

- Protected against overload
 - Tension only
 - Usable without cutting the belt
 - For Static and Dynamic Applications
-
- Automotive crash test
 - Kid seats tests
 - Security belts controls
 - Laboratory and Research

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FN4055

Low Ranges Seatbelt Load Cell

SPECIFICATIONS

- Ranges from 100 to 300 N (20 to 60 lbf)
- Compatible with most seat belts
- Machined with integrated mechanical stops
- Accuracy $\pm 0.25\%FS$

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

The **FN4055** 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 kid's security. It is protected against overload by mechanical stops.

A similar sensor, **EL20-S458**, covers requests with higher ranges up to 25kN.

With many years of 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.

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

STANDARD RANGES

Ranges in N (FS)	100	250	300
Ranges in lbf (FS)	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 (typical values at temperature 23±3°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	<1.5% of reading / 50° C [/100° F]
Over-Range	
Without Damage	See table
Accuracy	
Combined Non-Linearity & Hysteresis	±0.25% F.S.

Electrical Characteristics

Model	FN4055
Supply Outage	10Vdc
Sensitivity "FSO"	2 mV/V
Zero Offset	<±1mV
Input Impedance/Consumption	350 Ω
Output Impedance	350 Ω
Insulation under 50Vdc	≥100MΩ

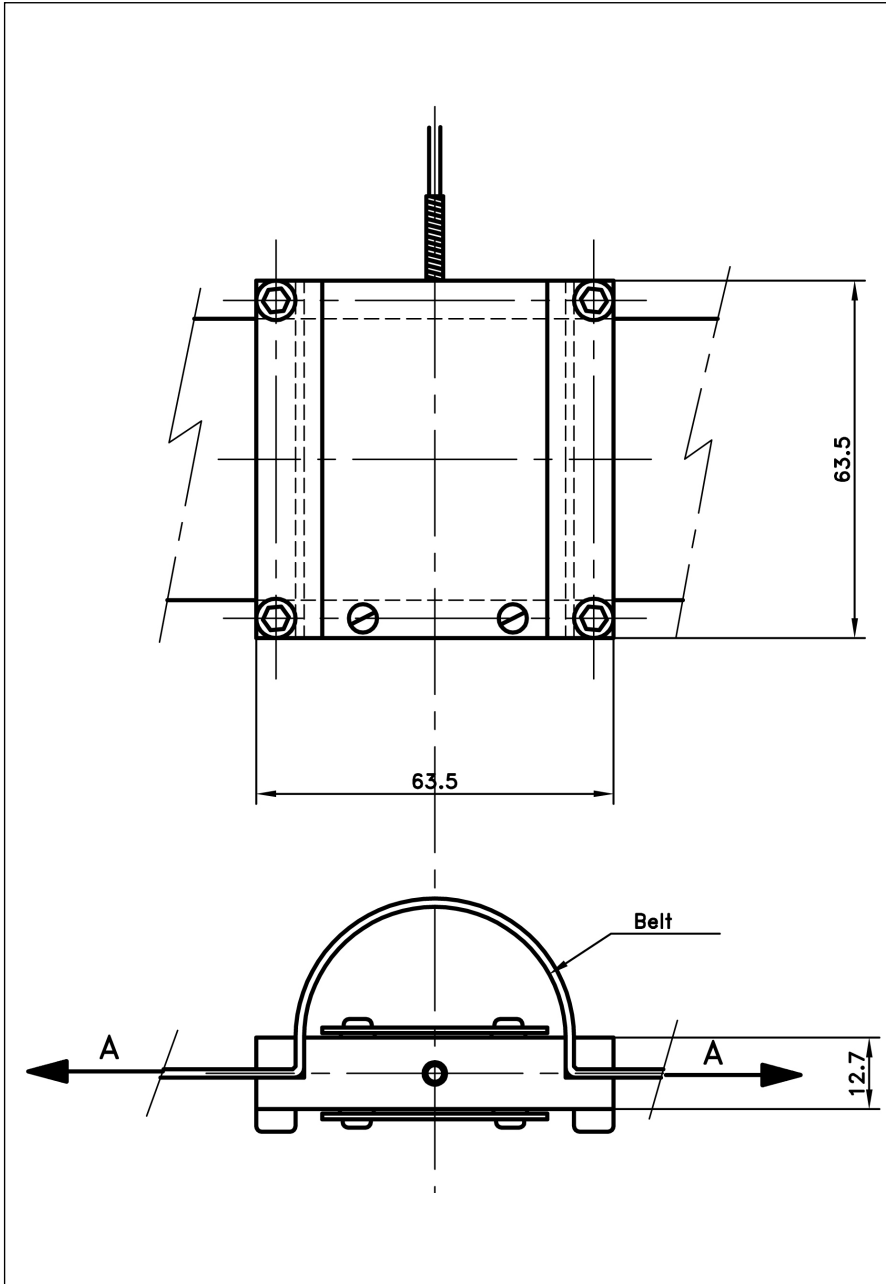
Notes

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

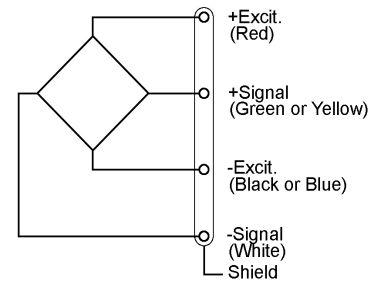
FN4055

Seat belt load cell

DIMENSIONS



Wiring Schematic



FN4055

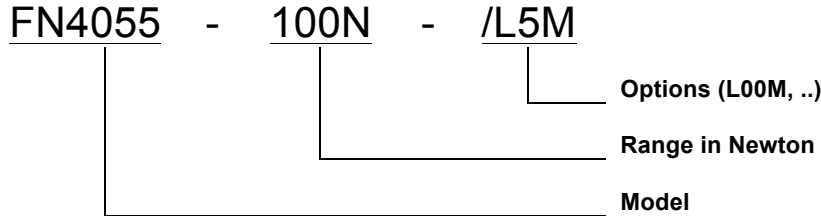
Seat belt load cell

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



NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Vibration Design Center
32 Journey - Suite 150
Aliso Viejo, CA 92656
United States USA
Tel: 1-949-716-0877
Fax: 1-949-916-5677
CustomerCare.lcsb@te.com

EUROPE

Measurement Specialties (Europe), Ltd.
a TE Connectivity Company
26 Rue des Dames
78340 Les Clayes-Sous-Bois, France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
CustomerCare.lcsb@te.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057 China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
CustomerCare.shzn@te.com

TE.com/sensorsolutions

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