ISO 9001:2000 CERTIFIED

Force and Motion

AMTI

Interface Force Measurements Ltd
Unit 19 Wellington Business Park,
Dukes Ride, Crowthorne,
Berkshire, RG45 6LS. U.K.

MC36 Force/Torque Sensor

DESCRIPTION

AMTI's MC36 transducer is designed to resolve loads into orthogonal force and moment components. These precision sensors feature high stiffness, high sensitivity, low crosstalk, excellent repeatability and term stability. They exhibit the inherent ruggedness of bonded gauge transducers

Applications

The size and layout of this transducer makes it ideal for many applications. It is commonly used for the monitoring of machining processes and it is particularly suitable for grinding studies due to its high stiffness and high sensitivity in the vertical direction

AMPLIFICATION

The MC36 Force and Torque transducer incorporates strain gauges mounted on two precision strain elements in a patented design to isolate and 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 is 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.

MC36 V2 2017 06 08

AMTI ADVANCED MECHANICAL TECHNOLOGY, INC.

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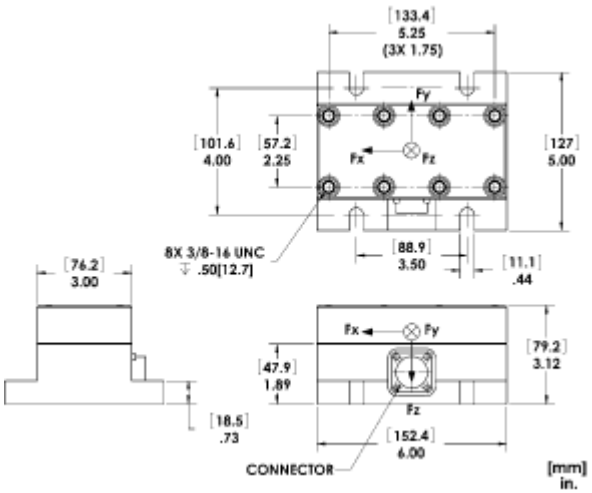
Specifications

MC36 SERIES SPECIFICATIONS	100	250	500	1000
Fx, Fy, Fz Capacity, lb, (N)	100 (445)	250 (1112)	500 (2224)	1000 (4448)
Mx Capacity, in-lb, (Nm)	150 (17.0)	375 (42.4)	750 (84.8)	1500 (169.0)
My, Mz Capacity, in*lb, (Nm)	300 (33.9)	750 (84.8)	1499 (169.0)	3000 (339.0)
Fx, Fy Typical Sensitivity µV/V-lb (µV/V-N)	12.0 (2.70)	6.8 (1.08)	2.4 (0.54)	1.2 (0.27)
Fz Typical Sensitivity µV/V-lb (µV/V-N)	3.0 (0.67)	1.2 (0.27)	0.6 (0.135)	0.30 (0.27)
Mx Typical Sensitivity µV/V-in-lb (µV/V-Nm)	11.4 (100.9)	4.56 (40.38)	2.28 (20.2)	1.14 (10.1)
My Typical Sensitivity µV/V-in-lb (µV/V-Nm)	2.8 (24.8)	1.12 (9.92)	0.56 (4.96)	0.28 (2.48)
Mz Typical Sensitivity µV/V-in-lb (µV/V-Nm)	2.6 (23.0)	1.04 (9.21)	0.52 (4.61)	0.32 (2.30)
Fx Stiffness x 10^5 lb/in (10^5 N/m)	0.35 (61.37)	0.875 (153)	1.75 (307.0)	3.50 (614.0)
Fy Stiffness x 10^5 lb/in (10^5 N/m)	0.25 (43.83)	0.625 (109.6)	51.25 (219)	2.5 (438.0)
Fz Stiffness x 10^5 lb/in (10^5 N/m)	3.00 (526)	7.5 (1315)	14.99 (2629)	30.0 (5260)
Non- Linearity Fz, Fx, Fy %FSO	0.2	0.2	0.2	0.2
Hysteresis Fx, Fy, Fz %FSO	0.2	0.2	0.2	0.2

GENERAL SPECIFICATIONS

Excitation: 10V maximum: Crosstalk: Less than 2% on all channels: Temperature Range: 0 to 125°F, (-17 to 52°C) Crosstalk: Less than 2% on all channels. Weight, with steel base 11lbs (5kgs)



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