

## **PA-931 Low Cost Transducer Amplifier**



- Low-cost alternative to the PM-1000
- High gain to x1100
- Built-in, adjustable excitation
- 2-position filter switch
- Continuously variable sensitivity of x1 to x11
- Industry standard Canon WK6-32S input connector

The PA-931 offers an economical alternative to the PM-1000, and provides the same level of compatibility with wide range of resistive and solid state transducers. The PA-931 is a good choice for cost-sensitive applications that don't demand the PM-1000's high degree of measurement flexibility. Instead of the PM-1000's nine-step attenuator, the PA-931's design substitutes a ten-turn sensitivity control and a 10x/100x range switch. The six-position low-pass filter switch on the PM-1000 is replaced by a three-position switch on the PA-931, providing passive mean and 1kHz selections. Up to six PA-931 modules will fit in any DI-1000 Series module cage. Like the PM-1000, the PA-931 IS NOT designed for patient-connected (clinical) blood pressure applications.

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Differential, balanced to chassis common	Low pass filter	3-position
Statham, Gould, Grass, etc.	Filter frequencies	0.1(Mean), 1000Hz, Off
>100db @ 60Hz	Filter cutoff slope	-6db/octave
Canon WK6-32S	Input connector	BNC
+4 to +10VDC adjustable	Output range	±10V
±0.2, ±0.05VDC, 10-turn (internally selectable ranges)	Output connector	Amphenol, 7-pin plug
x10-x1100, 2 ranges	Power requirements	±12VDC @ 50ma
10-turn, 1-11x	Dimensions	2.75" × 5" × 10"
	chassis common Statham, Gould, Grass, etc. >100db @ 60Hz Canon WK6-32S +4 to +10VDC adjustable ±0.2, ±0.05VDC, 10-turn (internally selectable ranges) x10-x1100, 2 ranges 10-turn, 1-11x	chassis common  Statham, Gould, Grass, etc.  >100db @ 60Hz  Filter cutoff slope  Canon WK6-32S  Input connector  +4 to +10VDC adjustable  ±0.2, ±0.05VDC, 10-turn (internally selectable ranges)  x10-x1100, 2 ranges  Power requirements

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## CT-1000 Cardiotachometer



- LED display shows current measurements
- Uses exponential and derivative enhancement techniques to discriminate the R-wave from other components
- Wide dynamic gain range and an adjustable latency time prevent false triggering from strong P or T waves

The CT-1000 is a combined ECG amplifier, R-wave detector, and rate meter for the determination of heart rate (beats/min) or beat-to-beat-interval (mS). Input can be either a direct electrode connection, or a high-level signal. A TTL detect pulse is provided for external use, and a polarity reversal switch allows the amplifier to be used with any ECG lead. An amplified ECG signal is available on the card edge connector, as is an inhibit input for external gating of the R-wave function. The CT-1000 is compatible with the ISO-Z isolation head-stage for patientconnected applications.

Specifications*			
Input impedance (lo level, hi level)	$>1000M\Omega$ differential, $1M\Omega$ single-ended	Measurement resolution	1mS (interval), 0.1 bpm (rate)
Input voltage range (lo level, hi level)	$\pm 100 \mu V$ to $\pm 20 mV$ , $\pm 10 V$	Output impedance	<10Ω
Input coupling	AC	Parallel data out	12-bits with strobe, TTL
Dynamic R-wave capture range	>20dB	LED indicators	R-detect, saturation
Output pulse	TTL	Digital readout	Rate or interval, 4-digit LED
Inhibit input	TTL, negative logic	Input/output connectors	BNC
Latency time adjustment range	50mS to 1.05 seconds	Power requirements	±12VDC @ 50mA, 5VDC @ 300mA
Usable rate range	12 to 500 bpm	Dimensions	5.5" × 5" × 9"
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Usable interval range	1mS to 9.999 seconds		

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