

Flexible Rogowski Coil Specification

RSD2**0 is a flexible current transducer based on Rogowski principle, particularly suitable for measurement in combination with portable devices. RSD coils are available in different sizes and can be supplied according to customer's design, therefore they can be used in all those applications, in which traditional transducers are not fitting due to its size and/or weight

What is a Rogowski coil?

Rogowski coils have been used for the detection and measurement of electric currents for decades. They are based on a simple principle: an "air-cored" coil is placed around the conductor in a toroidal fashion and the magnetic field produced by the current induces a voltage in the coil. The voltage output is proportional to the rate of change of current. This voltage is integrated, thus producing an output proportional to the current.

By using precision winding techniques, especially developed for the purpose, the coils are manufactured so that their output is not influenced by the position of the conductor within the toroid, and to reject interference from external magnetic fields caused, for example, from nearby conductors. Basically, a Rogowski coil current measuring system consists of a combination of a coil and conditioning electronics. Rogowski coil current transducers are used for the AC measurement.

They can be used in similar circumstances to current transformers but for many applications they have considerable advantages:

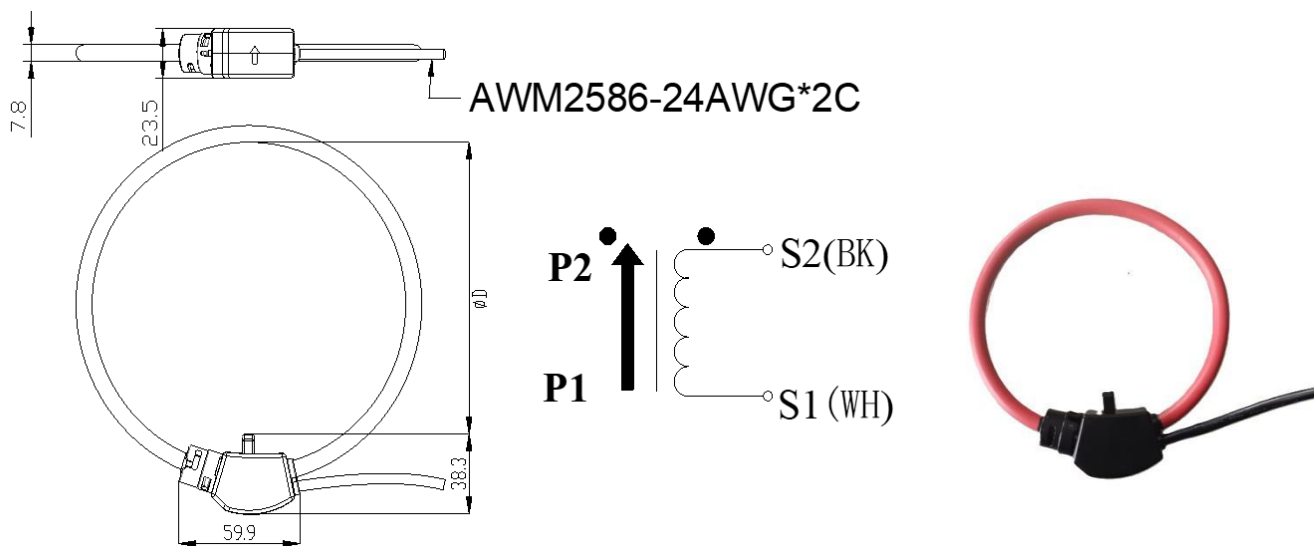
- Wide dynamic range.
- High linearity.
- Very useful with large size or awkward shaped conductors or in places with limited access. Thanks to the structure without hard core, the coil can be easily manufactured according to the application or to the available space.
- Unlike traditional current transducers, there is no danger from open-circuited secondaries.
- They cannot be damaged by large overloads.
- They are non-intrusive. They draw no power from the main circuit carrying the current to be measured.
- They are also light weighted and in some applications are light enough to be suspended on the conductor being measured.

The transducer does not measure direct currents but, unlike a current transformer, it can carry out accurate measurements of AC component even if there is a large superimposed DC component, since there is no iron core causing saturation. This feature is particularly useful for measuring ripple currents for example in battery charging systems

Technical Data:

Part No.	RSD2**0
Rated Input (AC)	1000A@50Hz
Rated output (AC)	Support customized parameter calibration within the range of 40mV~100mV
Measuring input Range(AC)	Up to 200 kA
Accuracy	±0.5%
Frequency Range	10Hz~100kHz
Isolation Voltage	Between primary and secondary circuit: 7kV rms/50Hz/1 min.
Linearity	±0.2%
Working Temperature	-40℃~+85℃
Storage Temperature	-40℃~+85℃
Temperature Coefficient	100ppm/℃
Position Sensitivity	±1%
Coil Dimensions	Window ID is 50mm-300mm (Customized), Coil diameter is 7.8mm.
Protection Grade	IP68
Output Cable	Output cable: AWM2586 24AWG*2C jacketed cable with shielding (two core wires, white/black). Cable length is customized.
Coil color	Red, Yellow, Green, Orange, Blue
Environment Protection	RoHS compliant
Flame Retardant Rating	UL94 V-0
Safety Standards	EN61010-1, EN61010-2-032
UL Listed	ANSI/CAN/UL 2808 standard, file # E468983

Product Photo and Outline Drawing (mm):



Selection Description:

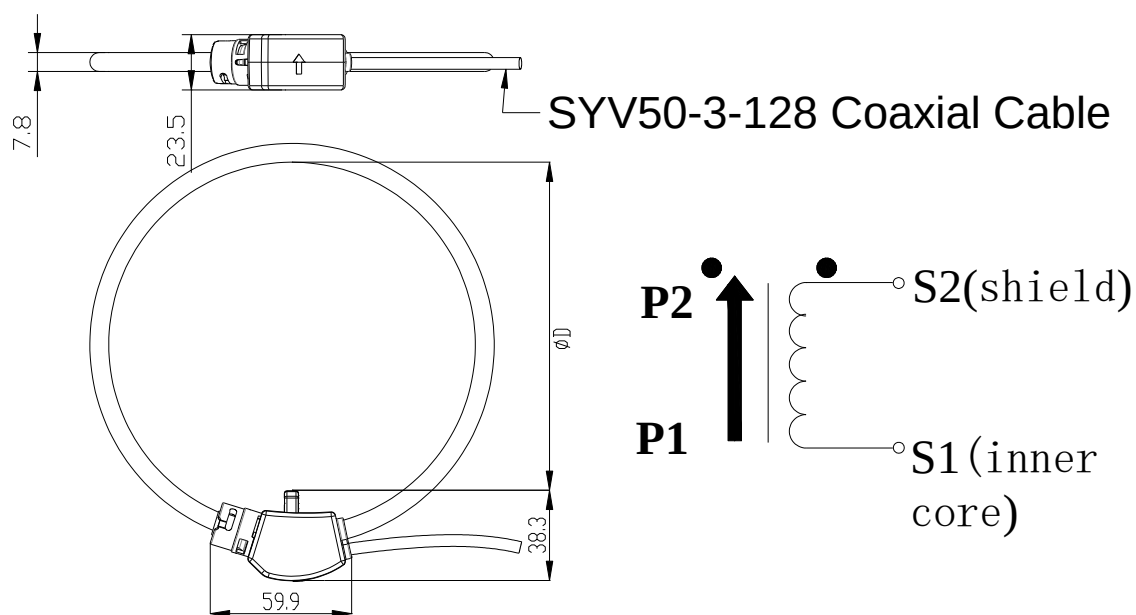
Indicates the coil window diameter in centimeters (cm). The model with a 10 cm window diameter is RSD2100.

Flexible Rogowski Coil Specification

Technical Parameters:

Model	RNH1060
Input Current (AC)	0-200kA
Output Voltage (AC)	16.5mV/KA @50Hz
Accuracy	≤±5%
Frequency Range	50Hz~5MHz
Linearity	±0.2%
Temperature Coefficient	≤50ppm/°C
Internal Resistance	1.2Ω±0.3Ω
Working Temperature	-40°C~+85°C
Storage Temperature	-40°C~+85°C
Position Sensitivity	≤±1%
Protection Grade	IP67
Coil Dimensions	Window ID is 60mm (Customized)
Output Cable	SYV50-3-128 coaxial cable. Cable length is 2m (customized).
Coil color	Orange
Environment Protection	RoHS compliant
Flame Retardant Rating	UL94 V-0

Outline dimensions and product photo (mm):



Selection Description:

Indicates the coil window diameter in centimeters (cm). The model with a 10 cm window diameter is RNH1100.