

N7040A/41A/42A Rogowski Coil AC Current Probes

- Easy-to-use clip-around coil enabling current measurement in confined space
- Measure AC current up to 3,000 Apk (with N7040A)
- Up to 30 MHz bandwidth (with N7041A/42A)

The N7040A Series Rogowski coil current probes are designed for measuring AC currents ranging from a few 100 milliamps to 3,000 A from 3 Hz to > 30 MHz.

The probes have a thin, lightweight, flexible and simple-to-use clip-around Rogowski coil that enables current measurement in the most difficult-to-reach parts and confined spaces of a circuit under test and can measure large AC current without increase in transducer size.

The N7040A Series is ideal for measuring AC current in the presence of large DC current and can be used to design, debug and troubleshoot power semiconductor circuits, power supplies, inverters and motor drives.

These probes come with an AC power adapter and 4x AA batteries to power the probe and can be used with any oscilloscope with 1 Mohm BNC interface.



	N7040A	N7041A	N7042A
HF bandwidth (-3 dB)	23 MHz	30 MHz	30 MHz
LF bandwidth (-3 dB)	3 Hz	12 Hz	9.2 Hz
Peak current (A _{pk})	3,000 A _{pk}	600 A _{pk}	300 A _{pk}
Sensitivity	2 mV/A (500:1)	10 mV/A (100:1)	20 mV/A (50:1)
Max noise (mV _{pp})	8 mV _{pp}	10 mV _{pp}	15 mV _{pp}
Droop (%/msec)	2.8%/msec	11%/msec	9%/msec
Peak di/dt (kA/μsec)	80 kA/μsec	40 kA/μsec	20 kA/μsec
Absolute max peak di/dt (kA/μsec)	100 kA/μsec	100 kA/μsec	70 kA/μsec
Absolute max rms di/dt (kA/μsec)	1.2 kA/μsec	1.2 kA/μsec	1.2 kA/μsec
Accuracy	Calibrated to ± 0.2% of reading with conductor central in the coil loop		
Variation in conductor position	± 2% of reading		
Linearity	0.05% of reading		
DC offset	± 3 mV max at 25 °C		
Temperature range	Coil and cable at -40 to +125 °C		
Coil voltage	5 kV peak	5 kV peak	1.2 kV peak
Coil length (circumference)	200 mm	100 mm	80 mm
Coil cross-section (diameter)	4.5 mm	4.5 mm	1.7 mm
Cable length	4 m (connecting cable coil to integrator box)	2.5 m (connecting cable coil to integrator box)	
Total cable length	4.5 m (4 m input cable + 0.5 m BNC cable to scope)	3 m (2.5 m input cable + 0.5 m BNC cable to scope)	
Probe output	Terminated into 1 MΩ BNC input of oscilloscope		
Probe power	4x AA batteries and AC power adapter (included)		