

# AC/DC Current Probe

## ► TCP0030



## 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.

### ► Characteristics

**Bandwidth** – DC to  $\geq 120$  MHz.

**Rise Time** –  $\leq 2.92$  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 –

$\pm 1\%$  typical.

$\pm 3\%$  warranted.

#### Max Amp-Second Product –

500 A $\cdot$  $\mu$ S (in 30 A Range).

#### Insertion Impedance –

1 m $\Omega$  @ 10 kHz.

3.5 m $\Omega$  @ 100 kHz.

0.08  $\Omega$  @ 1 MHz.

0.15  $\Omega$  @ 10 MHz.

0.7  $\Omega$  @ 100 MHz.

0.85  $\Omega$  @ 120 MHz.

**Signal Delay** – 14.5 ns.

#### Environmental

##### Temperature –

Operating: 0 °C to +50 °C.

Non-Operating: -40 °C to +75 °C.

##### Humidity –

Operating: 5% to 95% Relative Humidity (RH)

at up to +30 °C; 5% to 85% RH above 30 °C

up to +50 °C, non-condensing.

Non-Operating: 5% to 95% Relative Humidity (RH)

at up to +30 °C; 5% to 85% RH above 30 °C up

to +75 °C, non-condensing.

##### Altitude –

Operating: Up to 3,000 m (10,000 feet).

Non-operating: Up to 12,192 m (40,000 feet).

#### Regulatory

##### Compliance Labeling –

CE (European Union).

WEEE (European Union).

### ► 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

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 Via an Easy-to-Access Oscilloscope UI Display Menu

Safety Certified for U.S. and Canada

### ► Applications

Power Supplies

Semiconductor Devices

Power Inverters/Converters

Electronic Ballasts

Industrial/Consumer Electronics

Mobile Communications

Motor Drives

Transportation Systems

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## ▶ 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	lbs.
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, 071-1813-xx Japanese or 071-1814-xx Simplified Chinese)<sup>1</sup>, Protective Cover (016-1923-xx), Probe Ground Lead – 6 in. length (196-3120-xx), Nylon Carrying Case (016-1952-xx).

## Language Options

**Opt. L5** – Japanese instruction manual.

**Opt. L7** – Simplified Chinese instruction manual.

<sup>1</sup> Specify manual language when ordering.

## 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.

## Contact Tektronix:

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Updated 15 June 2005

Our most up-to-date product information is available at:  
[www.tektronix.com](http://www.tektronix.com)

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in ISO registered facilities.



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12/05 HB/WWW

51W-19042-1

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