

Documentation MSA – 6

MSA-6

MiniAmp Strain Gage Amplifier



DESCRIPTION

The AMTI MSA-6 instrument is a 6-channel strain gage amplifier designed for use with AMTI biomechanics force platforms, multi-component force/torque transducers or other strain gage devices. It is a low cost, compact instrument capable of high resolution measurements. The microprocessor based MSA-6 features easy bridge balancing with a single push button auto zero, low-pass fixed filters, and jumper-selectable precision bridge excitation voltages and gains for each channel.

The amplifier inputs and outputs are conveniently provided through separate connectors. The analog output signal range is $\pm 10V$ and is generally connected to an A/D converter in a computer aided data acquisition system.

An RS-232 serial output is also provided which allows the MSA-6 to be used without an external A/D converter. A serial to USB converter can also be used. The analog and serial outputs are provided simultaneously. The MSA-6 is generally used as a desktop unit but rack mount hardware is included.

TECHNICAL SPECIFICATIONS

Gain Jumper-selectable gains of 1000, 2000, or 4000 on each channel.

Bridge Excitation Jumper selectable excitation of 2.50, 5.00, or 10.00 VDC on each channel (350W bridge min).

Auto Zero Single push button for simultaneously balancing all channels. Balancing through the serial port also provided.

Filter Each channel has a two-pole, low-pass filter with a 1000 Hz cutoff.

Analog Outputs $\pm 10VDC$ into a minimum 10K ohm load.

Serial Port RS232 communication provides data rates up to 200 data sets/second. Serial to USB converter enables rates up to 1200 data sets/second.

Operating Temperature 0°F to 125°F (-18°C to 52°C)

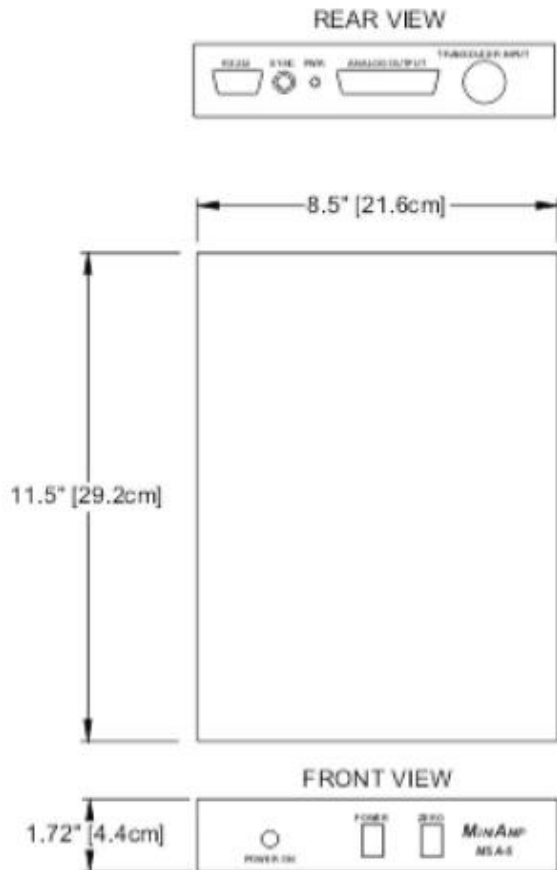
Power Supply Requirements 15 VDC @ 200 mA. AC line voltage powered DC supply included.

Weight 5 lb (2.3 kg)

Sync 5V digital logic level input for marking the serial data stream.

MSA-6

MiniAmp Strain Gage Amplifier



I/O Connector Specifications

Amplifier input connector: Souriau 851-02E16-26S50-44

Analog output connector: DB25S

RS-232 connector: DB9S

Power connector: 2.1 mm power jack

SYNC (external trigger) connector: RCA phono jack

MSA-6 Enclosure

Desktop case: 8.5"W x 1.73"H x 11.5"D

I/O, DC power, SYNC and RS232 connectors located on rear panel.

Power switch, auto zero push button, and indicator light located on front panel.

Gain and bridge excitation jumper selections are accessible under the screw-top cover.

Rack Mount Options

