

CA1800 Charge Amplifier System



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

The CA1800 Charge Amplifier System 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, and each channel may be configured (at the MTI Instruments factory) for one of three different gain settings to match accelerometer sensitivities.

INPUTS

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|----------------------|---|
| Differential Input | Static discharge protected |
| Input Connection | Differential with shield connected to case, MS3101E-10SL-3P |
| Input Impedance | 10 Ω maximum |
| Maximum Input Charge | 16,000 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 | 10 Ω maximum |
| Capacitance Load | 0.1 μ F 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 |
| Highpass filter options: | 10, 15, 20, 25 Hz |
| Outputs (ACC & VEL): | Differential or Single Ended |

POWER REQUIREMENTS

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|-----------------------|------------------------------------|
| AC Power Requirements | 110/240 VAC \pm 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 |
| Case Material | Aluminum |

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