

FN3060 Load Cell for Fatigue Testing



- S-Beam load cell
- Designed for endurance applications
- Ranges 250 to 2500 N (50 to 500 lbf)
- Cable gland or connector output
- Optional build in amplifier

DESCRIPTION

The **FN3060** S-beam load cell is highly suited for use in test benches and fatigue tests. Due to the mechanical design, the **FN3060** is especially durable. It measures tension and compression in standard ranges from 0-250 to 0-2500 N [50 to 500 lbf].

For high-level output a model with integrated amplifier is available. Sensor can all be supplied in higher temperature range for fatigue tests in oven.

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

- High stiffness
- Tension and compression
- Accuracy : 0.1% F.S.
- High level output with integrated amplifier
- IP 64 protected

APPLICATIONS

- Lifetime test benches
- Dynamic fatigue testing
- Robotics and Effectors
- Laboratory and Research
- Pneumatic cylinder monitoring

STANDARD RANGES

Ranges in N	250	500	1k	2.5k
Ranges in lbf	50	100	200	500
Stiffness in N/m	8×10^6	1.5×10^7	2.5×10^7	5×10^7
Stiffness in lbf/ft	5.5×10^5	1.0×10^6	1.7×10^6	3.4×10^6

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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	<0.5% F.S. / 50° C [100° F]
Sensitivity Shift in CTR	<1% of reading / 50° C [100° F]
Range (F.S.)	0-10 to 0-2000 N [0-2 to 0-400 lbf]
Over-Range	
Without Damage	1.5 x F.S.
Without Destruction	3 x F.S.
Accuracy	
Combined non-linearity & hysteresis	≤±0.1% F.S.

Electrical Characteristics

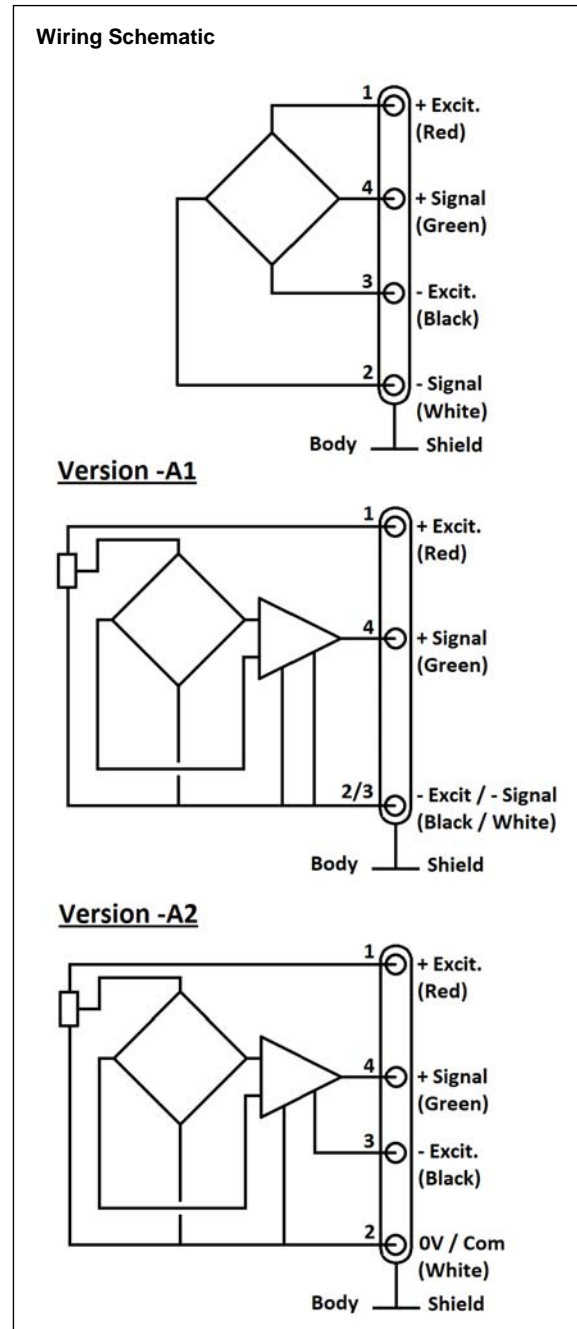
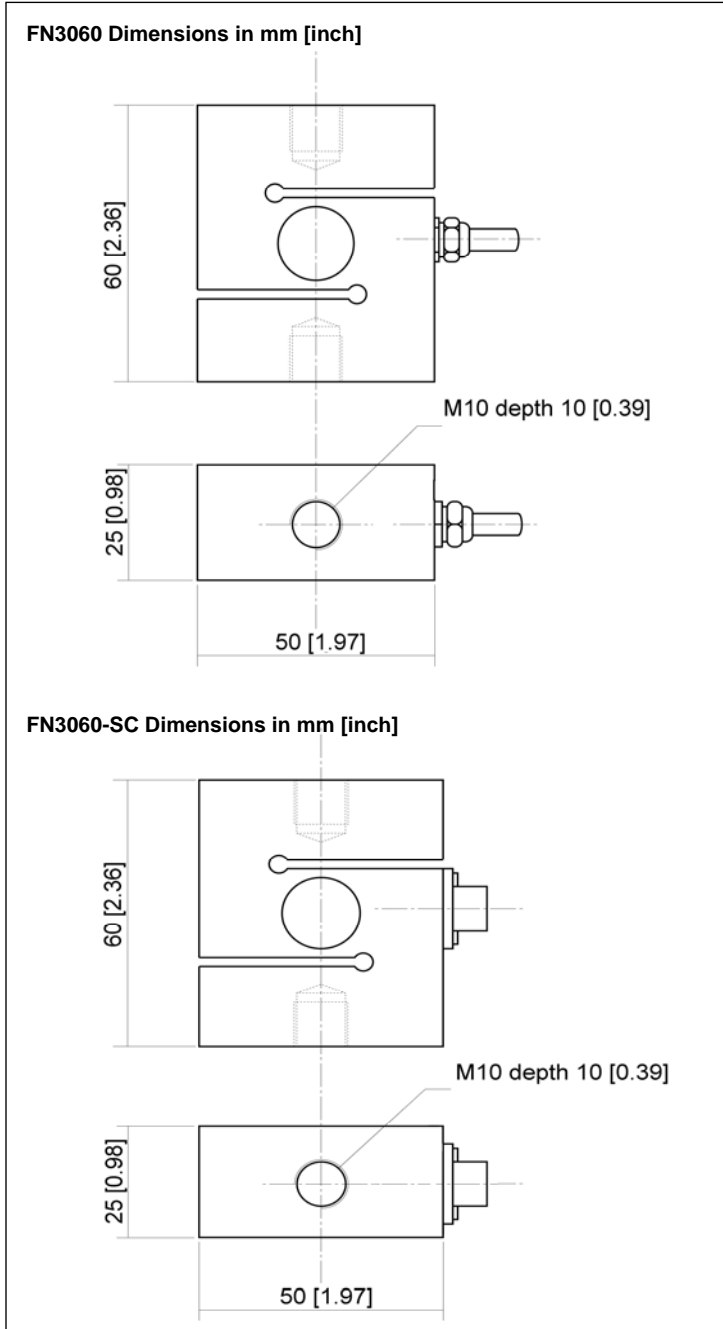
Model	FN3060	FN3060-A1	FN3060-A2
Supply Voltage	10Vdc	10 to 30Vdc	±15Vdc (±12 to ±18Vdc)
F.S. Output ⁴	±2mV/V	±2V ±5% F.S.	±5V ±5% F.S.
Zero Offset ⁴	±5% F.S.	2.5V ±5% F.S.	0V ±5% F.S.
Input Impedance/Consumption	350 to 700Ω	<50mA	50mA
Output Impedance	350 to 700Ω	1 kΩ ⁵	1 kΩ ⁵
Insulation under 50Vdc	≥100MΩ	≥100MΩ	≥100MΩ

Notes

1. Electrical Termination: Cable gland termination; 2 m cable length standard
2. Material: Body aluminum alloy depending on F.S.
3. Protection Index: IP64
4. Other signal output on request
5. Output impedance < 100Ω 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)

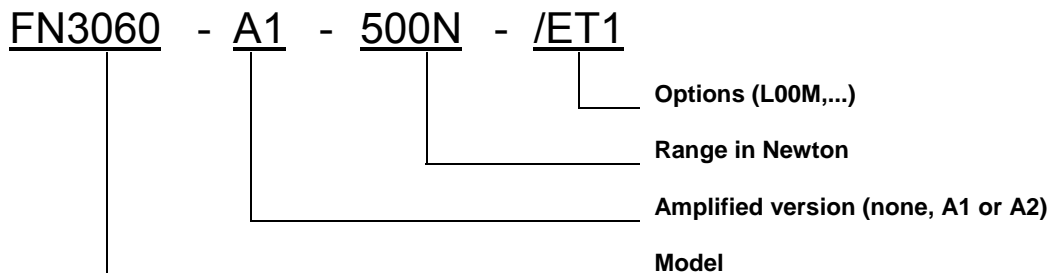


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OPTIONS

A1 : Amplified Tension output with unipolar power supply
A2 : Amplified Tension output with bipolar power supply
ET1 : CTR -20 to 100° C OTR = CTR
ET2 : CTR -40 to 120° C OTR = CTR
SC : Connector output
L00M : special cable length, replace "00" with total length in meters

ORDERING INFO



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