662.20-01 Axial/Torsional Load Transducers

MTS 662.20-01 Axial/Torsional Load Transducers are compact, fatigue-rated devices designed for measuring through-zero tension and compression and torsional loads. These load transducers feature low deflection and a high degree of stiffness to give you better dynamic performance. They also feature a high degree of component concentricity and parallelism to give you greater accuracy during your test setup. Special attention has been given to ensure low crosstalk interaction between the two axes. Accuracy is also enhanced by a design that features radially-oriented strain measurement beams. Beams oriented in this manner compensate for off-axis loads and moments.

These units require an isolation / adapter plate to mount on or with, existing force transducers on actuators, crossheads, platens or other test fixtures. They are manufactured for long, accurate service life using aircraft-quality, specially heat-treated aluminum. There are no welded joints to fatigue.

MTS uses proprietary wiring techniques to reduce electrical noise, then compensates each unit to ensure temperature stability.

FEATURES

Dynamic Performance
- Low deflection and high stiffness give you better dynamic performance

High Output
- Provides you with excellent resolution and reading accuracy.

Radially Oriented Beams
- Lets unit resist off-axis loads and moments for greater accuracy.

High Degree Of Component Concentricity And Parallelism
- This feature gives you greater accuracy during your test setup.

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SPECIFICATIONS

Temperature Effect On Zero
- 0.0020% of full scale/°F
- 0.0036% of full scale/°C

Temperature Effect On Sensitivity
- 0.0020% of reading/°F
- 0.0036% of reading/°C

Compensated Temperature Range
- +70°F (+21°C) to +170°F (+77°C)

Useable Temperature Range
- –50°F (–46°C) to +200°F (+93°C)

Bridge Resistance (nominal)
- Axial 1000 Ω
- Torsional 1000 Ω

Maximum Excitation Voltage
- 15 Vdc

Repeatability
- 0.1% of full scale

Nominal Output Sensitivity
- 1mv/V Axial at full scale load
- .75mv/V Torsional at full scale load

Maximum Crosstalk
- 1.0% of full scale torsional to axial
- 1.0% of full scale axial to torsional

Deflection At Rated Force Capacity
- 0.002 inch (0.05 mm)

Deflection At Rated Torque Capacity
- 0.20 degrees

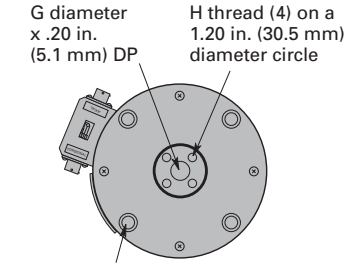
Weight (approximate)
- 3.5 lb (1.6 kg) does not include adapter*

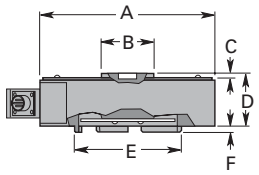
Hysteresis
- 0.15% of full scale

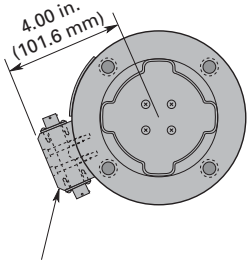
Non-linearity
- 0.15% of full scale axial
- 0.15% of full scale torsional

Calibration
- Each load transducer ordered may be calibrated by MTS at our factory or on-site by MTS Field Service. In addition, the load transducer and associated conditioning electronics may be returned to MTS for repair and recalibration.

*__These A/T transducers__ must be used with an aluminum isolation / adapter plate, or mount on an aluminum part, to avoid detremental thermal effects on output of device.







A	B	C	D	E	F	G
5.75 in. dia. (146 mm)	1.72 in. dia. (43.7 mm)	0.175 in. (4.4 mm) typ.	1.750 in. (44.5 mm)	3.50 in. dia. (88.9 mm)	.180 in. (4.6 mm)	.626 in. dia. (15.9 mm)

Model	Load Capacity	H Thread Size
662.20C-01	550 lb axial / 250 IN-LB torsional	1/4-20 UNC-2B x .50 in. deep
662.20D-01	2.5KN axial / 25 N• M torsional	M6 x 1.0 mm x 12.7 mm deep

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ISO 9001:2000 CERTIFIED QMS

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