Novatech
Loadcell Design & Manufacture

F305 Seat Belt Tension Loadcell

- Only 50g mass
- High performance
- All titanium construction
- Ultra light weight cable
- Connector for easy cable replacement
- Traceable calibration with certificate included in the standard price

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±3	% RL
Hysteresis	±1	% RL
Creep - 20 minutes	±0.05	% AL
Repeatability	±0.2	% RL
Rated output - Nominal	1.5	mV/V
Zero load output	±4	% RL
Temperature effect on rated output per Â°C	±0.005	% AL
Temperature effect on zero load output per Â°C	±0.007	% RL
Temperature range - Compensated	-10 to +50	°C
Temperature range - Safe	-10 to +80	°C
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	10	V
Bridge resistance	350	Î©
Insulation resistance - Minimum at 50Vdc	500	MÎ©
Structural stiffness (normal to belt axis)	1.9 x 107	N/m

Overload - Safe	30	% RL
Overload - Ultimate	100	% RL
Weight - Nominal (excluding cable)	50	g
The standard range is manufactured in titanium.		

The F305 is a high performance loadcell for measuring seat belt tension forces.

Its geometry was created by computer program to generate an optimal design with minimal mass, material usage, stress and deflection. The outer bars can easily be removed allowing fitting to a seat belt while it is anchored at both ends. The performance figures are typical values and are dependant on belt type. We can carry out a 5 point calibration using a 2 metre sample of customer supplied belt to reduce application errors. The calibration data can be used to reduce non-linearity errors in test results.We are happy to design variants of this loadcell to meet your specific requirements. Please consult our engineering department.

Order Codes

Code	Description
F305TF00H0	Tension, unrationalised

Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.

Connections

The loadcell is fitted with 2 metres of miniature PVC insulated 4 core screened cable.

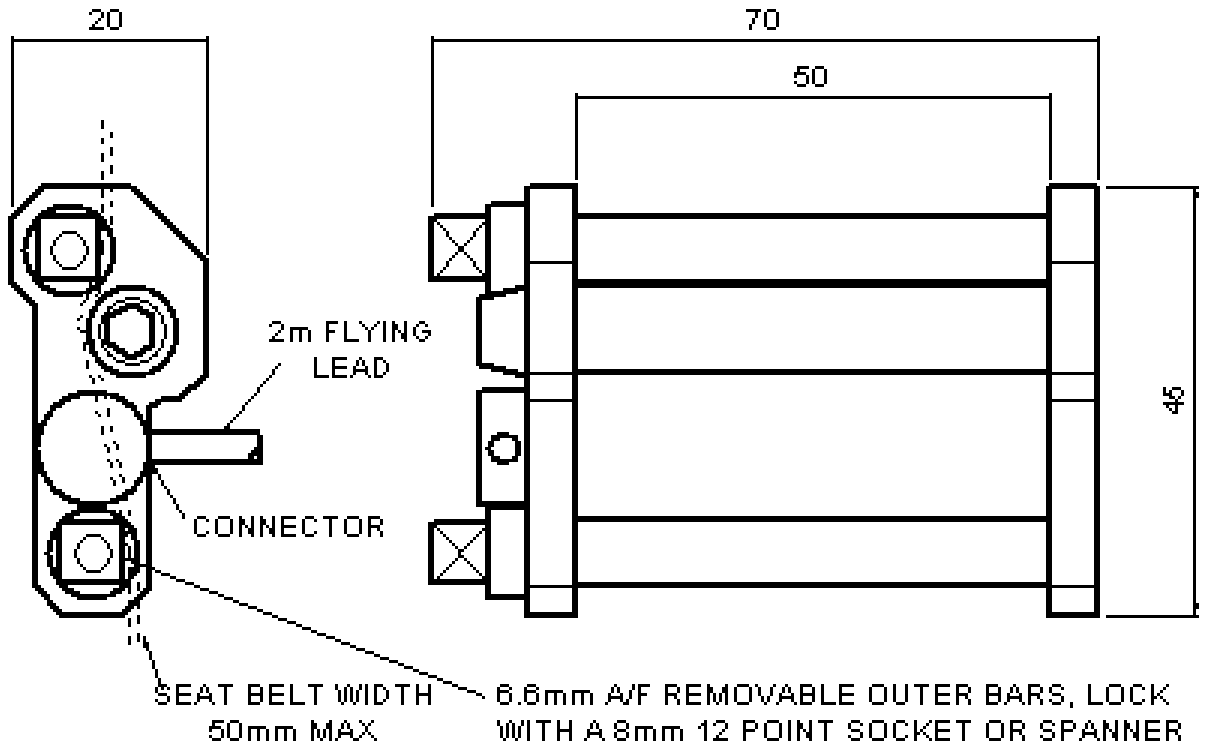
Excitation + = Red, Excitation - = Black, Signal + = White, Signal - = Green, Screen = Orange.

The screen is not connected to the loadcell body.

Files

Type	Title	Download
STEP File	F305TF00H0 16kN (1.6tonnef)	Download

Outline



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