

FN7325 Multiaxial Load Cell



- 6-Components Load Cell
- Range from 5 to 250 kN (1 to 50 kbf)
- Measures force in three directions X, Y, Z
- Measures torque in three directions Mx, My, Mz
- Minimal Cross Effects
- High Level Output Model with Integrated Amplifier

DESCRIPTION

The multi-axial **FN7325** measures force from 0-5 kN to 0-250 kN along three axes as well as the corresponding torque from 0-200 Nm to 0-7000 Nm. The **FN7325** is simple to use and install and in many diverse applications circumvents the necessity of employing multiple single-axes units. For high-level output a model with integrated amplifier is available.

With many years of experience as a designer and manufacturer of sensors, Measurement Specialties, Inc. often works with customers to design or customize sensors for specific uses and testing environments.

To meet your needs we also offer complete turnkey systems. The matched components (sensor, power, amplifier and digital display) are formatted, calibrated and ready for immediate use.

FEATURES

- Measures force and torque simultaneously
- Up to 6 components load cell
- Multiple and custom designs available
- Optional integrated amplifier
- Minimal Cross Effects

APPLICATIONS

- Mechanical linkage
- Structure testing
- Crash testing
- Automotive testing
- Industrial test benches

STANDARD RANGES

Model	FN7325-M6	FN7325-M8	FN7325-M10	FN7325-M12	FN7325-M16
Force X/Y in N [in lbf]	5k [1k]	15k [3k]	30k [6k]	60k [12k]	100k [20k]
Force Z in N [in lbf]	15k [3k]	30k [6k]	50k [10k]	100k [20k]	250k [50k]
Torque X/Y/Z in N/m [in lbf/ft]	200 [145]	600 [440]	1.2k [885]	2.8k [2 065]	7k [5 160]

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PERFORMANCE SPECIFICATIONS

All values are typical at temperature 20±1°C

PARAMETERS	
Operating Temperature Range (OTR)	-20 to 80° C [-4 to 176° F]
Compensated Temperature Range (CTR)	0 to 60° C (32 to 140° F)
Zero Shift in CTR	<1% F.S. / 50° C [100° F]
Sensitivity Shift in CTR	< 2% of reading / 50° C [100° F]
Ranges (F.S.)	See table
Over-Range	
Without Damage	1.2 x F.S.
Accuracy	
Combined non-linearity and hysteresis	±1% F.S. typical
Cross effects	3% F.S. typical (5% max.)

Electrical Characteristics

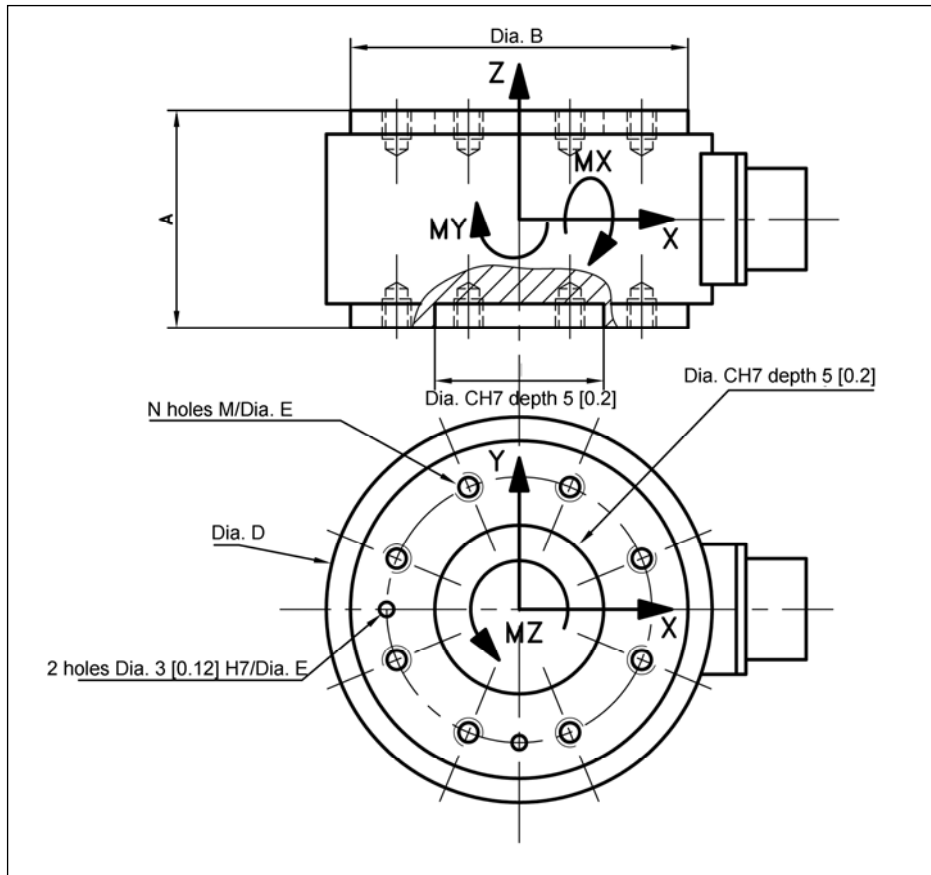
Model	FN7325	FN7325-A1	FN7325-A2
Supply Voltage	10 Vdc	10 - 30 Vdc	±15 Vdc (±12 to ±18Vdc)
F.S. Output ⁵	±10 -15 mV/V	±2V ±5% F.S.	±5 V ±5% F.S.
Zero Offset ⁵	±5% F.S.	2.5 V ±5% F.S.	0 V ±5% F.S.
Insulation under 50Vdc	≥100MΩ		

Notes

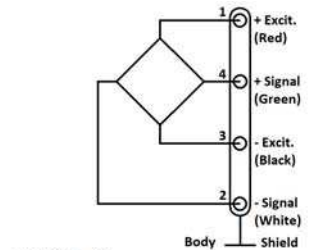
1. Electrical Termination: Connector output including mate
2. Wiring schematic depends on the sensor and number of channels
3. Materials: Body in stainless steel cover in aluminium alloy
4. Protection index: IP50
5. Other signal output on request
6. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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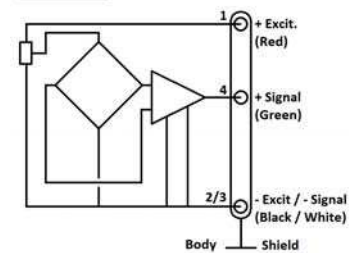
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



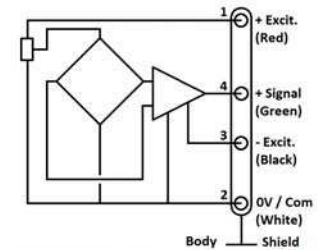
Wiring Schematic (per channel)



Version -A1



Version -A2



Dimensions in mm [inch]

Model	FN7325-M6	FN7325-M8	FN7325-M10	FN7325-M12	FN7325-M16
Force X/Y in N [in lbf]	5k [1k]	15k [3k]	30k [6k]	60k [12k]	100k [20k]
Force Z in N [in lbf]	15k [3k]	30k [6k]	50k [10k]	100k [20k]	250k [50k]
Torque X/Y/Z in N/m [in lbf/ft]	200 [145]	600 [440]	1.2k [885]	2.8k [2 065]	7k [5 160]
A	50 [1.97]	55 [2.17]	65 [2.56]	75 [2.95]	90 [3.54]
B	70 [2.76]	88 [3.46]	114 [4.49]	148 [5.83]	190 [7.48]
C	35 [1.38]	40 [1.57]	50 [1.97]	65 [2.56]	90 [3.54]
D	80 [3.15]	98 [3.86]	124 [4.88]	158 [6.22]	200 [7.87]
N	8 x M6/Ø55 [2.17]	8 x M8/ Ø70 [2.76]	8 x M10/Ø95 [3.74]	12 x M12/Ø125 [4.92]	12 x M16/Ø150 [5.91]

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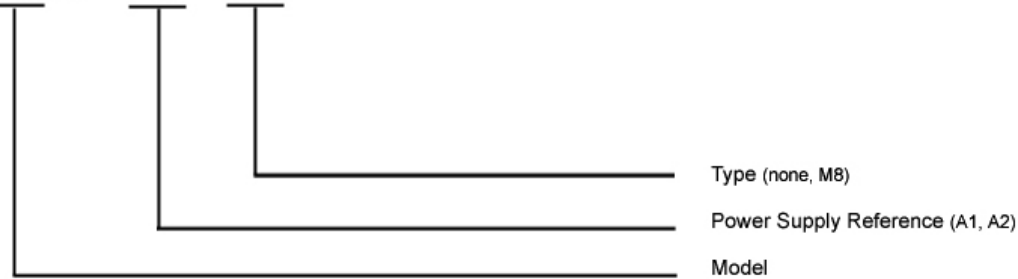
OPTIONS

A1 : Amplified Tension output with unipolar power supply

A2 : Amplified Tension output with bipolar power supply

ORDERING INFO

FN7325 - A1 - M8



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