

## PTA-100 Transimpedance Amplifier

### Features:

- Low noise: 4 fA /  $\sqrt{\text{Hz}}$
- < 0.1 mV input offset voltage
- Virtual ground input
- Up to 20 kHz bandwidth
- 300-hour battery life
- Compact



The PTA-100 is a low noise, precision transimpedance amplifier in a compact, convenient-to-use package. It converts low-level currents into voltages, which can be readily measured using a variety of voltage-sensitive instruments such as oscilloscopes, lock-in amplifiers, multi-meters, chart recorders and data loggers. Because the PTA-100 is battery powered, it operates free from AC power lines and can be easily located close to signal sources to minimize noise and interference when measuring weak currents.

### Specifications \*

- Sensitivity:  $10^{-5}$  A / V to  $10^{-9}$  A / V
- Gain accuracy:  $\pm 1\%$
- Input: virtual ground
- Input leakage current:  $\pm 0.1$  pA max.
- Input offset voltage:  $\pm 0.1$  mV max.
- Output range:  $\pm 3\text{V}$  (>50 k $\Omega$  load)
- Output offset:  $\pm 0.1$  mV max.
- Input capacitance load: up to 1000 pF without gain peaking
- Output capacitance load: stable up to 1000 pF
- Power: internal 9-volt battery; 500 hr. battery life
- Case dimensions: 11 cm X 6 cm X 4.1 cm
- Weight: 200 gm

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<b>Range</b>	<b>Frequency response</b>	<b>Input-referred noise</b>
$10^{-5}$ A / V	0 – 30,000 Hz	$5 \times 10^{-12}$ A / $\sqrt{\text{Hz}}$
$10^{-6}$ A / V	0 – 8,000 Hz	$5 \times 10^{-13}$ A / $\sqrt{\text{Hz}}$
$10^{-7}$ A / V	0 – 3,000 Hz	$6 \times 10^{-14}$ A / $\sqrt{\text{Hz}}$
$10^{-8}$ A / V	0 – 1,000 Hz	$2 \times 10^{-14}$ A / $\sqrt{\text{Hz}}$
$10^{-9}$ A / V	0 – 80 Hz	$4 \times 10^{-15}$ A / $\sqrt{\text{Hz}}$