

Square Three Directional Load Cell

Model TR3D-C-*

- 16,000 lb and 40,000 lb capacity
- Measures three orthogonal forces in tension and compression
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction
- Weatherproof connector



Description

Michigan Scientific's *TR3D-C-** transducers are designed for applications that require force measurements in all three directions. Available in 16,000 lb and 40,000 lb capacities, these rugged transducers are ideally suited for field data acquisition and laboratory testing. The transducers have identical top and bottom mounting surfaces and bolt patterns.

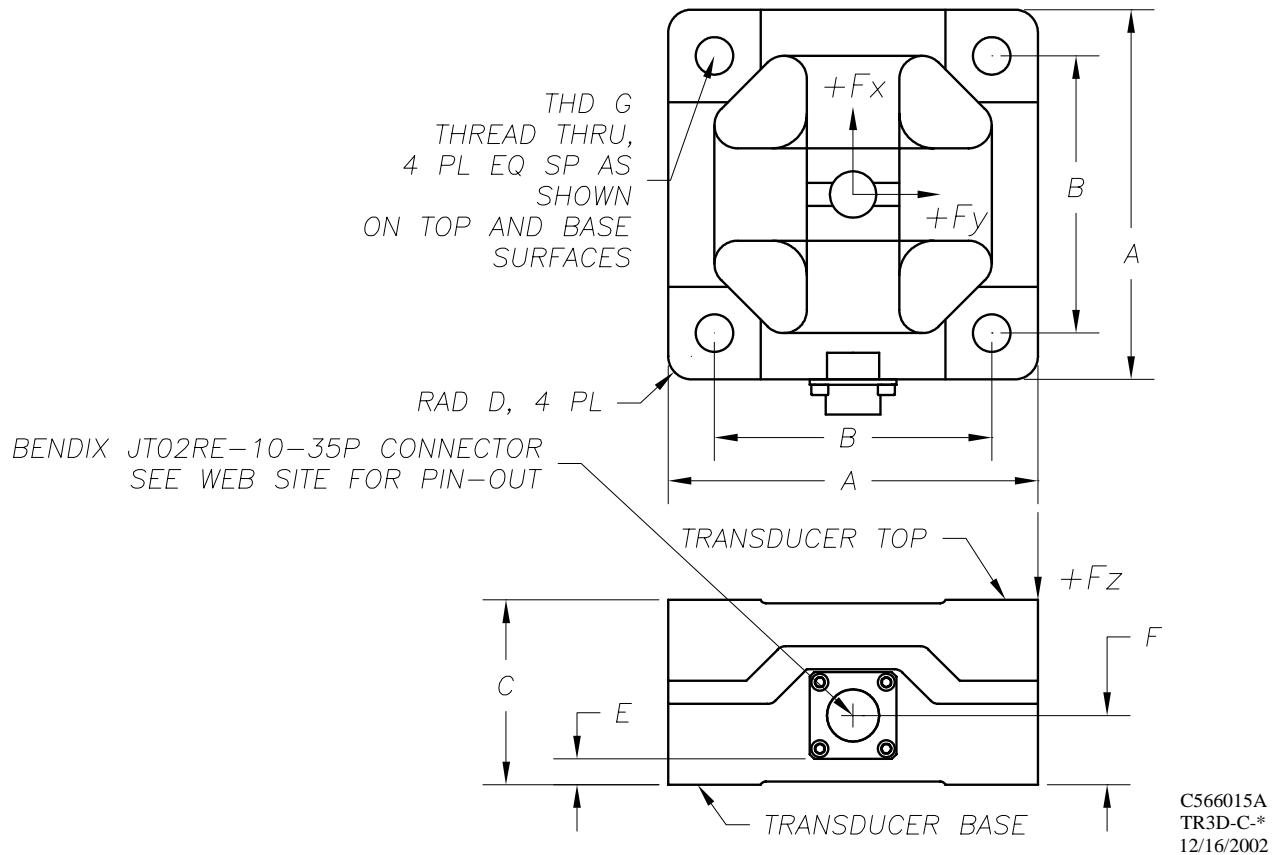
High grade stainless steel material in addition to weatherproof sealing combine to provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the transducers ensures stable output throughout a wide temperature range.

Specifications

	TR3D-C-16K	TR3D-C-40K
Maximum Load Capacity (per channel)	16,000 lbs (7257 kg)	40,000 lbs (18,143 kg)
Full Scale Load (per channel)	16,000 lbs (7257 kg)	40,000 lbs (18,143 kg)
Weight	4.8 lbs (2.2 kg)	16.5 lbs (7.5 kg)
Fatigue Rating for Single Axis (full scale load)	>10 ⁶ cycles	>10 ⁷ cycles
Full Scale Output	1.5 mV/V, nominal, all channels	
Sensor	3 four-arm strain gage bridges	
Nonlinearity	2.0% of full scale output	
Hysteresis	1.0% of full scale output	
Repeatability	1.0% 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 (bare leads)	10 ft (3 m)	

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TR3D-C-* Configuration



MODEL	A	B	C	D	E	F	THRD G
TR3D-C-16K	4.000 in (10.16 mm)	3.000 in (7.62 mm)	2.000 in (5.08 mm)	0.250 in (6.35 mm)	0.281 in (7.14 mm)	0.750 in (19.05 mm)	(M12 x 1.75)
TR3D-C-40K	6.000 in (15.24 mm)	4.500 in (11.43 mm)	3.000 in (7.62 mm)	0.375 in (9.53 mm)	0.656 in (16.66 mm)	1.125 in (28.58 mm)	(M18 x 1.5)

Dimensions are inch (mm); all tolerances are ± 0.005 in [± 0.13 mm], unless specified otherwise.

Positive outputs result when the transducer top is displaced relative to the transducer base, in the directions indicated.

Ordering Options

Connectors and cable length may be specified by the customer.

Contact Michigan Scientific for information on transducer applications and mounting.

8500 Ance Road
Charlevoix, MI 49720
Tel: 231-547-5511
Fax: 231-547-7070
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MICHIGAN SCIENTIFIC
corporation
<http://www.michsci.com>
Email: mscinfo@michsci.com

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