

FN7325 Multiaxial Load Cell



- 6-Components Load Cell
- 5 to 0-250 kN (1 to 50 kLbf)
- 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 multiaxial FN7325 measures force from 0-5 kN to 0-250 kN along three axes as well as the corresponding torque from 0-200 N.m to 0-7000 N.m. 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 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

- Full Scale Range from 0-5 kN to 0-250 kN
- Measures force in three directions X, Y, Z
- Measures torque in three directions Mx, My, Mz
- High Level Output Model with 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 [Lbf]	5 000	[1 000]	15 000	[3 000]	30 000	[6 000]	60 000	[12 000]	100 000	[20 000]
Force Z in N [Lbf]	15 000	[3 000]	30 000	[6 000]	50 000	[10 000]	100 000	[20 000]	250 000	[50 000]
Torque X/Y/Z in N.m [Lbf.ft]	200	[145]	600	[440]	1 200	[885]	2 800	[2 065]	7 000	[5 160]

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PERFORMANCE SPECIFICATIONS

Ambient Temperature: 20±1°C (unless otherwise specified)

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	<5.10 ⁻⁴ / °C of reading <2.5.10 ⁻⁴ / °F of reading]
Range (F.S.)	0-5 kN to 0-250 kN (see dimensions)

Over-Range

Without Damage	1.2 x F.S.
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Accuracy

Combined Non-Linearity & Hysteresis	From 1-5% F.S.
Cross Effects	3% Typical – max. 5%

Electrical Characteristics

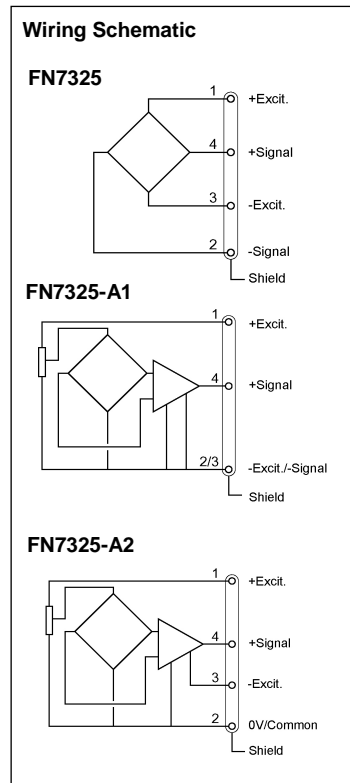
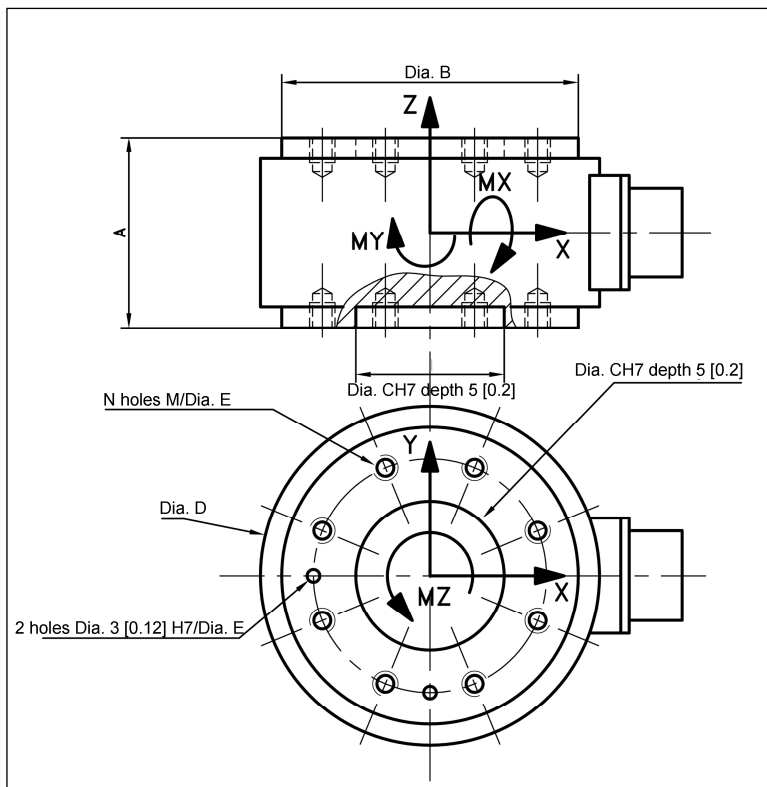
Model	FN7325	FN7325-A1	FN7325-A2
Supply Outage	10 Vdc	10 to 30 Vdc	±15 Vdc (±12 to ± 18 Vdc)
F.S. Output	10 - 15mV/V	0.5 to 4.5 V	±5 V
Zero Offset	±5% F.S.	2.5 V ±5% F.S.	0 V ±5% F.S.
Insulation under 50Vdc	≥100 MΩ	≥100 MΩ	≥100 MΩ

Notes

1. Electrical Termination: Connector output including mate
2. Materials: Body in stainless steel cover in aluminium alloy
3. Protection index: IP50

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DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

Model	FN7325-M6	FN7325-M8	FN7325-M10	FN7325-M12	FN7325-M16
Force X/Y in N [Lbf]	5000 [1000]	15000 [3000]	30000 [6000]	60000 [12000]	100000 [20000]
Force Z in N [Lbf]	15000 [3000]	30000 [6000]	50000 [10000]	100000 [20000]	250000 [50000]
Torque X/Y/Z in N.m [Lbf.ft]	200 [145]	600 [440]	1200 [885]	2800 [2065]	7000 [5160]
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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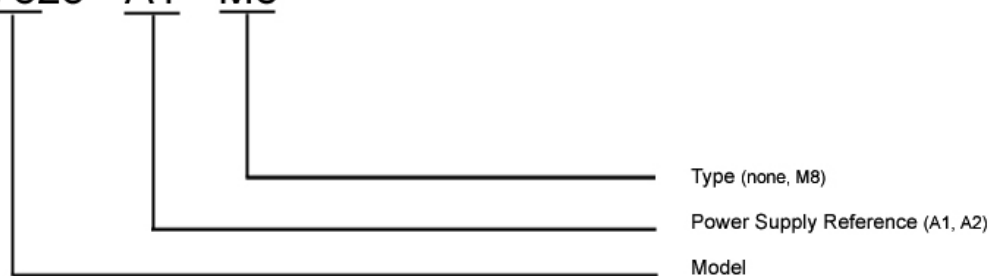
OPTIONS

A1 : Unipolar tension

A2 : Bipolar tension

ORDERING INFO

FN7325 - A1 - M8



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