F301

Low Range Stylus Loadcell

Standard Ranges 100 and 300g (1 and 3N)

- **Integral overload stops**
- **Tension / compression / bi-directional calibration**
- **Simple installation**
- **Small diameter**
- **Standard 2 year warranty**

The F301 is a compact bending beam loadcell for low range force measurements. Its small diameter eases mounting problems in existing systems. All standard bi-directional loadcells are calibrated in both modes.

The loadcell has integral overload stops to protect against overloading in the vertical axis. Torsional loads about the longitudinal axis may damage the loadcell.

We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for higher temperature operation. Please consult our engineering department.

Details of our other loadcell families can be found in the Loadcell Specifier Guide. If you require a copy please contact our sales department or look on our web site at www.novatechloadcells.co.uk.

Ordering Codes:	See the loadcell ordering code sheet for more details. Add range in the required units.		
F301CF00H0	Compression, unrationalised	F301CF00HN	Compression, rationalised
F301TF00H0	Tension, unrationalised	F301TF00HN	Tension, rationalised
F301UF00H0	Bi-directional, unrationalised	F301UF00HN	Bi-directional, rationalised

F301 Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.1	% RL
Hysteresis	±0.1	% RL
Creep - 20 minutes	±0.05	% AL
Repeatability	±0.03	% RL
Rated output - Nominal	1.0	mV/V
Rated output - Rationalised	0.8	mV/V
Rationalisation tolerance	±0.5	% RL
Zero load output	±8	% RL
Temperature effect on rated output per ºC	±0.005	% AL
Temperature effect on zero load output per ºC	±0.01	% RL
Temperature range - Compensated	-10 to +50	ºC
Temperature range - Safe	-10 to +80	ºC
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	10	V
Bridge resistance	350	Ω
Insulation resistance - Minimum at 50Vdc	500	MΩ
Overload - Safe	20	% RL
Overload - Ultimate	100	% RL
Weight - Nominal (excluding cable)	18 to 20	g

All standard ranges are manufactured in aluminium.

When this loadcell is rationalised the resistors are housed in a capsule located in the loadcell cable 100mm from the free end. Capsule dimensions are Ø10mm by 57mm.

Structural stiffness - Nominal					
Range (N)	Stiffness (N/m)	Range (N)	Stiffness (N/m)	Range (N)	Stiffness (N/m)
1	1.2×10^3	3	3.6×10^3		

Notes

1. AL = Applied load.
2. RL = Rated load.
3. Temperature coefficients apply over the compensated range.
4. The load must be applied directly through the central loading axis.

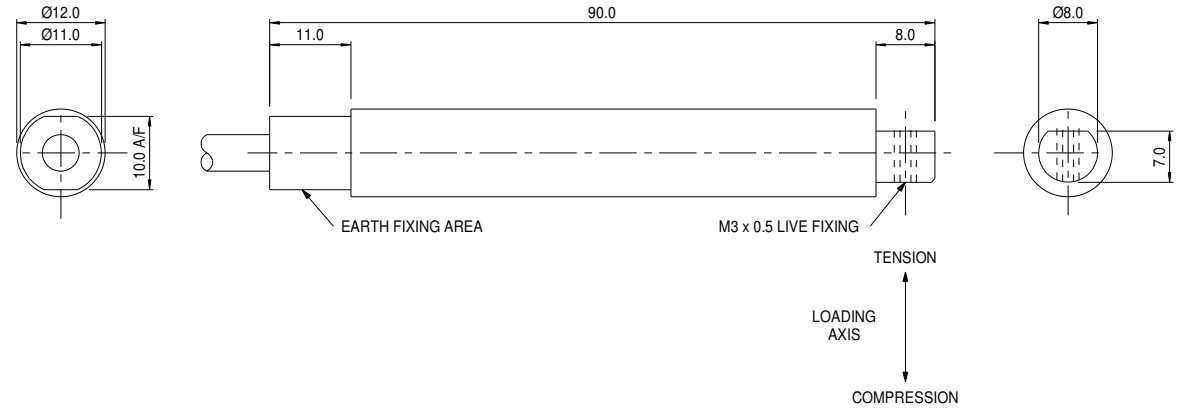
Connections

The loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 7-1-4C.

Excitation + = Red Signal + = Yellow Screen = Orange

Excitation - = Blue Signal - = Green

Reverse the signal connections to obtain a positive signal in tension mode. The screen is not connected to the loadcell body.



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