

BP400600

Force Platform

DESCRIPTION

AMTI's Biomechanics Force Platform model 400600 is specifically designed for the precise measurement of ground reaction forces. The platform measures the three orthogonal forces and moment components along the X, Y and Z axis, producing a total of six outputs. The high sensitivity, low cross talk, excellent repeatability and long term stability of this platform make it ideal for research studies. It is easy to use and is available in 1000 or 2000lbf, (4,448, 8,896 newtons) capacities.



SOFTWARE

Automated data collection and reduction requires a PC and software. AMTI's **BioSoft with NetForce** software package is designed for biomechanics and clinical application. NetForce provides a simple user interface and extensive database functions for easy trial set-up and data acquisition. BioAnalysis performs a comprehensive analysis of the data and presents many summarizing parameters that can be averaged numerous selectable trails.

AMPLIFICATION

The BP400600 Biomechanics 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 analogue strain gauge amplifiers, the MSA-6 and DSA-6. There is also digital signal amplifier, the Gen 5. All 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

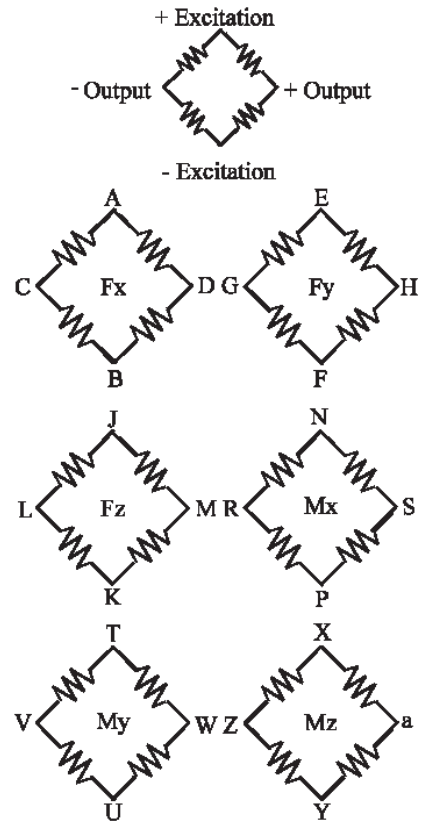
AMTI also offers special multi-axis transducers to meet your specific requirements. Units are available that are water proof, pressure compensated, non-magnetic, non-conductive and transparent. Capacities from 1lb (4.5N) to 3 million lbs (13.3Mn) can be made.

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Specifications

BP400600 SERIES SPECIFICATIONS	1000	2000
Fx, Fy Capacity, lb, (N)	500 (2224)	1000 (4448)
Fz Capacity, lb, (N)	1000 (4448)	2000 (8896)
Mx Capacity, in*lb, (Nm)	11800 (1332)	23600 (2666)
My Capacity, in*lb, (Nm)	7900 (892)	15800 (1785)
Mz Capacity, in*lb, (Nm)	5900 (666)	11800 (1300)
Fx, Fy Natural Frequency, Hz	280	360
Fz Natural Frequency, Hz	370	400
Fx, Fy Sensitivity, $\mu\text{V}/[\text{V}*\text{lb}]$, ($\mu\text{V}/[\text{V}*\text{N}]$)	3.0 (0.67)	1.5 (0.34)
Fz Sensitivity, $\mu\text{V}/[\text{V}*\text{lb}]$, ($\mu\text{V}/[\text{V}*\text{N}]$)	0.75 (0.17)	0.375 (0.08)
Mx Sensitivity, $\mu\text{V}/[\text{V}*\text{in}*\text{lb}]$, ($\mu\text{V}/[\text{V}*\text{Nm}]$)	0.158 (1.40)	0.079 (0.697)
My Sensitivity, $\mu\text{V}/[\text{V}*\text{in}*\text{lb}]$, ($\mu\text{V}/[\text{V}*\text{Nm}]$)	0.201 (1.78)	0.101 (0.888)
Mz Sensitivity, $\mu\text{V}/[\text{V}*\text{in}*\text{lb}]$, ($\mu\text{V}/[\text{V}*\text{Nm}]$)	0.369 (3.227)	0.184 (1.634)
Height, in, (mm)	3.25 (82.5)	3.25 (82.5)
Weight, lb, (Kg)	70 (32)	70 (32)
Top Plate Material	aluminum	aluminum

Wiring



Bridge Fz = 700 ohms

Bridges Fx, Fy, Mx, My, Mz = 350 ohms

Connector Type: Souriau851-02E16-26P50-44

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: $\pm 0.2\%$ Full: Scale Output: Fx, Fy, Fz non-linearity: $\pm 0.2\%$ Full Scale Output.

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ISO 9001:2000 CERTIFIED

 **Force and Motion**
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