



## A6312 DC-coupled Current Probe

DC to 100 MHz Bandwidth

Simultaneous AC/DC  
Measurements

High Sensitivity

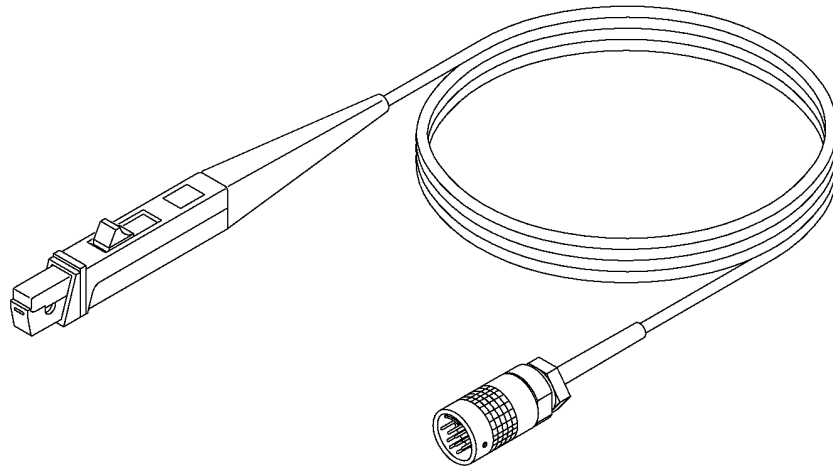
Split Core Construction Enables  
Easy Circuit Connection

20 Amps DC + Peak AC Current

50 Amps Peak Pulse Current

100 x 10<sup>-6</sup> Amp \* Sec Product

UL, CSA, CE Marking



**T**he A6312 is a 100 MHz DC-coupled current probe for use with the AM 503, AM 503A, AM 503B, and AM5030 current probe amplifiers. The combination of an A6312, an AM 503B, and a TM502A provides a flexible current-measurement tool that can display currents up to 20 Amps DC + peak AC and 50 Amps peak pulse on any oscilloscope. It has a split core construction that permits easy connection to the circuit under test. It may be ordered either separately as the A6312 or as Option 05 to the AM 503S.

### SPECIFICATIONS

#### STANDARD SPECIFICATIONS for A6312/AM 503B/TM502A

##### Bandwidth

DC to 100 MHz

##### Maximum DC + Peak AC Current

20 Amps

##### Maximum Peak Pulse Current

50 Amps

##### Minimum Sensitivity

1 mA/div

##### DC Accuracy

±3% (±1.5% typical)

##### Maximum Barewire Voltage

300 Volts (Category I)

#### TYPICAL CHARACTERISTICS

##### Insertion Impedance

0.1 Ohms at 1 MHz  
0.2 Ohms at 50 MHz  
1.0 Ohm at 100 MHz

##### Propagation Delay

17 ns

##### Maximum Conductor Diameter

3.8 mm (0.15 in.)

##### Electrostatic Immunity (per

IEC 801-2)

>8 kV

##### Amp \* Sec Product

100 x 10<sup>-6</sup> Amp \* sec

##### Risetime

3.5 ns

#### PHYSICAL CHARACTERISTICS

##### Probe Weight

0.25 kg (0.56 lbs.)

##### Cable Length

2 m (6.6 ft.)

#### POWER REQUIREMENTS

The A6312 is powered by the AM 503B/TM502A. The performance specifications listed are for this combination of products.

#### A6312 SAFETY

##### CERTIFICATIONS

UL 3111-1

CSA 1010.1

IEC 1010-1, 1010-2-032



## A6312 DC-coupled Current Probe

For further information, contact Tektronix:

<b>ASEAN Countries</b> (65) 356-3900	<b>Japan</b> (Sony/Tektronix Corporation) 81 (3) 3448-4611
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<b>India</b> 91 (80) 2265470	<b>USA</b> 1-800-426-2200
<b>Italy</b> 39 (2) 250861	

### From other areas, contact:

Tektronix, Inc. Export Sales  
P.O. Box 500, M/S 50-255  
Beaverton, Oregon 97077-0001 USA  
(503)627-1916

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### SYSTEM SPECIFICATIONS

	A6312/AM 503B	A6312/AM 5030	A6312/AM 503A	A6312/AM 503
<b>Bandwidth</b>	DC to 100 MHz	DC to 100 MHz	DC to 80 MHz	DC to 100 MHz
<b>Risetime (10% to 90%)</b>	3.5 ns	3.5 ns	4.4 ns	3.5 ns <sup>1</sup>
<b>Aberrations (typical)</b>	7% p-p	7% p-p	7% p-p	7% p-p <sup>1</sup>
<b>DC Gain Accuracy</b>	3% (<1.5% typical)	3%	3%	3%
<b>Noise, RMS (typical)</b>	250 µA	250 µA	250 µA	250 µA

<sup>1</sup> Requires adjustment of R364 (HFComp) in amplifier.

### ORDERING INFORMATION

#### A6312 DC-COUPLED CURRENT PROBE

**Includes:** Instruction Manual P/N 070-9603-00

#### RELATED PRODUCTS

##### AM 503B

Current Probe Amplifier

##### AM 5030

Programmable Current Probe Amplifier

##### AM 503S

Current Measurement System

##### A6302

Current Probe – DC to 50 MHz, 20A

##### A6302XL

Current Probe – DC to 17 MHz, 20A, 8 m cable

##### A6303

Current Probe – DC to 15 MHz, 100A

##### A6303XL

Current Probe – DC to 10 MHz, 100A, 8 m cable

##### A6304XL

Current Probe – DC to 2 MHz, 500A

##### P5200

High Voltage Differential Probe

##### AM 503S

Current Measurement System

Opt 01 – Adds A6303 Probe

Opt 03 – Substitutes A6303 Probe for A6302 Probe

Opt 05 – Substitutes A6312 Probe for A6302 Probe

Opt 09 – Deletes A6302 Probe