

**Description**

Multi axis transducer Model MAT – 200 is multi axis force sensor designed for measuring the force in the Lathe Operation, Tribology research exhibits high sensitivity, low cross talk & excellent repeatability. This is strain gage based sensor with full temperature compensation over 50°C. This is available with three axis force sensing in X, Y & Z directions and torque around X,Y,Z axis.

**Features**

- Multi axis force and torque combinations are available.
- Available in various capacities, ranging from 0 – 100N to 0 – 5000N for force & 0 – 100 NM to 0 – 500NM for torque.
- Can be provided in various shapes like Rectangular, Cylindrical, Platform or Flanged

**Applications**

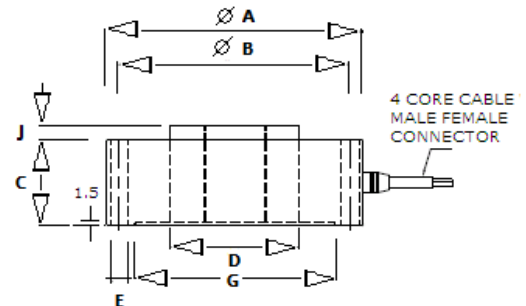
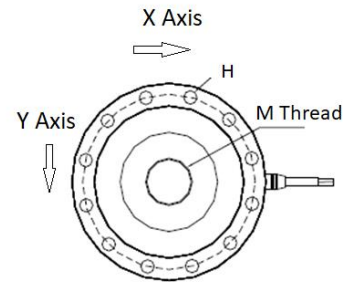
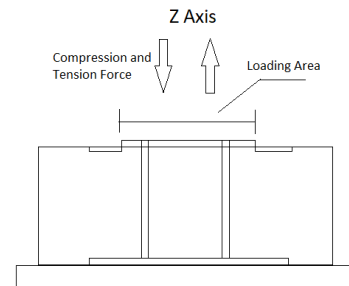
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|---|--|
| Lathe Operation<br>Grinding & abrasive Wheel Research<br>Tool Wear research | Cutting Force Dynamometer<br>Material Testing<br>Automotive Research<br>Tribology Research |
|---|--|

**Performance Specification**

|                                     |                 |  |
|-------------------------------------|-----------------|--|
| <b>Standard Capacities</b>          | <b>Force</b>    | UP TO 25KN – X,Y AXIS<br>UP TO 10KN - Z AXIS   |
| Excitation Voltage                  |                 | 10 VDC- Maximum 15 VDC                         |
| Nominal Output                      | Force<br>Torque | 1 - 1.5 mV/V in Z axis<br>1 mv/V in X , Y axis |
| Non - Linearity                     |                 | < ±0.5% FSO (Full Scale Output)                |
| Hysteresis                          |                 | < ±0.5% FSO                                    |
| Non-Repeatability                   |                 | < ±0.2% FSO                                    |
| Creep (30 minutes)                  |                 | < ±0.5% FSO                                    |
| Zero Balance                        |                 | ±1.0% FSO                                      |
| Bridge Resistance                   |                 | 350 / 700 ± 20 Ohms                            |
| Insulation Resistance (50 VDC)      |                 | > 2000 Mega Ohms                               |
| Cable Length ( 10 Core)             |                 | 3 Meters                                       |
| Safe Overload of Rated Capacity     |                 | 150%   |
| Ultimate Overload of Rated Capacity |                 | 200%   |
| Temp. Compensated Range             |                 | 0-50°C   |
| Temperature Effect on Output        |                 | < 0.04% FSO/ °C                                |
| Temperature Effect on Zero          |                 | < 0.04% FSO/ °C                                |
| Deflection                          |                 | < 0.4 mm at FSO                                |
| Finish & Construction               |                 | SS / Electro less Nickel plated<br>Tool Steel  |
| Environmental Protection Class      |                 | IP65   |

**Electrical Termination**

**8 core cable for -**  
**Excitation: 2 cores**  
**X, Y Torque : 4 cores**  
**Z Force : 2 cores**



Specification are subject to change.

All dimensions are in mm.

| Capacity – Tf.                         | A  | B  | C  | J | D  | G  | E DIA. X H<br>PLCS. | M<br>Thread | MOC*          |
|--|----|----|----|---|----|----|---------------------|-------------|---------------|
| See above – <b>standard capacities</b> | 90 | 70 | 28 | 2 | 23 | 58 | 6.2 X 8             | 16 X 1.5    | SS 17-4<br>PH |



Made in INDIA by:

**ADI ARTECH**  
**TRANSDUCERS PVT. LTD.**

917/1, G.I.D.C. Estate, Makarpura, Vadodara - 390 010, Gujarat, INDIA

**Mobile** : +91-9374068998, 9879444551, 9054467370

**Email** : sales@adiartech.com, adiartech@adiartech.com

**Website** : www.adiartech.com