AC/DC Current Probe

TCP0030 Data Sheet

- High Accuracy with Typically Less than 1% DC Gain Error
- Accurately Measures Current Levels as Low as 1 mA
- Low Noise and DC Drift
- Easy to Degauss and Autozero
- Setup Controls and Probe Status/Diagnostic Indicators are Provided on Both the Probe Hardware, and through an Easy-to-Access Oscilloscope UI Display Menu
- Safety Certified for U.S. and Canada

Features & Benefits

- Easy-to-use and Accurate AC/DC Current Measurements
- Connects Directly to DPO7000 and DPO4000 Series Oscilloscopes Using the New TekVPI™ Probe Interface
- Provides Automatic Units Scaling and Readout on the Oscilloscope Display
- Split-core Construction Allows Easy Circuit Connection
- DC to >120 MHz Bandwidth
- 30 A RMS Maximum Current Capability
- 50 A Peak Pulse Current Capability

Applications

- Power Supplies
- Semiconductor Devices
- Power Inverters/Converters
- Electronic Ballasts
- Industrial/Consumer Electronics
- Mobile Communications
- Motor Drives
- Transportation Systems

TCP0030

TCP0030 is a high-performance, easy-to-use AC/DC current probe designed for use and direct connection (without the need of an additional power supply) to the TekVPI™ probe interface used on Tektronix' new DPO7000 and DPO4000 Series Oscilloscopes. This AC/DC current measurement probe provides greater than 120 MHz of bandwidth with selectable 5 A and 30 A measurement ranges. It also provides exceptional low-current measurement capability and accuracy to current levels as low as 1 mA, important for meeting today's challenging current measurement needs.

Tektronix®

Characteristics

Bandwidth – DC to ≥120 MHz

Rise Time – ≤2.92 ns

Max RMS Current – 30 A

Max Peak Pulse Current – 50 A

Minimum Sensitivity –
1 mA (on oscilloscopes that support 1 mV/div setting)
AC Coupling (on oscilloscopes that support AC/DC coupling)

Current Ranges – 5 A and 30 A

Max Bare-wire Voltage – Use insulated wire only

Typical Characteristics

DC Accuracy –
±1% typical
±3% warranted

Max Amp-second Product – 500 A*µs (in 30 A Range)

Insertion Impedance –
1 mΩ at 10 kHz
3.5 mΩ at 100 kHz
0.08 Ω at 1 MHz
0.15 Ω at 10 MHz
0.7 Ω at 100 MHz
0.85 Ω at 120 MHz

Signal Delay – 14.5 ns

Environmental

Temperature –
Operating: 0 ºC to +50 ºC
Nonoperating: -40 ºC to +75 ºC

Humidity –
Operating: 5% to 95% Relative Humidity (RH) at up to +30 °C; 5% to 85% RH above 30 °C up to +50 °C, noncondensing
Nonoperating: 5% to 95% Relative Humidity (RH) at up to +30 °C; 5% to 85% RH above 30 °C up to +75 °C, noncondensing

Altitude –
Operating: Up to 3,000 m (10,000 ft.)
Nonoperating: Up to 12,192 m (40,000 ft.)

Regulatory

Compliance Labeling –
CE (European Union)
WEEE (European Union)

Physical Characteristics

Probe Head Size	cm	in.
Height	3.2	1.25
Width	1.6	0.625
Length	20	7.77
Other Dimensions		
Cable Length	200	79
Max Conductor Diameter	0.38	0.15
Weight	**kg**	**lb.**
Shipping	1.55	3.44
Power Requirements		
TCP0030 is powered directly by the DPO7000 and DPO4000 Series Oscilloscopes using TekVPI™ interface		

Recommended Oscilloscopes

DPO7000 and DPO4000 Series Oscilloscopes with TekVPI™ probe interface.

Standard Warranty

One year parts and labor.

Ordering Information

TCP0030

AC/DC Current Probe

Includes: Instruction manual (071-1812-xx English, or 071-1813-xx Japanese, or 071-1814-xx Simplified Chinese)*1, Protective Cover (016-1923-xx), Probe Ground Lead – 6 in. length (196-3120-xx), Nylon Carrying Case (016-1952-xx).

*1 Specify manual language when ordering.

Language Options

Opt. L5 – Japanese instruction manual.
Opt. L7 – Simplified Chinese instruction manual.

Service Options

Opt. C3 – Calibration Service 3 Years.
Opt. C5 – Calibration Service 5 Years.
Opt. D1 – Calibration Data Report.
Opt. D3 – Calibration Data Report 3 Years (with Opt. C3).
Opt. D5 – Calibration Data Report 5 Years (with Opt. C5).
Opt. R3 – Repair Service 3 Years.
Opt. R5 – Repair Service 5 Years.

Recommended Accessories

Current Loop, 1 Turn, 50 Ω with BNC connector used for Performance Verification – Order 015-0601-50.

CE

ISO 9001

Product(s) are manufactured in ISO registered facilities.

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For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit **www.tektronix.com**

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