



FEATURES

- Protected against overload
- Tension only
- Usable without cutting the belt
- For Static and Dynamic Applications

APPLICATIONS

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

FN4055

Low Ranges Seat Belt 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.

FN4055

Seat belt load cell

STANDARD RANGES

Ranges in N (FS)	100	250	300
Ranges in lbf (FS)	20	50	60
Over range in N w/o damage	1000	2500	3000
Over range in lbf w/o damage	200	500	600

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

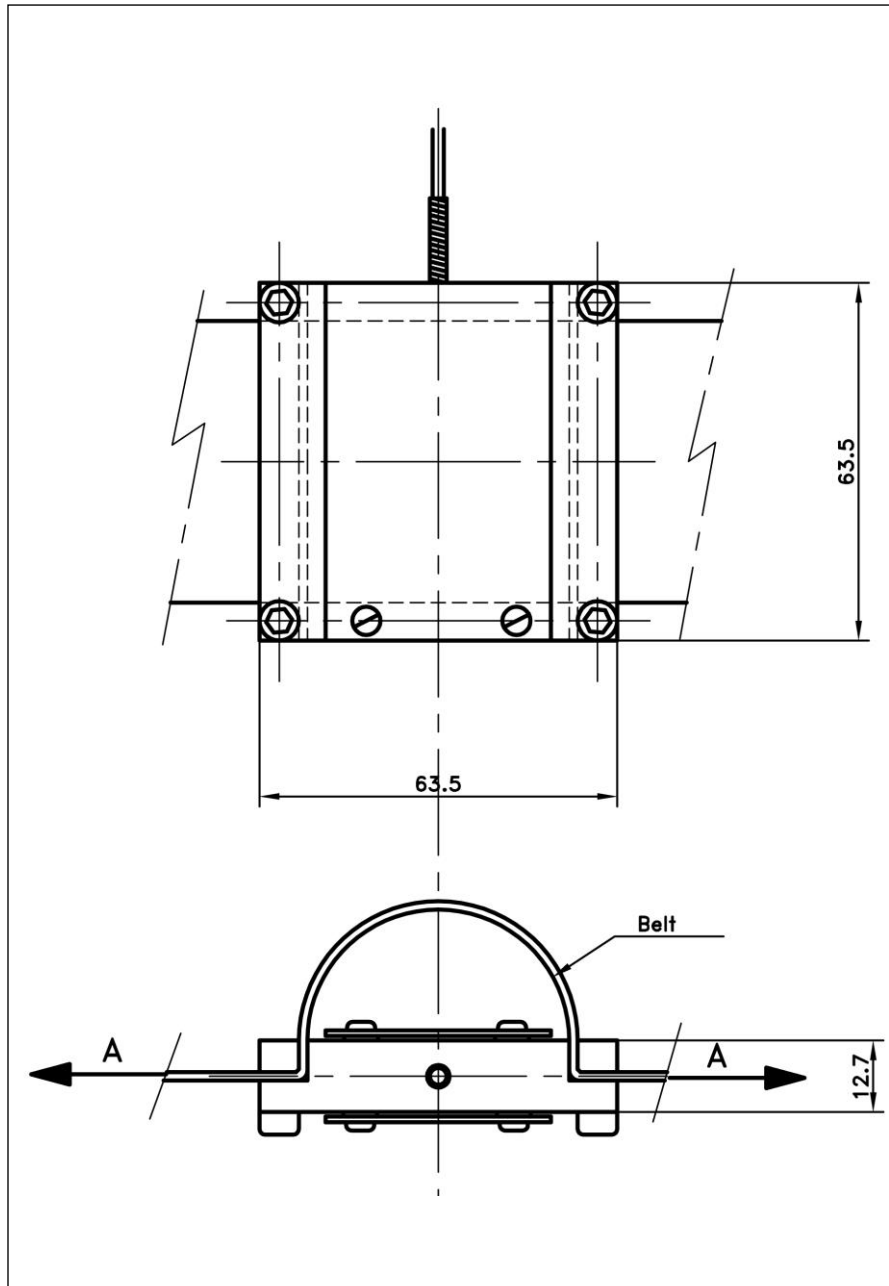
Notes

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

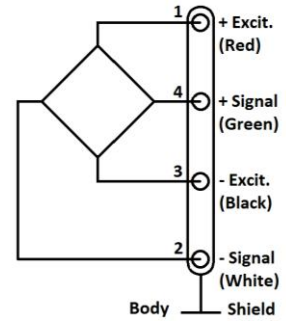
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DIMENSIONS



Wiring Schematic



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Seat belt load cell

OPTIONS AND ACCESSORIES

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

ORDERING INFORMATION

