



661.19 Force Transducer

FEATURES

Shear Web Design

- ▶ Units resist off-axis loads and moments for greater accuracy.

Dynamic Performance

- ▶ Low deflection and high stiffness give you better dynamic performance.

High Output

- ▶ Provides you with excellent resolution and reading accuracy.

High Degree Of Component Concentricity And Parallelism

- ▶ This feature gives you greater accuracy during your test setup.

Unique Wiring Technique

- ▶ A unique proprietary wiring technique used on the bridge allows for minimal susceptibility to stray magnetic fields.

MTS 661.19 Force Transducers are compact, fatigue-rated devices designed for measuring through-zero tension and compression loads of 1100 to 5500 lb (5 to 25 kN).

These force 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. Accuracy is also enhanced by a shear-web design that features radially-oriented beams. These beams compensate for off-axis loads and moments.

These units are easily mounted on, or interchanged with, existing force transducers on actuators, crossheads, platens or other test fixtures. They

are manufactured for long, accurate service life using aircraft-quality steels, specially heat-treated to minimize distortion and ensure uniform hardness. There are no brazed or welded joints to fatigue.

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

You get excellent resolution and reading accuracy from these units because of high output which is symmetrical between tension and compression for accurate through-zero testing.

In addition to single bridge models, there are units available with dual bridges to give you the capability to continue testing should you experience any failure during testing.





661.19 Force Transducer

SPECIFICATIONS

Static Overload Capacity

- ▶ 150% of rated force capacity

Temperature Effect On Zero

- ▶ 0.001% of full scale/°F
- ▶ 0.002% of full scale/°C

Temperature Effect On Sensitivity

- ▶ 0.001% of reading/°F
- ▶ 0.002% of reading/°C

Compensated Temperature Range

- ▶ 0°F (-18°C) to +150°F (+66°C)

Useable Temperature Range

- ▶ -65°F (-54°C) to +200°F (+93°C)

Bridge Resistance

- ▶ 350 Ω

Maximum Excitation Voltage

- ▶ 20 Vdc

Non-linearity

- ▶ 0.08% of full scale

Threads

- ▶ 1/2-20 UNF-3B (M12 x 1.25mm)

Hysteresis

- ▶ 0.05% of full scale

Repeatability

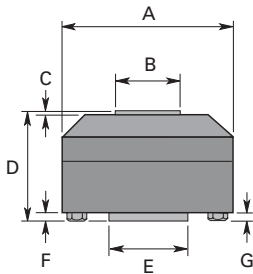
- ▶ 0.03% of full scale

Weight (approximate)

- ▶ 6.75 lb (3.06 kg)

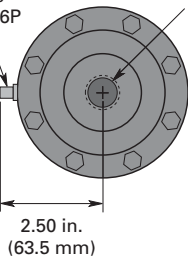
Calibration

- ▶ Each force transducer ordered may be calibrated by MTS using our automated calibration system at our factory or on-site by MTS Field Service. In addition, the force transducer and associated conditioning electronics may be returned to MTS for repair and recalibration.



Depth
Near Side:
1.00 in.
(25.4 mm)
Far Side:
0.80 in.
(20.3 mm)

Connector
Receptacle
PT02E-10-6P



| A | B | C | D | E | F | G |
|-----------------------------|----------------------------|---------------------------|-----------------------|-----------------------|----------------------|---------------------------|
| 4.12 in. dia. (104.6 mm) | 1.25 in. dia. (31.8 mm) | 0.03 in. (0.8 mm) typ. | 2.62 in. (66.5 mm) | 1.34 in. (34.0 mm) | 0.25 in. (6.4 mm) | 0.20 in. max. (5.1 mm) |

| Model | Force Capacity | Deflection At Rated Force Capacity | Output | Number Of Bridges |
|------------|----------------|------------------------------------|----------|-------------------|
| 661.19E-01 | 1100 lb | 0.001 in | 1.0 mV/V | Single |
| 661.19E-02 | 2200 lb | 0.002 in | 2.0 mV/V | Single |
| 661.19E-03 | 3300 lb | 0.001 in | 1.0 mV/V | Single |
| 661.19E-04 | 5500 lb | 0.002 in | 2.0 mV/V | Single |
| 661.19E-05 | 1100 lb | 0.001 in | 1.0 mV/V | Dual |
| 661.19E-06 | 2200 lb | 0.002 in | 2.0 mV/V | Dual |
| 661.19E-07 | 3300 lb | 0.001 in | 1.0 mV/V | Dual |
| 661.19E-08 | 5500 lb | 0.002 in | 2.0 mV/V | Dual |
| 661.19F-01 | 5 kN | 0.03 mm | 1.0 mV/V | Single |
| 661.19F-02 | 10 kN | 0.05 mm | 2.0 mV/V | Single |
| 661.19F-03 | 15 kN | 0.03 mm | 1.0 mV/V | Single |
| 661.19F-04 | 25 kN | 0.05 mm | 2.0 mV/V | Single |
| 661.19F-05 | 5 kN | 0.03 mm | 1.0 mV/V | Dual |
| 661.19F-06 | 10 kN | 0.05 mm | 2.0 mV/V | Dual |
| 661.19F-07 | 15 kN | 0.03 mm | 1.0 mV/V | Dual |
| 661.19F-08 | 25 kN | 0.05 mm | 2.0 mV/V | Dual |