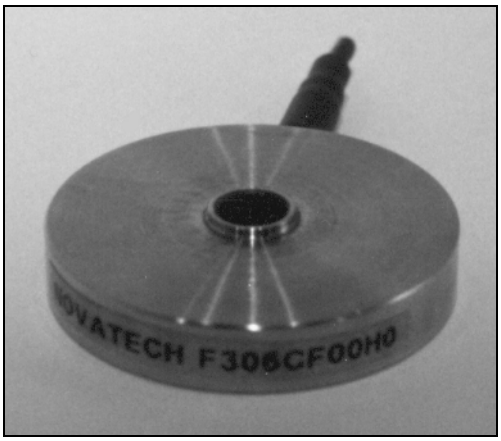
F306

Disc Loadcell

Standard Ranges 50, 200, 500N and 1, 2, 5, 10kN (5kgf to 1tonnef)

- **Very low profile - 8mm high**
- **Easy installation**
- **High stiffness**
- **Through centre hole**
- **Tensile applications are 'fail-safe'**
- **Traceable calibration with certificate included in the standard price**



Geometry: Very low profile disc loadcell for use in force measurements.

The F306 is designed for compressive force measurements in situations where space is limited. Alternatively tensile load transfer can be achieved via a tie rod assembly through the centre hole. In this way the loadcell can indirectly measure tensile loads in a 'fail-safe' mode.

In the event of structural failure of the loadcell the resulting vertical movement of the supported load will be very small.

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 Product List and the Loadcell Specifier Guide. If you require copies 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.		
F306CFR0H0	Compression, IP65, unrationalised	F306CFR0HN	Compression, IP65, rationalised

F306 Specification

Parameter	50N to 1kN	2 to 10kN	Unit
Non-linearity - Terminal	±0.3	±0.5	% RL
Hysteresis	±0.2	±0.3	% RL
Creep - 20 minutes	±0.1	±0.1	% AL
Repeatability	±0.1	±0.1	% RL
Rated output - Nominal	1.2	2.2	mV/V
Rated output - Rationalised	1.0	2.0	mV/V
Rationalisation tolerance	±0.5	±0.5	% RL
Zero load output	±4	±4	% RL
Temperature effect on rated output per ºC	±0.005	±0.005	% AL
Temperature effect on zero load output per ºC	±0.01	±0.005	% RL
Temperature range - Compensated	-10 to +50	-10 to +50	ºC
Temperature range - Safe	-10 to +80	-10 to +80	ºC
Excitation voltage - Recommended	10	10	V
Excitation voltage - Maximum	10	10	V
Bridge resistance	350	350	Ω
Insulation resistance - Minimum at 50Vdc	500	500	MΩ
Overload - Safe	50	50	% RL
Overload - Ultimate	300	300	% RL
Weight - Nominal (excluding cable)	20 to 50		g

The 50N range is manufactured in aluminium; the 200N to 10kN ranges are manufactured in stainless steel. 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 (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
50	4.8×10^5	1	2.5×10^7	10	2.8×10^8
200	2.2×10^6	2	2.4×10^7		
500	8.8×10^6	5	9.6×10^7		

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.

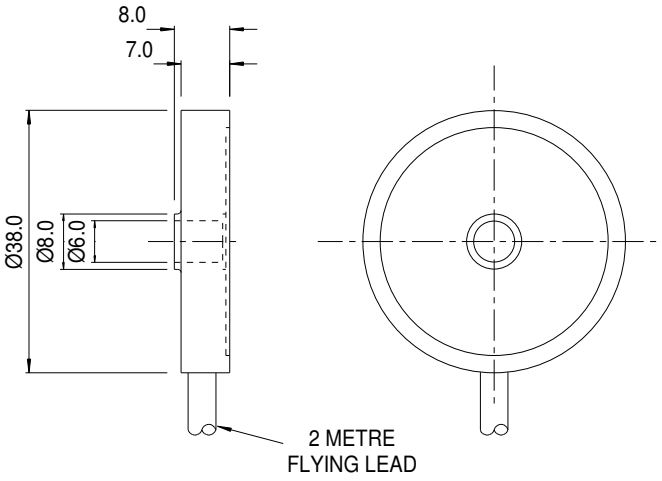
Connections

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

Excitation + = Red Signal + = White Screen = Orange

Excitation - = Black Signal - = Green

The screen is not connected to the loadcell body.



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