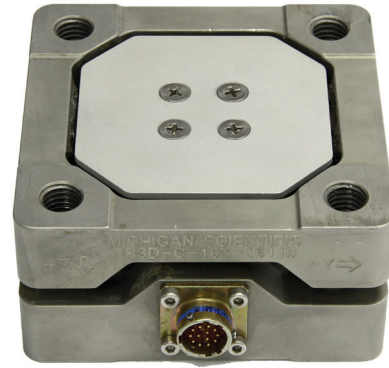


# Square Three Axis Load Cell

## Model TR3D-C-\*

- 10,000 lbf, 16,000 lbf and 40,000 lbf capacities
- Measures forces in three perpendicular directions
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction



## Description

Michigan Scientific's *TR3D-C-\** Square Three Axis Load Cells are designed for applications that require force measurements in three perpendicular directions. Available in 10,000 lbf, 16,000 lbf and 40,000 lbf 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-10K	TR3D-C-16K	TR3D-C-40K
Maximum Load Capacity (per channel)	10,000 lbf (44 kN)	16,000 lbf (71 kN)	40,000 lbf (177 kN)
Maximum Moment Capacity (per channel)	900 lbf · ft (1.2 kN · m)	1,250 lbf · ft (1.7 kN · m)	7,000 lbf · ft (9.5 kN · m)
Weight	2.3 lb (1.0 kg)	4.8 lb (2.2 kg)	16.5 lb (7.5 kg)
Full Scale Output	1.5 mV/V, nominal, all channels		
Sensor	3 four-arm strain gauge bridges		
Nonlinearity	≤ 1 % of full scale for X and Y axes; ≤ 2 % of full scale for Z axis		
Hysteresis	≤ 2 % of full scale for X and Y axes; ≤ 4 % of full scale for Z axis		
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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Rev. A

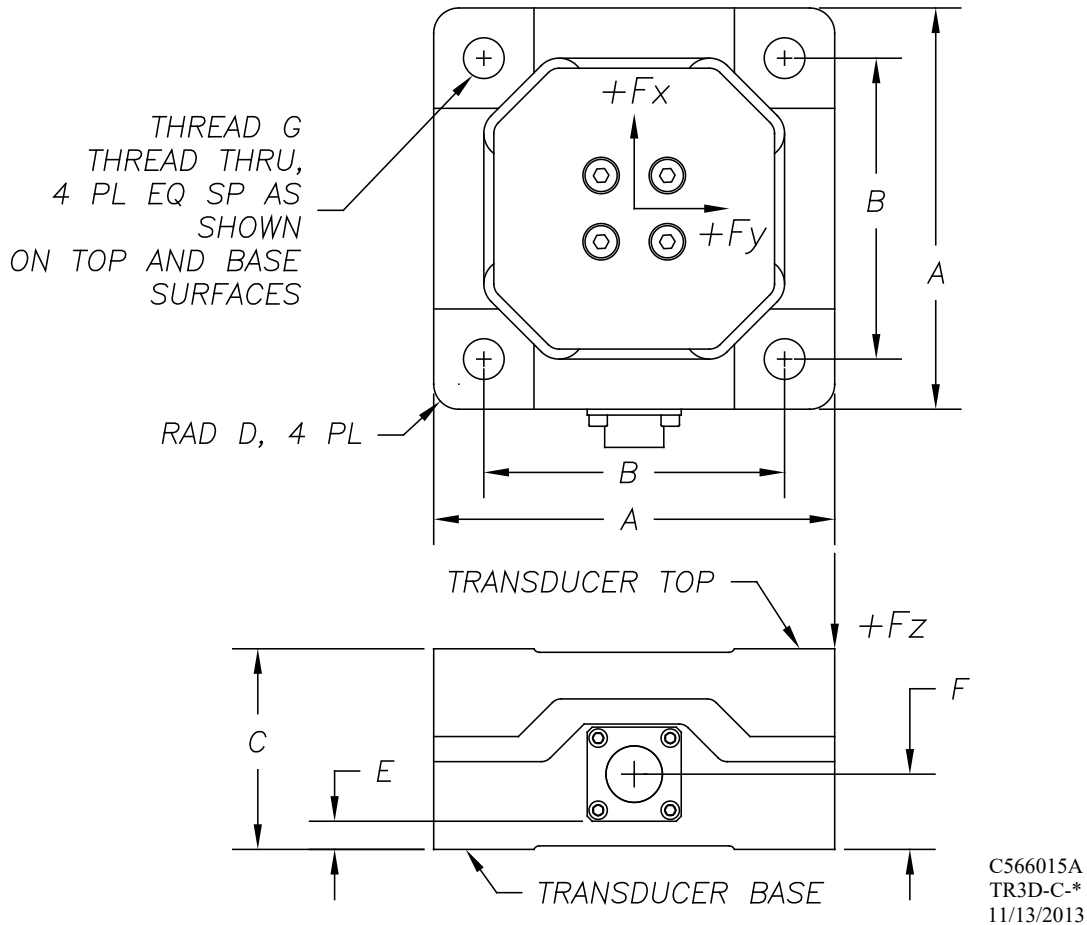
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# Square Three Axis Load Cell

## TR3D-C-\* Configuration



Model	A	B	C	D	E	F	THRD G
TR3D-C-10K**	3.000 in (76.20 mm)	2.250 in (57.15 mm)	1.650 in (41.91 mm)	0.1875 in (4.76 mm)	NA	0.615 in (15.62 mm)	(M10 x 1.5)
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  $\pm 0.005$  in [ $\pm 0.13$  mm], unless specified otherwise.  
 Positive outputs result when the transducer top is displaced relative to the transducer base, in the directions indicated.  
 \*\*TR3D-C-10K features a recessed connector  
 \*Thread size changed from M18x1.5 to M20x2.5 on 2-11-2011

## Ordering Options

Individual bridge 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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