

TEKTRONIX

TCP0150

The Tektronix TCP0150 is a high-performance 150 A AC/DC current probe designed specifically for use with the TekVPI™ oscilloscope interface. With a bandwidth of DC to 20 MHz, it provides excellent accuracy and high sensitivity for measuring both low-level currents down to 5 mA and high-power currents up to 300 A peak. The probe is powered directly by the oscilloscope and features automatic scaling, on-screen readout, and integrated degaussing/auto-zero controls.

SPECIFICATIONS

General

Interfaces	TekVPI interface
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Physical

Power Supply	Powered directly via TekVPI probe interface
Operating Temperature	0 °C to 50 °C °C
Weight	0.66 kg kg
Jaw Opening	21 mm

Electrical & Measurement Performance

Bandwidth	DC to >=20 MHz
Rise Time	<=17.5 ns
Maximum Continuous Current (RMS)	150 A
Maximum Peak Pulse Current	300 A
Minimum Measurable Current	5 mA
Measurement Ranges	25 A / 150 A
DC Accuracy	±3% (typical ±1%)
Amp-Second Product	3000 A·μs (150 A range), 500 A·μs (25 A range)
Propagation Delay	17 ns (typical)
Insertion Impedance (1 MHz)	0.03 Ω
Insertion Impedance (10 MHz)	0.12 Ω
Insertion Impedance (20 MHz)	0.3 Ω
Maximum Bare Wire Voltage	300 V RMS CAT II
Signal Coupling	AC, DC
Output Impedance	50 Ω
Random Noise (25 A Range)	≤2.5 mA RMS
Random Noise (150 A Range)	≤12.5 mA RMS

Interface & Compatibility

Interface Type	TekVPI
Power Requirements	Powered directly by TekVPI host oscilloscope
Host Oscilloscope Compatibility	Tektronix oscilloscopes with TekVPI probe interface
Automatic Scaling Support	Yes (automatic units and scaling on oscilloscope screen)

Control & Operation

Degauss and Auto-Zero Controls	Button on probe compensation box
Range Selection Controls	Button on probe compensation box or via oscilloscope menu
Status Indicator LEDs	Yes (Degauss/AutoZero status, 25 A range, 150 A range)
Jaw Open/Closed Detection	Yes

Physical & Mechanical

Maximum Conductor Diameter	21 mm (0.83 in)
Probe Head Length	26.8 cm (10.55 in)
Probe Head Width	4.1 cm (1.6 in)
Probe Head Height	6.8 cm (2.7 in)
Probe Cable Length	2 m (6.6 ft)
Probe Head Weight	0.66 kg (1.45 lb)

Environmental Specifications

Storage Temperature	-40 °C to 75 °C (-40 °F to 167 °F)
Operating Humidity	5% to 95% RH (non-condensing) up to +30 °C; 5% to 85% RH from +30 °C to +50 °C
Storage Humidity	5% to 95% RH (non-condensing) up to +30 °C; 5% to 85% RH from +30 °C to +75 °C
Operating Altitude	Up to 2,000 m (6,560 ft)
Storage Altitude	Up to 12,192 m (40,000 ft)

Regulatory & Safety Compliance

Safety Certifications	UL61010-2-032, CSA61010-2-032, EN61010-2-032, IEC61010-2-032
Pollution Degree	2
RoHS Compliant	Yes

Ordering & Maintenance

Standard Accessories	Probe cover, instruction manual, certificate of calibration
Warranty Period	1 year

Electrical Characteristics

Maximum Insulated Wire Voltage	600 V RMS CAT II
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Performance

Typical DC Accuracy	±1.5% of reading ±50 mA
DC Accuracy Temperature Range	23 °C ±5 °C
Minimum Sensitivity	5 mA (on oscilloscopes supporting 1 mV/div)
Typical Gain Drift	<2.5% (over 0 °C to 50 °C operating range, after 20-minute warm-up)

Physical Characteristics

Compensation Box Length	107 mm
Compensation Box Width	41 mm
Compensation Box Height	26 mm

Safety & Compliance

EMC Compliance	EC Council Directive 2004/108/EC, FCC Part 15 Class A, EN61326-1, EN61326-2-1, AS/NZS CISPR 11
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TECHNOLOGY

Split-core Hall-effect and transformer AC/DC current sensing

APPLICATIONS

Power supply design, motor drive analysis, power electronics, and industrial maintenance

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