



FN4055

Seat belt load cell

SPECIFICATIONS

- Tension - very low range 250N
- Compatible with most seat belts
- Easy and economical maintenance
- Overload protection

Measurement Specialties has applied our decade of experience serving the automotive crash test industry to design the ultimate crash test seat belt restraint sensor.

Created for the automobile industry, the FN 4060 measures with excellent accuracy the forces exerted on the seat belt. Only the actual compression upon the seat belt is measured, as the sensor is insensitive to contact from the crash test dummy. The unit is designed for very low range, like tests for kids security. It is protected against overload by mechanical stops.

For a new example of similar application with higher range, please read the datasheet of EL20-S458.

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.

FEATURES

- Protected against overload
- Usable without cutting the belt
- High accuracy
- 250N range, higher range with EL20 sensors

APPLICATIONS

- Automotive crash test
- Kid seats tests
- Security belts controls
- Laboratory and research

STANDARD RANGES

| | | | |
|-------------------------------------|-----|------|------|
| Ranges in N | 100 | 250 | 300 |
| Ranges in lbf | 20 | 50 | 60 |
| Over range in N w/o damage | 500 | 1250 | 1500 |
| Over range in lbf w/o damage | 10 | 250 | 300 |

PERFORMANCE SPECIFICATIONS**All values are typical at temperature 20±1° C**

| | |
|-------------------------------------|--------------------------------------|
| PARAMETERS | |
| Operating Temperature Range (OTR) | -40 to 120° C [-4 to 176° F] |
| Compensated Temperature Range (CTR) | 0 to 60° C [32 to 140° F] |
| Zero Shift in CTR | <0.02% F.S. / °C |
| Sensitivity Shift in CTR | <0.02 % of reading / °C |
| Range (F.S.) | 0-100N to 0-300 N [0-20 to 0-60 lbf] |
| Over-Range | |
| Without Damage | See table |
| Accuracy | |
| Combined Non-Linearity & Hysteresis | ±0.25% F.S. |

Electrical Characteristics

| | |
|-----------------------------|---------------|
| Model | FN4055 |
| Supply Outage | 10Vdc |
| F.S. Output | 2 mV/V |
| Zero Offset | ±5% F.S. |
| Input Impedance/Consumption | 350 Ω |
| Output Impedance | 350 Ω |
| Insulation under 50Vdc | ≥100MΩ |

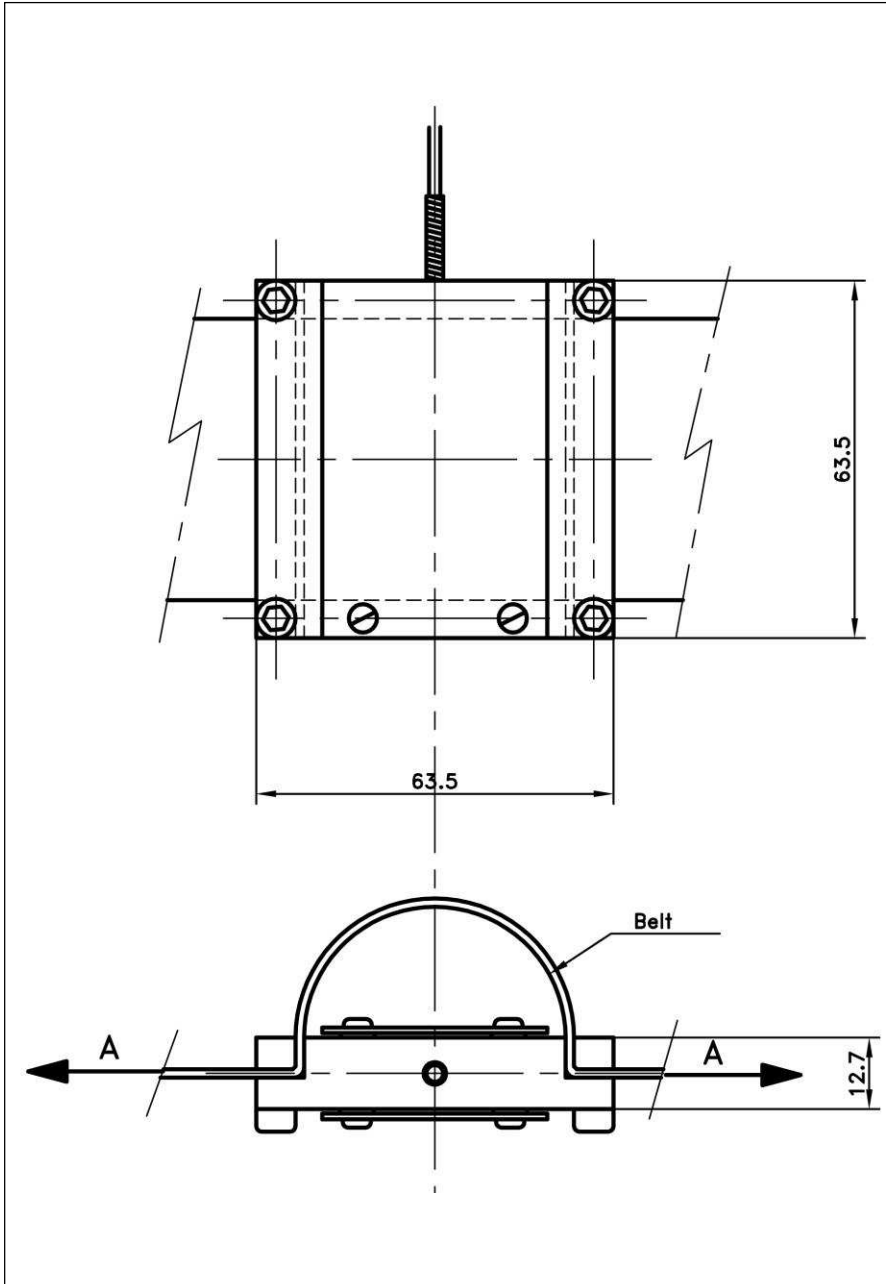
Notes

1. Shielded cable with 4 wires, standard length 2 m [6.5 ft]
2. Material: Body aluminium alloy
3. Protection Index: IP50

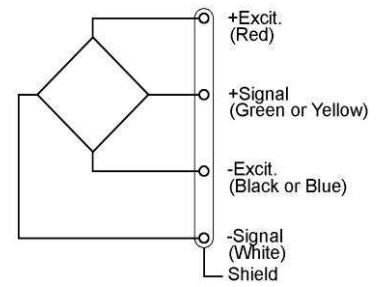
FN4055

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DIMENSIONS



Wiring Schematic



FN4055

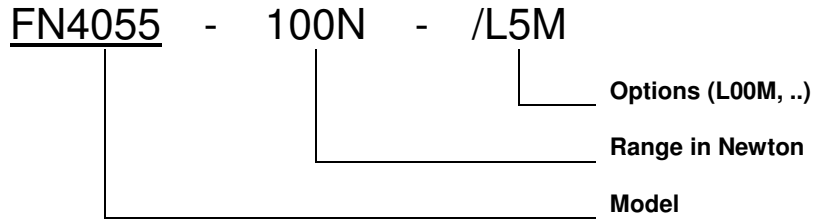
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OPTIONS AND ACCESSORIES

L00F: Special Cable Length, replace "00" with total length in feet (Specified only on units with lbf range.)

L00M: Special Cable Length, replace "00" with total length in meter (Specified only on units with N range.)

ORDERING INFORMATION



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