Low Profile Six Axis Load Cell

Model TR6D-F-*

- 2,800 lbf to 10,000 lbf force capacities
- 275 lbf · ft to 2,500 lbf · ft moment capacities
- Measures three perpendicular forces and moments
- Low profile design (between 24 mm and 40 mm height)
- Environmentally protected
- Low cross-axis sensitivity
- Temperature compensated
- Rugged stainless steel construction



Description

The Michigan Scientific Low Profile Six Axis Load Cell is designed for applications that require three force and three moment measurements in a low profile package. This rugged transducer is ideally suited for both field data acquisition and laboratory testing.

Constructed from high-grade stainless steel and sealed for weatherproofing, all models provide excellent resistance to corrosion and environmental conditions. Temperature compensation of the transducer ensures stable output throughout a wide temperature range.

Specifications

Models	TR6D-F-2.8K	TR6D-F-5K	TR6D-F-10K / TR6D-F-10K-T
Maximum Force Capacity (Fx, Fy, Fz)	2,800 lbf (12.5 kN)	5,000 lbf (22 kN)	10,000 lbf (45 kN)
Maximum Moment Capacity (Mx, My, Mz)	275 lbf · ft (370 N · m)	800 lbf · ft (1.1 kN · m)	2,500 lbf · ft (3.4 kN · m)
Weight	0.9 lbs (0.41 kg)	2.4 lb (1.1 kg)	8.1 lbs (3.67 kg)
Full Scale Output (Nominal)	Fx, Fy: 3.3 mV/V Fz: 2.4 mV/V Mx, My: 3.6 mV/V Mz: 1.6 mV/V	Fx, Fy: 3.0 mV/V Fz: 2.5 mV/V Mx, My: 3.5 mV/V Mz: 1.3 mV/V	Fx, Fy: 2.4 mV/V Fz: 2.1 mV/V Mx, My: 3.3 mV/V Mz: 1.4 mV/V
Sensor	Full strain gauge bridges (Fz: 700 Ω, All others: 350 Ω)		
Nonlinearity	≤ 0.5 % of full scale		≤ 0.75 % of full scale
Hysteresis	≤ 0.5 % of full scale		≤ 0.75 % of full scale
Cross-talk between channels	< 2.5 % of full scale		
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 m) shielded, open-ended leads		

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08-27-26
Rev. A

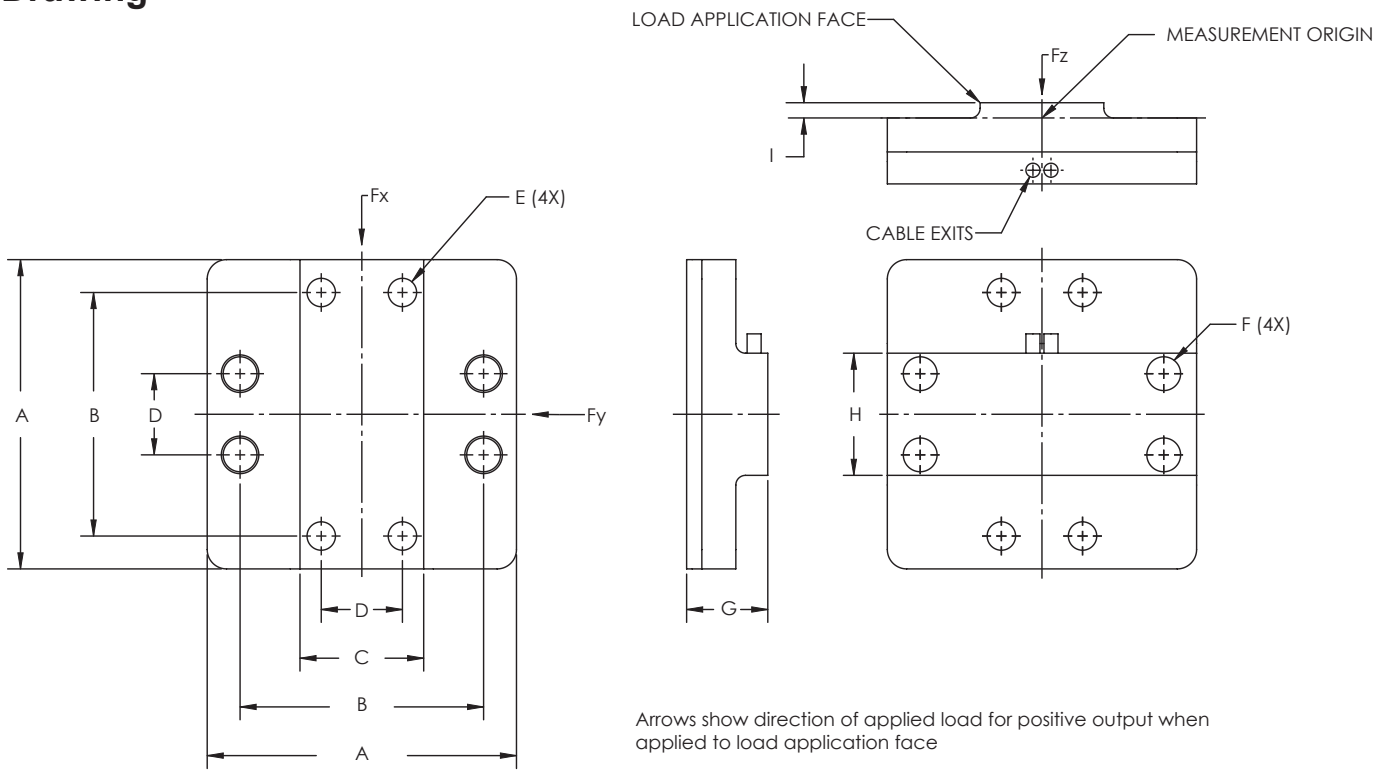
MICHIGAN SCIENTIFIC corporation

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Low Profile Six Axis Load Cell

Drawing



Arrows show direction of applied load for positive output when applied to load application face

	TR6D-F-2.8K	TR6D-F-5K	TR6D-F-10K	TR6D-F-10K-T
A	2.500 (63.50)	4.000 (101.60)	6.000 (152.40)	
B	1.967 (50.00)	3.150 (80)	4.724 (120)	
C	1.000 (25.40)	1.600 (40.64)	2.400 (60.96)	
D	0.551 (14.00)	1.024 (26)	1.575 (40)	
E	(4X) M8x1.25	(4X) M10 x 1.5	(4X) M16 x 2.0	(4X) M16 x 2.0
F	4(X) M8 x 1.25 ↧ 0.630 (16.00)	(4X) M10 x 1.5	(4X) M16 x 2.0	(4X) Ø 0.656 (16.65)
G	0.945 (24.00)	1.024 (26.00)	1.575 (40.00)	
H	0.988 (25.10)	1.580 (40.13)	2.370 (60.20)	
I	0.233 (5.67)	0.197 (5.00)	0.295 (7.50)	

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

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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