

## FN3280 Load Cell Tension and Compression



- S-Beam with Mechanical Stops
- Very low range: 1 to 5 N (0.2 to 1 Lbf)
- Very high resolution
- Compact size

### DESCRIPTION

The FN3280 S-beam load cell is designed to measure low loads and comes in standard ranges of 0-1 N to 0-5 N. Integrated mechanical stops protect against accidental overloads up to 100 times F.S. The FN3280 provides a combination of economy and performance; this low cost load cell has an accuracy of 0.1% F.S.

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 0-1N to 0-5 N (0-0.2Lbf to 0-1Lbf)
- Tension and Compression
- Accuracy : 0.1% F.S.
- Integrated Mechanical Stops

### APPLICATIONS

- Product Validation Testing
- Medical Instruments
- Weighing
- High Accuracy Measurements
- Laboratories and Research

### STANDARD RANGES

F.S. Ranges in N	1	2	5
F.S. Ranges in Lbf	0.2	0.4	1
Stiffness in N/m	$2.5 \times 10^3$	$2.75 \times 10^3$	$1.25 \times 10^4$
Stiffness in Lbf/ft	$1.7 \times 10^2$	$1.9 \times 10^2$	$8.6 \times 10^2$

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### PERFORMANCE SPECIFICATIONS

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

#### PARAMETERS

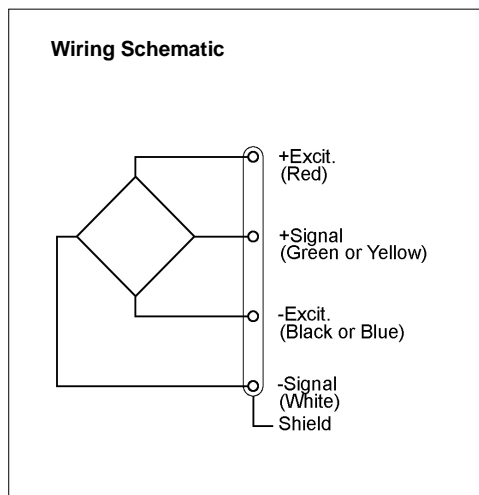
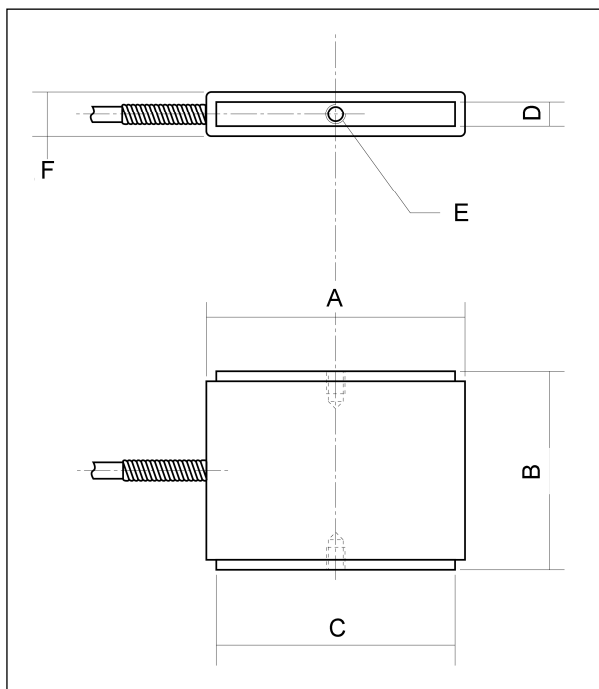
Operating Temperature Range [OTR]	-20 to 80 °C [-4 to 176 °F]
Compensated Temperature Range [CTR]	0 to 60 °C [32 to 140 °F]
Zero Shift in CTR	<0.5% F.S./50°C (100°F)
Sensitivity Shift in CTR	<2.10 <sup>-4</sup> / °C of reading (<1.10 <sup>-4</sup> / °F of reading)
Range [F.S.]	0-1 N to 0-5 N [0.2 lbf to 1 lbf]
<b>Over Range</b>	
Without Damage	40 to 100 xF.S.
<b>Accuracy</b>	
Combined Non Linearity & Hysteresis	±0.1% F.S.
<b>Electrical Characteristics</b>	
Supply Outage	10Vdc
F.S. Output	1 to 2mV/V
Zero Offset	<±5% F.S.
Input Impedance/Consumption	300 to 400Ω
Output Impedance	300 to 400Ω
Insulation under 50Vdc	≥1000MΩ

#### Notes

1. Electrical Termination: Shielded Ø2.2 mm Tefabloc cable, 4 Teflon wires (AWG32) standard length 2 m
2. Material s: Body in aluminum alloy, stainless steel cover

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## DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

F.S. Ranges in N [Lbf]	1 [0.2]	2 [0.4]	5 [1]
A	52 [2.05]		52 [2.05]
B	40 [1.57]		50 [1.57]
C	48 [1.89]		48 [1.89]
D	5 [0.20]		15 [0.59]
E (Thread)	M3 depth 6 [0.24]		M4 depth 6
F	9 [0.35]		19 [0.75]
Over-range	100 N [20 lb]	100 N [20 lb]	200 N [40 lb]

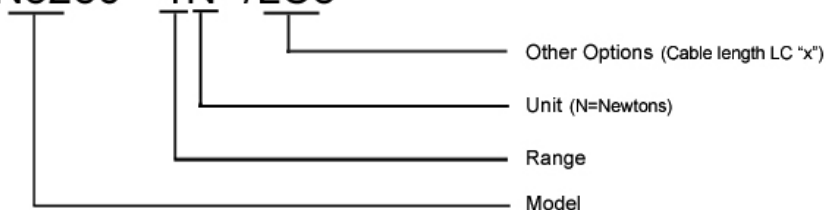
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### OPTIONS

LC "X" : Additional cable length in ft **Note** : "X" Customer Input value

### ORDERING INFO

FN3280 - 1N -/LC3



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