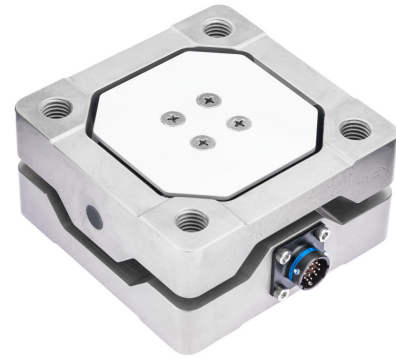


# Six Axis Load Cell

## Models TR6D-C\*

- Measures three perpendicular forces
- Measures three moments
- Environmentally protected
- Temperature compensated
- Rugged stainless steel construction
- Weatherproof connectors



## Description

Michigan Scientific's *TR6D-C-\** Six Axis Load Cells are designed for applications that require both force and moment measurements. 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.

The *TR6D-C-20K* model is made of titanium material and the *TR6D-C-16K* and *TR6D-C-40K* models are made of high grade stainless steel material. The load cell material, in addition to weatherproof sealing, provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the transducers ensures stable output throughout a wide temperature range.

## Specifications

	TR6D-C-16K	TR6D-C-20K	TR6D-C-40K
Maximum Force Capacity (Fx, Fy, Fz)	16,000 lbf (71 kN)	20,000 lbf (89 kN)	40,000 lbf (178 kN)
Maximum Moment Capacity (Mx, My, Mz)	1,000 lbf · ft (1.4 kN · m)	3,350 lbf · ft (4.5 kN · m)	7,000 lbf · ft (9.5 kN · m)
Weight	4.8 lb (2.2 kg)	9.5 lb (4.3 kg)	16.5 lb (7.5 kg)
Full Scale Output	0.5 mV/V nominal, Fx, Fy, Fz, 3.0 mV/V nominal, Mx, My, 0.8 mV/V nominal, Mz	1.5 mV/V nominal, Fx, Fy, Fz, 5.0 mV/V nominal, Mx, My, 1.75 mV/V nominal, Mz	
Sensor	6 four-arm strain gauge bridges		
Nonlinearity	≤ 1.0 % of full scale Fx, Fy ≤ 2.0 % of full scale Fz ≤ 0.5 % of full scale Mx, My, Mz	≤ 0.5 % of full scale for X and Y axes; ≤ 1.5 % of full scale for Z axis Moments ≤ 0.5 % of full scale for all channels	
Hysteresis	≤ 2.0 % of full scale Fx, Fy ≤ 4.0 % of full scale Fz ≤ 1.0 % of full scale Mx, My, Mz	≤ 0.5 % 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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Rev. A

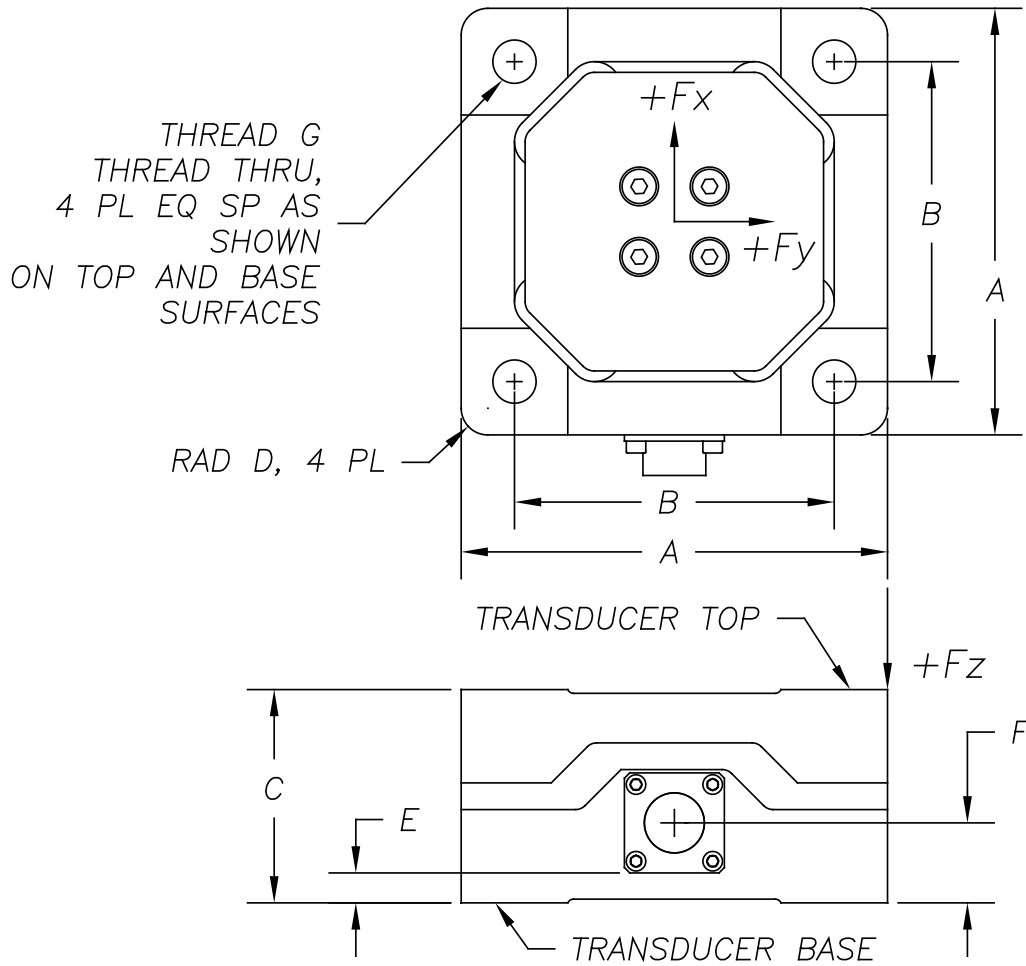
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# Six Axis Load Cell

## TR6D-C-40K Configuration



Model	A	B	C	D	E	F	THRD G
TR6D-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)
TR6D-C-20K	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)
TR6D-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)

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.

## Ordering Options

Individual bridge connectors and custom cable length may be specified by the customer.  
Contact Michigan Scientific for information on transducer applications and mounting.

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