. Ø8 screw type flexible Rogowski coil;
6. Frequency 0.1Hz-10MHz Bandwidth;
7. Conforms to EN 61010, 1000V CAT III;
8. Measurement range of 1A to 100KA AC;
9. 128 high times harmonic measurement;
10. Low phase shift for power measurement;
11. No danger from open-circuited secondary;
12. High permeability magnetic material core;
13. Strong anti-interference and good stability;
14. Improved ergonomic design & easy operation;
15. Excellent linearity 0.2% for current measurement;
16. 100mV/kA or 85mV/kA or 50mV/kA output signal;
17. Designed for DMMs, oscilloscopes, recorders, power and harmonic meters;
18. Holding wire diameter: ϕ305mm/190mm/120mm;

Appliations

1. Multimeter;
2. Oscilloscope;
3. Power recorders;
4. Energy sub-meters;
5. Smart power meter;
6. Power quality meter;
7. Power load monitoring;
8. Data logging/recording;
9. Power quality analyzer;
10. Energy meter calibrator;
11. Power monitoring device;
12. Power and harmonic meters;
13. Lightning current measurement;
14. Measuring around cable bundles;

Outline Drawing



Dimension

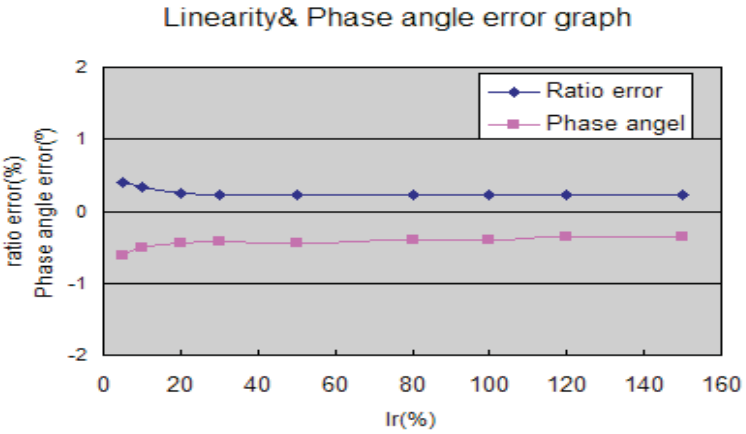
Dimensions(mm)	FQ-RCT02-120	FQ-RCT02-190	FQ-RCT02-305
Window A	120	190	305
Coil OD B	145	205	335
Coil Length C	400	600	1000
Output connection	1. UL2586-ESB 2x24AWG L=150cm (as required)		
	2. Coax terminated with safety male BNC connector L=250cm (as required)		
	3. UL2586-ESB 2x24AWG L=150cm (as required) with integrator		

Parameters

Electrical parameters				
Model		FQ-RCT02-120	FQ-RCT02-190	FQ-RCT02-305
Current range		1A - 100kA		
Frequency		10Hz - 10MHz		
Output voltage	Rated current	1000A/2000A	2000A/3000A	3000A/6000A
	50Hz	100mV/200mV AC	200mV/300mV AC	300mV/600mV AC
Max output		10kA or 100kA		
Accuracy		<1% @25°C (45-65Hz)		
Phase error		<30′ @25°C (45-65Hz)		
Output sensitivity		50mV/kA, 85mV/kA, 100mV/kA (50Hz)		
Coil section diameter		8mm		
Output sensitivity		±2% Max (No Calibration)		
		±0.5% @25°C (With Calibration)		
Linearity error		±0.2% RD		
Position Sensitivity		±1%		
External Influence		±1% Max		
Bandwidth		0.1Hz - 10MHz(-3dB)		
Power Supply		/		
Lead length		2.5m or 5m		
Standard		EN 61010-1, EN 61010-2-032, EN 61010-2-031 IEC60044-1, & IEC61869-2, 1000V CAT III		
Weight		150g - 230g		
Degree of protection		IP68		
Operation temperature		-30°C to +80°C		
Storage temperature		-40°C to +90°C		

Notes: Can be customized current probe according to user requirements!

Linearity & Phase Angle Error Graph



Current range 20~ 2000A @ 25°C

Position Sensitivity

Bus bar Position		Window A of coil (Φmm)			Position error
		120	190	305	
Φ (mm)	●	<12.5	<20	<35	<0.5%
Angel (°)	●	90°~270°			<1%
Radius(mm)	r	<12	<16	<20	<2%

Usage Instruction