

High-voltage Differential Probes

P5200A - P5205A - P5210A



Tektronix offers a broad portfolio of high-voltage probing solutions that enable users to safely and accurately make floating measurements.

Key performance specifications

- Bandwidths up to 200 MHz
- Up to 6000 V differential (DC + pk AC)
- Up to 2300 V common (RMS)

Key features

- Overrange Indicator
- Safety Certified
- Switchable Attenuation
- Switchable bandwidth limit

Applications

- Floating measurements
- Switching power supply design
- Motor drive design
- Electronic ballast design
- CRT display design
- Power converter design and service
- Power device evaluation

- BNC interface (P5200A probes)
- TekVPI® interface (TMDP and THDP Series probes)
- TekProbe® interface (P5205A, and P5210A Series probes)

Safe high-voltage probe solutions

The P5210A has the largest differential dynamic range capability from Tektronix, allowing users to safely measure up to ± 6000 V. This probe is supplied with two sizes of hook tips and have an overrange visual and audible indicator which warns the user when they are exceeding the linear range of the probe.

The P5205A is an active differential probe that is capable of safely measuring differential voltages up to ± 1500 V. The probe is effective in making measurements in IGBT circuits such as motor drives and power converters.

The P5200A can be used with any oscilloscope and enables users to safely make measurements of floating circuits with their oscilloscope grounded.

The P5200A Active Differential Probe converts floating signals to low-voltage ground-referenced signals that can be displayed safely and easily on any ground-referenced oscilloscope.

Connectivity options

The TMDP and THDP Series probes are equipped with the TekVPI® interface which allows smart communication between the oscilloscope and probe. Pushing the probe menu button will launch the probe control menu on the oscilloscope display providing access to all relevant probe settings and controls. These probes are designed to operate on TekVPI® oscilloscopes without requiring the TPA-BNC adapter.

The P52xxA Series probes are equipped with the Tektronix TekProbe® interface which communicates scale information to the oscilloscope. Direct connections can be made to oscilloscopes configured with the TekProbe® interface or to any oscilloscope when used with the 1103 TekProbe® Power Supply.

Specifications

All specifications apply to all models unless noted otherwise.

Model overview

Probes with the BNC and TekProbe® interface

	P5200A	P5202A	P5205A	P5210A
Attenuation	50X / 500X	20X / 200X	50X / 500X	100X / 1000X
Differential Voltage	500X: ±1300 V	200X: ±640 V	500X: ±1300 V	1000X: ±5600 V
Common Mode Voltage	50X: ±130 V ±1300 V	20X: ±64 V ±640 V	50X: ±130 V ±1300 V	100X: ±560 V ±5600 V
Maximum Input Voltage-to-Earth	1000 V CAT II	450 V CAT I 300 V CAT II	1000 V CAT II	2300 V CAT I 1000 V CAT III
Bandwidth	50 MHz	100 MHz	100 MHz	50 MHz
Differential Input Impedance	10 MΩ 2 pF	5 MΩ 2 pF	10 MΩ 2 pF	40 MΩ 2.5 pF
Input Impedance between each Input and Ground	5 MΩ 4 pF	2.5 MΩ 4 pF	5 MΩ 4 pF	20 MΩ 5 pF
Typical CMRR	DC: >80 dB	DC: >80 dB		
Cable length	100 kHz: >60 dB 3.2 MHz: >30 dB 50 MHz: >26 dB 1.8 m	100 kHz: >60 dB 3.2 MHz: >40 dB 50 MHz: >30 dB		

Ordering information

Standard accessories

P5200A and P5205A

Description	Quantity included	Reorder part number
Hook clips	1 set of red and black hook clips	AC280-FL
Pincer clips	1 set of red and black pincer clips	AC283-FL
Alligator clips	1 set of red and black alligator clips	AC285-FL
Extension cables	1 set of red and black extension cables	196-3523-00

P5210A

Description	Quantity included	Reorder kit part number
Probe tips	2	020-3070-00
Large hook clips	2	
Small hook clips	2	
Probe heads	2	

Probe and Accessory Derating Table

Common mode, relative to ground, when used with P52xxA Series probes

Accessory	Description	TMDP0200 / P5202A 450 V CAT I 300 V CAT II	THDP0200 / P5200A / P5205A 1000 V CAT II 600 V CAT III	THDP0100 / P5210A 2300 V CAT I 1000 V CAT III
196-3523-00	2x Extender Leads (1.5 m) 2300 V CAT I 1000 V CAT III	Standard 450 V CAT I 300 V CAT II	Standard 1000 V CAT II 600 V CAT III	Standard 2300 V CAT I 1000 V CAT III
AC280-FL	2x Hook Clips 1000 V CAT III 600 V CAT IV	Standard 450 V CAT I 300 V CAT II	Standard 1000 V CAT II 600 V CAT III	Optional 1000 V CAT I 1000 V CAT III
AC283-FL	2x Pincer Clips 1000 V CAT III 600 V CAT IV	Standard 450 V CAT I 300 V CAT II	Standard 1000 V CAT II 600 V CAT III	Optional 1000 V CAT I 1000 V CAT III
AC285-FL	2x Alligator Clips 1000 V CAT III 600 V CAT IV	Standard 450 V CAT I 300 V CAT II	Standard 1000 V CAT II 600 V CAT III	Optional 1000 V CAT I 1000 V CAT III
020-3070-00	Hook Clip Kit 2300 V CAT I 1000 V CAT II	Optional 450 V CAT I 300 V CAT II	Optional 1000 V CAT II 600 V CAT II	Standard 2300 V CAT I 1000 V CAT II
TP175-FL	2x Test Leads 1000 V CAT III 600 V CAT IV	Standard (TMDP0200) 550 V CAT I 300 V CAT III	Standard (THDP0200) 1000 V CAT II 600 V CAT III	Optional 2300 V CAT I 1000 V CAT III

Options

Power plug options (P5200A only)

- Opt. A0 North America power plug (115 V, 60 Hz)
- Opt. A1 Universal Euro power plug (220 V, 50 Hz)
- Opt. A2 United Kingdom power plug (240 V, 50 Hz)
- Opt. A3 Australia power plug (240 V, 50 Hz)
- Opt. A4 North America power plug (240 V, 50 Hz)
- Opt. A5 Switzerland power plug (220 V, 50 Hz)
- Opt. A6 Japan power plug (100 V, 110/120 V, 60 Hz)
- Opt. A10 China power plug (50 Hz)
- Opt. A11 India power plug (50 Hz)
- Opt. A12 Brazil power plug (60 Hz)
- Opt. A99 No power cord

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 (including warranty)
Opt. R5	Repair Service 5 Years (including warranty)
Opt. SILV200	Standard warranty extended to 5 years

Probes and accessories are not covered by the oscilloscope warranty and Service Offerings. Refer to the datasheet of each probe and accessory model for its unique warranty and calibration terms.



The P52xA Series probes provide high-voltage differential measurement solutions for any oscilloscope.



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.