

# Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 2 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, covering the cost of warranty returns BOTH ways (plus supplying a loan unit, if available) and supplying a free business tool with every order.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based near Heathrow Airport in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

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# 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

### Applications

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

### 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

### 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 $\Omega$  at 10 kHz

3.5 m $\Omega$  at 100 kHz

0.08  $\Omega$  at 1 MHz

0.15  $\Omega$  at 10 MHz

0.7  $\Omega$  at 100 MHz

0.85  $\Omega$  at 120 MHz

**Signal Delay** – 14.5 ns

## Environmental

**Temperature** –

Operating: 0 °C to +50 °C

Nonoperating: -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, 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  $\Omega$  with BNC connector used for Performance Verification** – Order 015-0601-50.



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](http://www.tektronix.com)



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