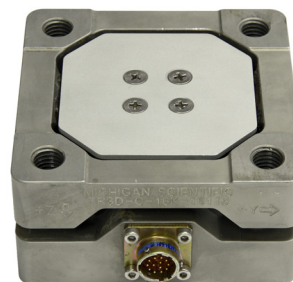


Square Three Directional Load Cell

Model TR3D-C-*

- 16,000 lb and 40,000 lb capacities
- Measures forces in three perpendicular directions
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction
- Weatherproof connector



Description

Michigan Scientific's *TR3D-C-** Square Three Directional Load Cells are designed for applications that require force measurements in three perpendicular directions. Available in 16,000 lb and 40,000 lb capacities, 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 an unlimited 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-C-16K	TR3D-C-40K
Maximum Load Capacity (per channel)	16,000 lbs (7257 kgf)	40,000 lbs (18,143 kgf)
Full Scale Load (per channel)	16,000 lbs (7257 kgf)	40,000 lbs (18,143 kgf)
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	≤ 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 full scale output	
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	

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

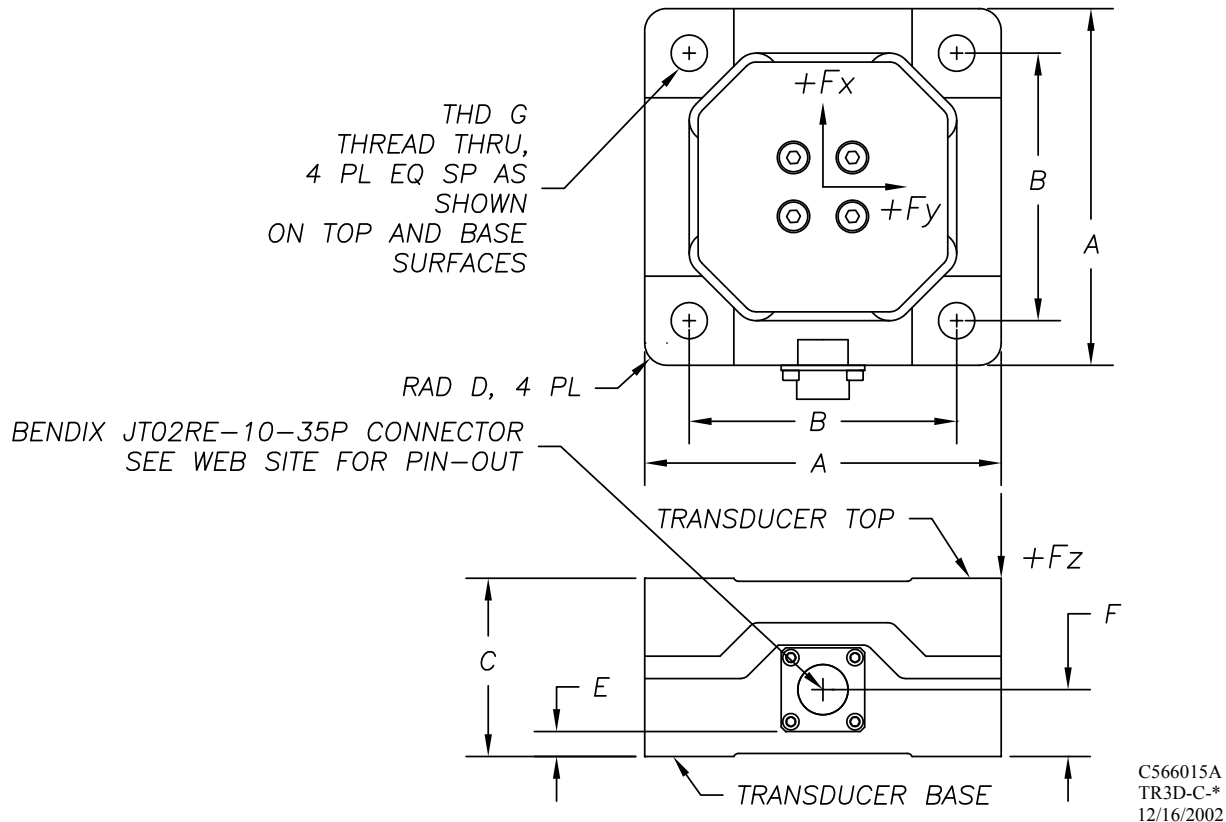
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Rev: 4/28/12

Square Three Directional Load Cell

TR3D-C-* Configuration



MODEL	A	B	C	D	E	F	THRD G
TR3D-C-16K	4.000 in (101.60 mm)	3.000 in (76.20 mm)	2.000 in (50.80 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 (152.40 mm)	4.500 in (114.30 mm)	3.000 in (76.20 mm)	0.375 in (9.53 mm)	0.656 in (16.66 mm)	1.125 in (28.58 mm)	(M20 x 2.5)*

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.

*Thread size changed from M18x1.5 to M20x2.5 on 2-11-2011

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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