

Square Six Axis Load Cell

Models TR6D-F-5K, TR6D-F-10K, TR6D-F-10K-T

- 5,000 and 10,000 lbf force capacities
- 800 and 2,500 lbf • ft moment capacities
- Measures forces and moments in three perpendicular directions
- Low profile designs (26 and 40 mm height)
- Environmentally protected
- Low cross-axis sensitivity
- Temperature compensated
- Rugged stainless steel construction



Description

The Michigan Scientific TR6D-F Rectangular Six Axis Load Cell is designed for applications that require three force and three moment measurements in a low profile package. Available in 5,000 and 10,000 lbf force capacities and 800 and 2,500 lbf • ft moment capacities, 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-5K	TR6D-F-10K / TR6D-F-10K-T
Maximum Force Capacity (Fx, Fy, Fz)	5,000 lbf (22 kN)	10,000 lbf (45 kN)
Maximum Moment Capacity (Mx, My, Mz)	800 lbf • ft (1.1 kN • m)	2,500 lbf • ft (3.4 kN • m)
Weight	2.4 lb (1.1 kg)	8.1 lbs (3.67 kg)
Full Scale Output	3.0 mV/V nominal, Fx, Fy 2.5 mV/V nominal, Fz 3.5 mV/V nominal, Mx, My 1.3 mV/V nominal, Mz	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	< 2.5 % of full scale
Temperature Range, Compensated	75 °F to 200 °F (24 °C to 93 °C)	
Temperature Effect on Zero	< 0.2 % 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	

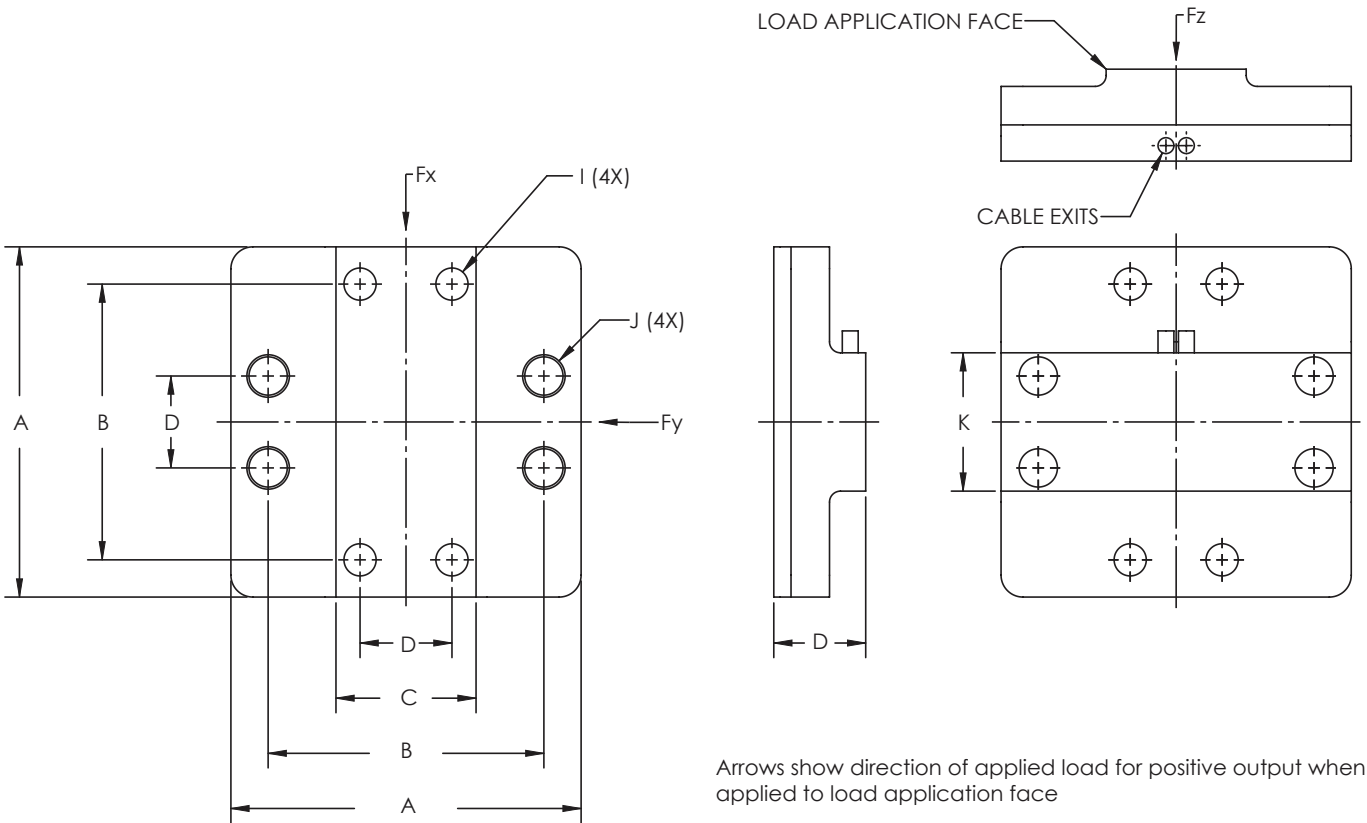
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Drawing



	TR6D-F-5K	TR6D-F-10K	TR6D-F-10K-T
A	4.000 (101.60)	6.000 (152.40)	
B	3.150 (80)	4.724 (120)	
C	1.600 (40.64)	2.400 (60.96)	
D	1.024 (26)	1.575 (40)	
E	(4X) M10 x 1.5	(4X) M16 x 2.0	(4X) M16 x 2.0
F	(4X) M10 x 1.5	(4X) M16 x 2.0	(4X) Ø 0.656 (16.65)
G	1.580 (40.13)	2.370 (60.20)	

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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