

Setting up and Using your Probe

1. Connect to an Oscilloscope

(Use the BNC cable shipped with the probe.)



2. Connect to a De-energized Conductor Under test



3. Power Up

(Use either the external power supply or batteries shipped with the probe.)



4. Turn the Probe ON



5. Set up the Oscilloscope

- Use the **Setup > Probe Configuration** option in the oscilloscope software GUI to set the **Probe Type to Current Probe** and the **Probe Attenuation Ratio** to match the "Output/Input" ratio (in V/A) printed on the label on the front side of the probe.
- Use the **Setup > Channel** option to set **Units to Amps**.

6. Start Making Measurements

To make the most accurate measurements, refer to the probe's user guide that includes details on bandwidth and positional accuracy etc.

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Safety and Regulatory Information



KC certification mark to demonstrate compliance with the South Korean EMC requirements.
South Korean Class A EMC declaration This equipment is Class A suitable for professional use and is for use in electromagnetic environments outside of the home.



The CE mark is a registered trademark of the European Community. ISM GRP 1-A denotes the instrument is an Industrial Scientific and Medical Group 1 Class A product. ICES/NMB-001 indicates product compliance with the Canadian Interference-Causing Equipment Standard.



This symbol indicates the Environmental Protection Use Period (EPU) for the product's toxic substances for the China RoHS requirements.



A registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.



Notice for the European Community: This product complies with the WEEE Directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste.
Product Category: With reference to the requirement types in the WEEE Directive Annex I, this product is classed as a "Monitoring and Control Instrumentation" product.
Do not dispose in domestic household waste.
To return unwanted products, contact your local Keysight office.

Quick Start Guide

N7040A/1A/2A Rogowski AC Current Probes

Read this guide before using the product.
For more information, refer to the product's user guide available at
<http://www.keysight.com/find/N7040A>.



N7040A / 1A / 2A Overview

The N7040A / 1A / 2A probes are flexible clip-around AC current probes with a Rogowski coil that allows these probes to monitor currents in confined spaces and difficult to reach conductors.

Model	Description
N7040A <i>Miniature clip-around coil (4.5 mm thick)</i>	23 MHz, 3000 Apk Bandwidth - 3 Hz - 23 MHz Output / Input - 0.002 V/A (500:1) Max. Working Voltage - 5kVac, CAT III
N7041A <i>Miniature clip-around coil (4.5 mm thick)</i>	30 MHz, 600 Apk Bandwidth - 12 Hz - 30 MHz Output / Input - 0.01 V/A (100:1) Max. Working Voltage - 5kVac, CAT III
N7042A <i>Ultra thin miniature clip-around coil (max. 1.7 mm thick)</i>	30 MHz, 300 Apk Bandwidth- 9.2 Hz - 30 MHz Output / Input - 0.02 V/A (50:1) Max. Working Voltage - 1.2kVac, CAT II

For detailed specifications and characteristics of each of these models, refer to the user guide available at <http://www.keysight.com/find/N7040A>.

Compatibility with Oscilloscopes

Compatible with all Keysight Infiniium and InfiniiVision oscilloscopes with 1Mohm BNC input.

For oscilloscopes that do not have BNC connectors such as the *V-series* or *90000X-series*, you need the N5449A adapter.



- | | |
|---------------------------------|-------------------------------------------------|
| ① Rogowski Coil (Probe) | ⑧ 4 X AA Batteries |
| ② Free End of the Coil | ⑨ Status Indicator LED
● ON
● Low Battery |
| ③ Ferrule | ⑩ Power Button |
| ④ Connecting Cable | ⑪ Power Supply Adapter *
(0950-5831) |
| ⑤ External Power Adapter Socket | ⑫ BNC to BNC Cable |
| ⑥ Enclosure | |
| ⑦ BNC Output Socket | |

* Item 11 is not shown in the drawing

Before you Start Using your Probe

CAUTION The probe is an AC probe only and its intended use is for measuring AC current. You must set up the oscilloscope properly to make accurate measurements. Refer to the probe's user guide for details.

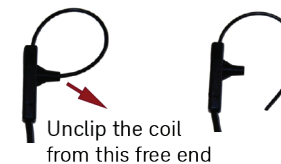
WARNING If HAZARDOUS LIVE voltages are present and accessible in the installation, appropriate protective measures must be taken to avoid electric shock.

WARNING Be extremely careful when using the sensor loop (coil) of the probe on uninsulated conductors. The power of the uninsulated conductor must be turned off when applying or removing the probe's coil from this conductor. In addition, make sure that the probe is never used at voltages greater than its voltage rating (safe PEAK working voltage). For N7040A and N7041A, it is 5kV peak and for N7042A, it is 1.2kV peak.

Proper Handling of the Probe

The sensor loop (coil) of the probe is fragile and must be handled with care to avoid any damage. Also, the accuracy of the measurements is greatly affected if the coil is not inserted properly. The correct insertion techniques are illustrated in detail in the user guide of these probes.

Clipping / Unclipping the Coil



Unclip the coil from this free end

Minimum Bend Radius of the Coil

Model	Minimum Bend Radius of the Coil
N7040A	14 mm
N7041A	14 mm
N7042A	10 mm

CAUTION

- Never force the free end of the coil into the ferrule. This may damage the coil insulation.
- Take care not to put any force onto the cable attached to the coil. This may damage the coil.
- It is recommended to store the coil in its protective case when not in use.