

Round Three Axis Load Cell

Model TR3D-A-*

- 1,000 lbf, 3,000 lbf, 5,000 lbf and 10,000 lbf capacities
- Measures forces in three perpendicular directions
- Environmentally protected
- Temperature compensated
- Rugged construction



Description

Michigan Scientific's *TR3D-A-** Round Three Axis Load Cells are ideal for applications that require force measurements in three perpendicular directions. Available in 1,000 lbf, 3,000 lbf, 5,000 lbf and 10,000 lbf capacities, these compact transducers are well suited for an unlimited variety of applications.

The 3K, 5K, 5/5/10K, and 10K models are made of high grade stainless steel material, and the 1K model is made of high grade aluminum. These materials, in addition to weatherproof sealing, combine to provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the transducers ensure stable output throughout a wide temperature range. In addition, the transducers are configured for easy adaptation to a variety of applications.

Specifications

	TR3D-A-1K	TR3D-A-3K	TR3D-A-5K	TR3D-A-5/5/10K	TR3D-A-10K
Maximum Load Capacity (per channel)	1,000 lbf (4.4 kN)	3,000 lbf (13.3 kN)	5,000 lbf (22 kN)	X & Y axes 5,000 lbf (22 kN) Z axis 10,000 lbf (44 kN)	10,000 lbf (44 kN)
Maximum Moment Capacity (per channel)	30 lbf · ft (40 N · m)	160 lbf · ft (215 N · m)	210 lbf · ft (280 N · m)	210 lbf · ft (280 N · m)	340 lbf · ft (461 N · m)
Full Scale Output	4.0 mV/V, nominal, all channels				2.5 mV/V, nominal
Sensor	3 four-arm strain gauge bridges				
Nonlinearity	≤ 0.5 % of full scale output				≤1 % of full scale output
Hysteresis	≤ 0.5 % of full scale output				≤1 % of full scale output
Temperature Range, Usable	-40 °F to 300 °F (-40 °C to 149 °C)				
Excitation Voltage, Maximum	10 Vdc or Vac rms				
Standard Cable Length	10 ft (3.05 m) shielded, open-ended leads				

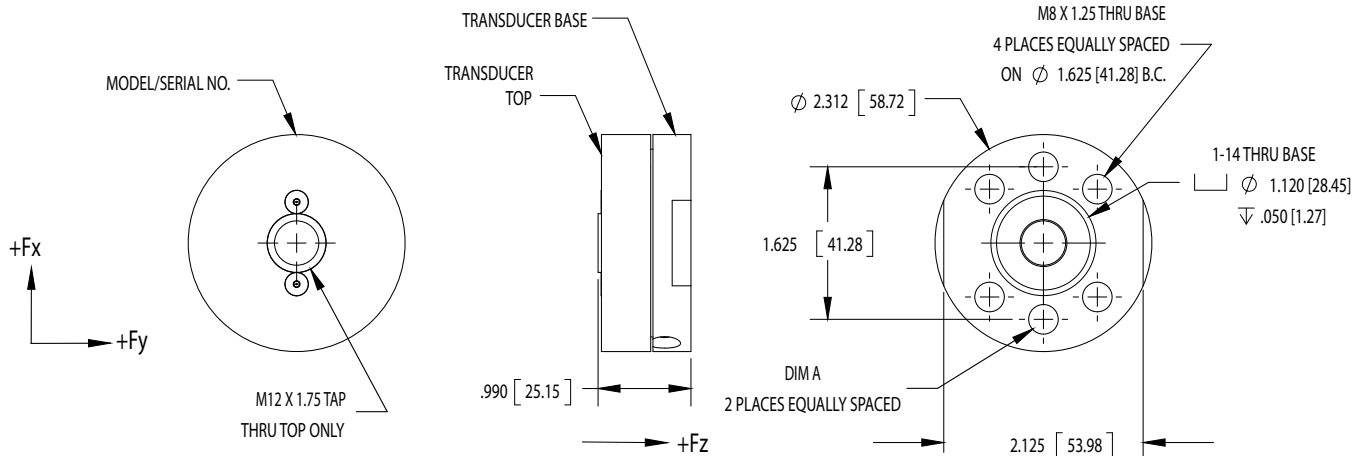
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02-13-23
Rev. A

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Round Three Axis Load Cell

TR3D-A-1K, TR3D-A-3K, TR3D-A-5K, TR3D-A-5/5/10K Configuration

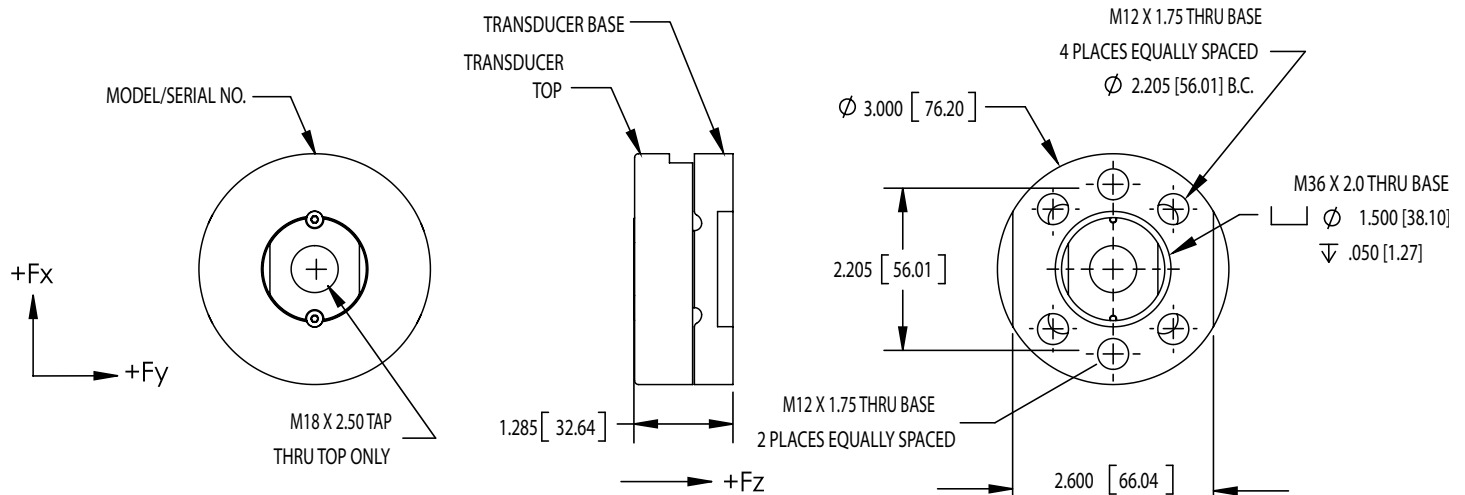


NOTES:

- FOR CLARITY, SOME HIDDEN LINES AND TRANSDUCER GEOMETRY NOT SHOW.
- DIMENSIONS ARE IN in [mm]
- POSITIVE OUTPUTS RESULT WHEN THE TRANSDUCER TOP IS DISPLACED RELATIVE TO THE TRANSDUCER BASE IN THE DIRECTIONS INDICATED.

MODEL	DIM A
TR3D-A-1K, TR3D-A-3K	M8 X 1.25 THRU BASE
TR3D-A-5K, TR3D-A-5/5/10K	M10 X 1.5 THRU BASE

TR3D-A-10K Configuration



NOTES:

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Ordering Options

Connector and optional cable length may be specified by the customer.

Contact Michigan Scientific for information on transducer applications and mounting.

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