

CA1800

8-channel charge amplifier

CHARGE MODE SIGNAL CONVERSION

BUFFER ACCELERATION OUTPUT SIGNALS

BUFFERED VELOCITY OUTPUT SIGNALS



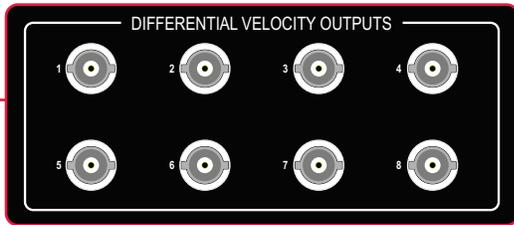
The CA1800 Charge Amplifier System conditions and amplifies charge-mode accelerometer signals. It is a rugged, rack-mountable instrument designed to be used in engine test cell control rooms and other environments where charge-mode accelerometers are used to measure machinery vibration.

- Provides up to eight (8) channels of charge amplification
- Each charge amplifier provides a buffered acceleration output signal as well as an integrated (velocity) signal output
- Outputs may be configured for either differential or singled ended configurations
- Each channel may be configured (at the MTI Instruments factory) for one of three different gain settings to match accelerometer sensitivities.

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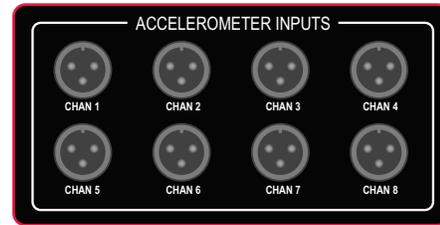
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SPECIFICATIONS



Provides a buffered “raw” acceleration signal and “integrated” velocity signal for each implemented channel

Charge signals from accelerometers are connected to the CA1800 using the rear panel MS connectors. Balanced, and fully differential charge signals are received by the CA1800 charge amplifier and then conditioned into voltage mode signals.



Receives input signals generated by charge mode accelerometers

The CA1800 Charge Amplifier System conditions the input charge signals and then performs an integration function to provide a VELOCITY output signal on the rear panel connectors. These velocity output signals are typically connected to a PBS-4100R or other vibration instrument using coax cables.



INPUTS

Differential Input	Static discharge protected
Input Connection	Differential with shield connected to case, MS3101E-10SL-3P
Input Impedance	10Ω maximum
Maximum Input Charge	20,000 pC pk, maximum

OUTPUTS - Outputs are normally differential, factory option single ended

Velocity Output	Rear Panel BNC female connector
Acceleration Output (buffered)	Front Panel BNC female connector
Output Impedance	10Ω maximum
Capacitance Load	0.1μF maximum
DC Output Bias	0 Vdc
Linear Output Voltage	17Vpk-pk max
Output Current	25 mA maximum
Linearity	2%
Residual Noise (RTD)	1.0 mV RMS maximum at gain =1, 4.0 mV RMS max at gain = 10

CONFIGURATION OPTIONS

Number of Channels:	4, 6, 8
Channel Gain Settings:	1, 4, 10 mV/pC
High-pass Filter Options:	10, 15, 20, 25 Hz
Outputs (ACC & VEL):	Differential or Single Ended

POWER REQUIREMENTS

AC Power Requirements	110/240 VAC ±15% 50 - 400 Hz
Warm-up Time	5 minutes

PHYSICAL CHARACTERISTICS

Dimensions	3.5" h X 19" w X 13" d
Weight	11.7 lbs

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