



Trig-Tek™ 201AP

Charge Amplifier

The Trig-Tek™ 201AP Charge Amplifier is designed to amplify the outputs from piezoelectric- or mV-type accelerometers, force gauges, microphones, and pressure pickups. The “Charge” output from the pickup, expressed in mV or pC/g, is then amplified and the AC signal proportional to the input is brought out via a BNC connector. The AC voltage output can be used to operate vibration monitors, recorders, analyzers, etc.

Key Features

- 1 Hz to 50 kHz bandwidth
- 100:1 mV/pC gain ADJ
- mV or pC input
- Low-Pass Filter

Product Information

The Trig-Tek™ 201AP accepts inputs from piezoelectric or mV (built-in electronic) sensors, such as piezoelectric accelerometers, microphones, force gages, pressure pickups, etc.

The charge input is converted to a proportional voltage. The gain is continuously adjustable over a 100 to 1 range. This gain range accommodates the pickups with a wide range of sensitivities to provide a calibrated AC output.

The unit includes a four section Low-Pass Filter. The cutoff frequency can be selected by changing resistor values on a plug-in assembly. Nominal -3dB cutoff is 20 kHz. Cutoff frequencies up to 50 kHz and down to 500 Hz can be accomplished by changing the resistor values on the plug. Custom cutoffs are to be specified at the time of order.

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Input

PC or mV

- Changed by a movable jumper on the PC Board (the default is set to “pC” mode at the factory)

Frequency -3dB

- 1 Hz to 100 kHz (no filter)

Sensitivity

- 0.1 to 1.0, 1.0 to 11 mV/pC continuously in conjunction with the “Gain” switch

Pyroelectric

- Amplifier will not block

Input Shunt Resistance

- Will operate with shunt resistance down to 1 mΩ

mV Mode

- 3 to 5 mA current (optional)

Connector

- 10-32 Microdot

AC Output

Impedance

- <50 Ω (10 mA)

Voltage

- 5 V_{rms} FS

Frequency Response

- ±5% 5 Hz to 50 kHz (no filter)

Amplitude Linearity

- 0.5% of FS

Harmonic Distortion

- <1%

Connector

- BNC

Interface

Power

- ±12 VDC to ±18 VDC at approx 15 mA

Mechanical

Dimensions

- 5 25” L x 2 5” W x 1 66” D
(13.3 cm x 6.3 cm x 4.2 cm)

Ordering Information

408372-001 : Trig-Tek™ 201AP (Mature)
Charge Amplifier



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