

Operation steps

- 1) Connect to the oscilloscope: Set the oscilloscope input impedance to $1M\Omega$, connect the probe BNC end to oscilloscope (make sure the oscilloscope is properly grounded);
- 2) Power the probe: Use standard adapter to power the probe. Indicator light turns green after power on;
- 3) Connect the DUT: make sure that the coil plug is inserted in place and the wire or pin under test passes through the appropriate position of the coil.
- 4) Power up the DUT.
- 5) After test, disconnect the circuit first, then unplug the coil.
- 6) Disconnect probe power.

Warranty

- 1) Micsig warrants the main body of this current probe for 1 year.
During the warranty period, Micsig will be responsible for free maintenance for any failure caused by the quality of the product under normal use.
- 2) Under the following circumstances, Micsig will refuse to provide maintenance services or charge for a fee:
 - a. No packaging or anti-counterfeiting label.
 - b. Anti-counterfeit label has been altered or blurred beyond recognition.
 - c. Unauthorized disassembly, such as: changing wires, dismantling internal components, etc.
 - d. No sales voucher or the content of sales voucher does not match the product.

Safety Precautions

- ✘ Please use within safe voltage range.
- ✘ The equipment connected to the probe must be reliably grounded.
- ✘ The outer skin of the Rogowski coil should be inspected before use. If it is damaged, stop using it.
- ✘ Before connecting the probe to the circuit under test, make sure the circuit under test is turned off.
- ✘ Please use the adapter that comes standard with the probe.

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Micsig

Rogowski AC Current Probe -- RCP series

Quick Guide

Overview

The RCP series Rogowski current probe measures AC currents up to 600Apk, max. bandwidth up to 30 MHz, delivers 1% typical accuracy, able to measure high-frequency, large current signals easily and accurately.

A 1.6mm thin, flexible, clip-around Rogowski coil allow user to conduct measurements without damaging the conductor and have no interference to the DUT.

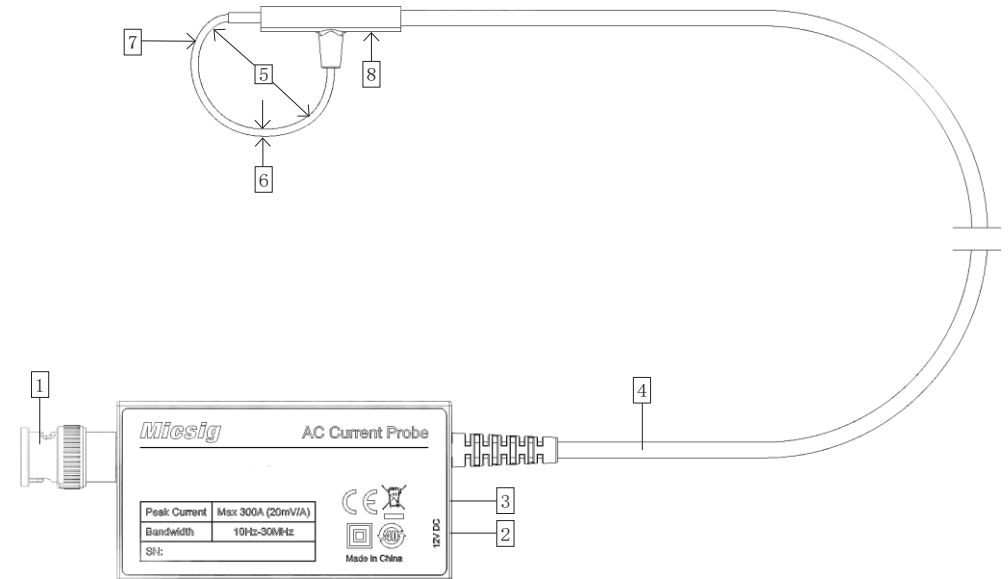


Specifications

| Model | RCP300XS | RCP600XS |
|---|---|---|
| Bandwidth | 10Hz-30MHz | 10Hz-30MHz |
| Measurement range | 200mA _{pk} -300A _{pk} | 200mA _{pk} -600A _{pk} |
| Output sensitivity | 20mV/A (50X) | 10mV/A (100X) |
| Accuracy (typical) | 1% | 1% |
| Output noise | < 18mV _{pp} | < 12mV _{pp} |
| Output interface | BNC | |
| Peak di/dt | 20kA/μs | 40kA/μs |
| Droop | 9%/ms | 6%/ms |
| Effect of conductor position | Within ±1% (deviation from center part) | |
| Offset voltage | <±1mV | |
| Peak coil isolation voltage | AC 1kV _{rms} (1 min) (50Hz/60Hz) (Rogowski coil part only) | |
| Output impedance | High impedance | |
| Measurable conductor diameter | ≤ 20mm | |
| Power supply | DC 12V | |
| Integrator size | 70*40*17mm | |
| Wire length (integrator to Rogowski coil) | 1.5m (customizable) | |
| Coil inner diameter | 25mm (customizable) | |
| Coil circumference | 80mm (customizable) | |
| Coil cross-section diameter | Appx. 1.6mm | |
| Interface | 1MΩ BNC | |
| Environment | | |
| Working temperature | Base unit : 0°C - 55°C Coil : -20°C - 125°C | |
| Storage temperature | -30°C -70°C | |
| Working humidity | ≤ 85%RH | |
| Storage humidity | ≤ 90%RH | |

Appearance

The RCP series current probe are composed of two parts: Integrator and Rogowski coil.



- Output:** Standard BNC, compatible with all BNC oscilloscopes.
- Power supply:** DC 12V, adapter
- Power indicator:** Turn Green after powered on.
- Cable length:** 1.5m, from integrator to coil, customizable.
- Rogowski coil inner diameter:** 25mm, measures wires within 20mm in diameter.
- Rogowski coil cross-section diameter:** 1.6mm
- Rogowski coil circumference:** 80mm, customizable.
- Current direction:** When the current flows in the marked direction, the output is positive, otherwise it is negative.

Precautions

- ✘ to ensure accuracy, the wire being measured should be positioned as much as possible between X and Y in the right diagram, where X is the center of coil and Y is the midpoint of the coil circumference.
- ✘ to ensure accuracy, the wire should avoid the coil junction as much as possible during measurement (shadow area).
- ✘ try to stay away from strong magnetic field interference sources as much as possible to avoid measurement errors.
- ✘ the coil can be placed around the wire being measured to measure the interference signals in the surrounding area, to determine whether there is strong interference nearby.

