

MC3232 Force Platform

DESCRIPTION

AMTI's MC3232 Force Platform is specifically designed for the precise measurement of forces and moments. This sensor measures along the X, Y and Z axes, along with the moments around these axis, giving a total of six outputs. These strain gauge sensors have high stiffness, high sensitivity, low crosstalk, excellent repeatability as well as long term stability. Standard capacity is 50, 000 lb (224,000N) vertical capacity. Other capacities are available on request



Applications

The MC3232 force and torque sensor is designed for use in the research, development and testing of aircraft undercarriage equipment. The MC3232 is particularly suitable of applications requiring simultaneous multi axis measurement of several large forces and moments, or measurement of large forces that change direction and position over time

AMPLIFICATION

The MC3232 Force Platform incorporates strain gauges mounted on four precision strain elements in a patented design to measure forces and moments. As with most conventional strain gauge transducers, bridge excitation and signal amplification is required.

AMTI's product line includes two strain gauge amplifiers, the analogue MSA-6 and Gen 5. Both these amplifiers are high gain devices which provide excitation and amplification for multiple channels in one convenient package

Calibration

Each platform is inspected and tested in AMTI's calibration facility. The calibration procedure provides a detailed sensitivity matrix and a complete test of all systems components, including the amplifier and connecting cable.

Custom

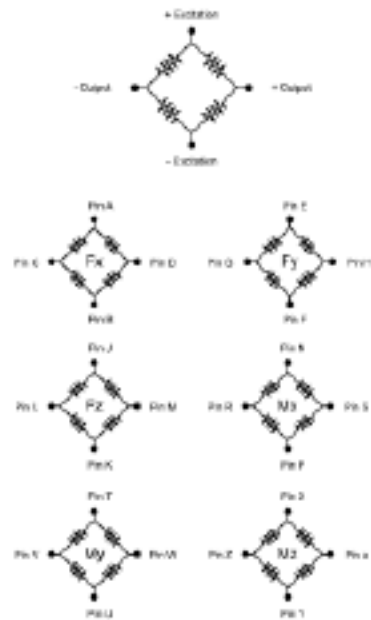
AMTI also offers special multi-axis transducers to meet your specific requirements. Units are available that are water proof, pressure compensated, non-magnetic, non- conductive and transparent. Capacities from 1lb (4.5N) to 3 million lbs (13.3Mn) can be made.

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Specifications

MC3232 SPECIFICATIONS	
Fx, Fy Capacity, lb, (N)	50,000 25,000 (111,206)
Fz Capacity, lb, (N)	50,000 (222,411)
Mx Capacity, in*lb, (Nm)	60,000 (67,751)
My Capacity, in*lb, (Nm)	60,000 (67,751)
Mz Capacity, in*lb, (Nm)	30,000 (33,875)
Fx, Fy Natural Frequency, Hz	500
Fz Natural Frequency, Hz	600
Fx, Fy Sensitivity (µv/v-in-lb)	0.08
Fz Sensitivity (µv/v-in-lb)	0.016
Mx, My Sensitivity (µv/v-in-lb)	0.003
Mz Sensitivity (µv/v-in-lb)	0.006
Dimension, in	32 x 32 x 9.5
Weight, lb, (Kg)	560 (254.5)

Wiring



Bridge Fx, Fy, Fz, Mz = 350 ohms
Bridge Mx, My = 700 ohms
Connector Type:
Sourlas 051-02E 16-20P-00-44

GENERAL SPECIFICATIONS

Excitation: 10V maximum, Crosstalk: Less than 2% on all channels: Temperature Range: 0 to 125°F, (-17 to 52°C) Fx, Fy, Fz hysteresis: ± 0.2 % Full: Scale Output: Fx, Fy, Fz non-linearity: ± 0.2% Full Scale Output.

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