

FN3280

Low Range Load Cell with Mechanical Stops

SPECIFICATIONS

- **Very low range: 1 N to 5 N (0.2 lbf to 1 lbf)**
- **S-Beam with mechanical stops**
- **Very high resolution**
- **Combined non-linearity & hysteresis 0.1% F.S.**

The **FN3280** S-beam load cell is designed to measure low force and has standard ranges of 1 N to 5 N [0.2 lbf to 1 lbf]. 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.

For higher ranges, the model **FN3148** can measurement loads from 10 N to 2 kN [2 to 400 lbf] with mechanical stops.

With a long standing experience as a designer and manufacturer of sensors, TE CONNECTIVITY often works with customers to design or customize sensors for specific uses and testing environments.

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

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

FEATURES

- High accuracy
- Tension and Compression
- Integrated Mechanical Stops
- Full Wheatstone bridge
- Cable output

APPLICATIONS

- Process control equipment
- Medical Instruments
- Weighing
- Laboratory and Research
- Calibration test benches

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STANDARD RANGES

Ranges in N (FS)	1	2	5
Ranges in lbf	0.2	0.4	1
Stiffness in N/m	$2.5x10^3$	$2.75x10^3$	$1.25x10^4$
Stiffness in lbf/ft	$1.7x10^2$	$1.9x10^2$	$8.6x10^2$

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 60º C [32 to 140° F]
Thermal Zero Shift in CTR	<0.5% F.S. / 50º C [/100° F]
Thermal Sensitivity Shift in CTR	<0.5 % of reading / 50º C [/100° F]
Over-Range	
Without Damage	40 to 100 x F.S. (see table page 3)
Accuracy	
Combined non Linearity & Hysteresis	±0.1% F.S.

Electrical Characteristics

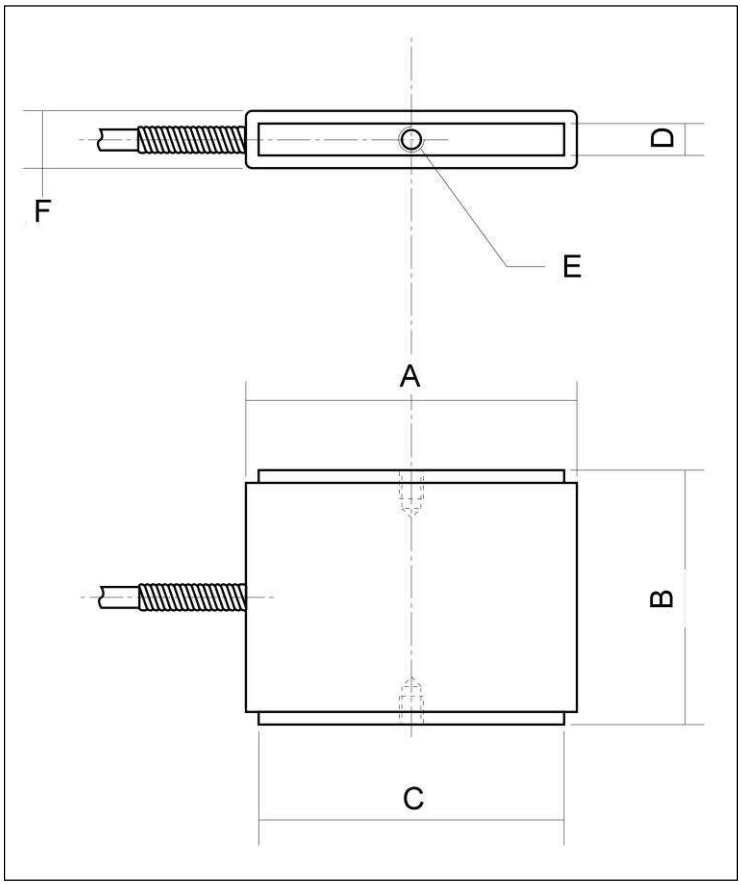
Model	**FN3280**
Supply Voltage	1 to 10 Vdc regulated
Sensitivity “FSO” [12]	±1mV/V for 1N range ±1.5mV/V for 2N and 5N ranges
Zero Offset	±1mV
Input Impedance/Consumption	300 to 400Ω
Output Impedance	300 to 400Ω
Insulation under 50Vdc	≥100MΩ

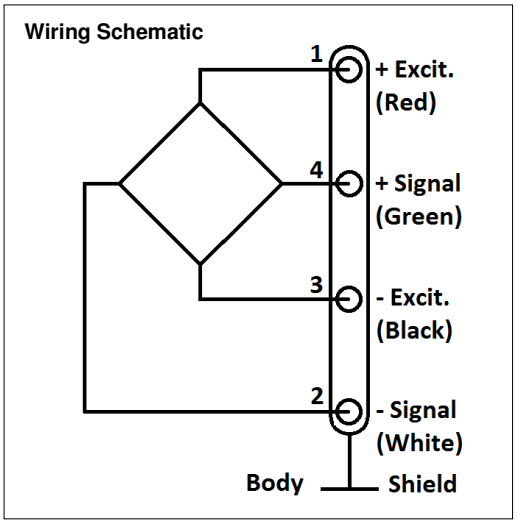
Notes

1. Sensors are calibrated with 10Vdc power supply as standard.
2. Signal goes positive in tension with standard wiring configuration
3. Electrical Termination: Shielded Ø2.2 mm cable, 4 wires (AWG32) standard length 2 m
4. Materials: Body and cover in aluminum alloy
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)





Dimensions in mm [inch]

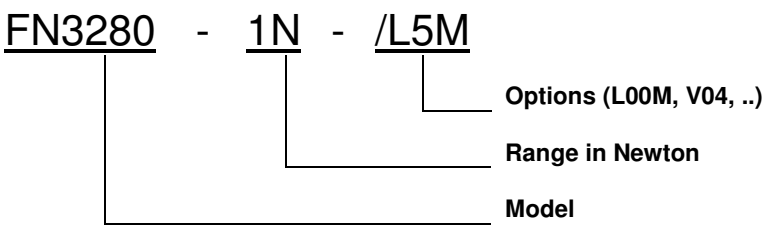
Range in N [in lbf]	**1 [0.2]**	**2 [0.4]**	**5 [1]**
A	48 [1.89]		48 [1.89]
B	40 [1.57]		50 [1.57]
C	48 [1.89]		48 [1.89]
D	5 [0.20]		15 [0.59]
E (Thread)	M3 depth 6 [0.24]		M4 depth 6 [0.24]
F	9 [0.35]		19 [0.75]
Over-range in N [in lbf]	100 [20]		200 [40]

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OPTIONS

V00 : Non-standard power supply calibration, replace “00” with value in Volt (standard 10Vdc)
L00M : special cable length, replace “00” with total length in meters.

ORDERING INFO



NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity Company
Phone: +1 800 522 6752
Email: customercare.frmt@te.com

EUROPE
Measurement Specialties (Europe), Ltd.
a TE Connectivity Company
Phone: +31 73 624 6999
Email: customercare.lcsb@te.com

ASIA
Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Phone +86 400 820 6015
Email: customercare.shzn@te.com

TE.com/sensorsolutions

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