

Square Three Directional Load Cell

Model TR3D-D-100K

- 100,000 lb capacity
- Measures forces in three perpendicular directions
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction
- Weatherproof connector



Description

Michigan Scientific's *TR3D-D-100K Square Three Directional Load Cell* is designed for applications that require force measurements in three perpendicular directions. With a 100,000 lb capacity, these rugged transducers are ideally suited for both field data acquisition and laboratory testing. The transducers have identical top and bottom mounting surfaces and bolt patterns, and can be easily adapted to a variety of applications.

High grade stainless steel material, in addition to weatherproof sealing, combine to provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the transducers ensures stable output throughout a wide temperature range.

Specifications

	TR3D-D-100K
Maximum Load Capacity (per channel)	100,000 lbs (45,350 kgf)
Full Scale Load (per channel)	100,000 lbs (45,350 kgf)
Weight	38.5 lbs (17.5 kg)
Fatigue Rating for Single Axis (full scale load)	>10 ⁷ cycles
Full Scale Output	1.25 mV/V, nominal, all channels
Sensor	3 four-arm strain gage bridges
Non-linearity	≤ 1% of full scale for X and Y axes ≤ 2% of full scale for Z axis
Hysteresis	<0.05% of full scale output
Repeatability	<0.05% of full scale output
Zero Balance	Within ± 10.0% of rated output at zero load
Bridge Resistance	700Ω nominal Fx & Fy, 1400Ω nominal Fz
Temperature Range, Compensated	75°F to 200°F (24°C to 93°C)
Temperature Effect on Zero	<0.5% full scale
Temperature Range, Useable	-40°F to 300°F (-40°C to 149°C)
Excitation Voltage, Maximum	10V DC or AC rms
Insulation Resistance, Bridge/Case	Exceeds 5000 MΩ
Standard Cable Length	10 ft (3.05 m) shielded, open-ended leads

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070

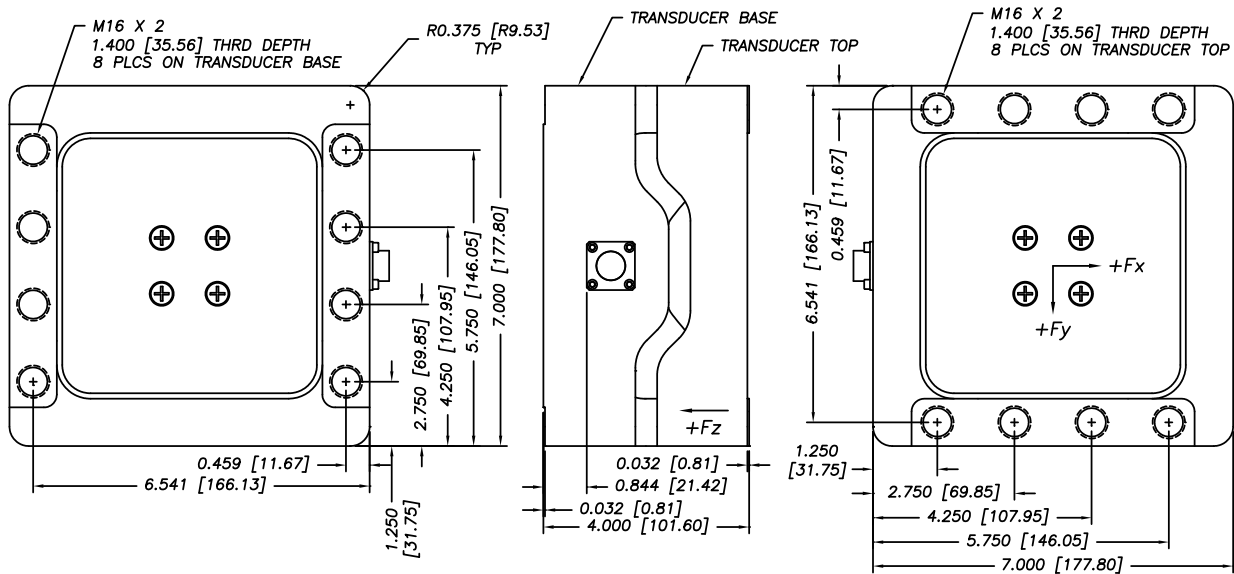
MICHIGAN SCIENTIFIC
corporation
<http://www.michsci.com>
Email: miscinfo@michsci.com

321 East Huron Street
Milford, MI 48381
Tel: 248-685-3939
Fax: 248-684-5406

Rev: 4/28/12

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TR3D-D-100K Configuration



NOTES:

- 1) FOR CLARITY, SOME HIDDEN LINES AND TRANSDUCER GEOMETRY NOT SHOWN.
- 2) DIMENSIONS ARE INCH [MM]; TOLERANCES ± 0.005 [0.127]
- 3) POSITIVE OUTPUTS RESULTS WHEN THE TRANSDUCER TOP IS DISPLACED RELATIVE TO THE TRANSDUCER BASE IN THE DIRECTIONS INDICATED.

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Ordering Options

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

Contact Michigan Scientific for information on transducer applications and mounting.

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