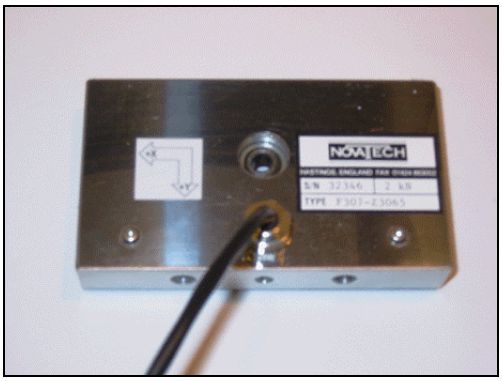
F314

2 Axis Loadcell

Ranges ±200kg to ±1tonne (±2kN to ±10kN)

- **Low cross talk**
- **Custom force ranges**
- **Simple installation**
- **Direct output from each axis without calculation**
- **Moment arm immune versions**
- **Standard 2 year warranty**



The F314 measures forces in two axes at 90°. Apart from error evaluations, each output is pure and requires no mathematical manipulation.

The loadcell is ideally suited to many industrial and scientific applications, including automotive research.

The integral spherical bearing removes the possibility of applying moments to the loadcell. If rigid fixings are required and moments are present the performance specification may be affected, our engineering department would be happy to evaluate performance changes.

The loadcell can be manufactured with force ranges to suit the application. Please consult our engineering department about the viability of the required ranges.

The example shown in the picture and drawing is a ±200kg model; there will be small differences in the dimensions of the fixings for other ranges.

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 ranges in the required units.
Most F314 loadcells are manufactured to special requirements and are given an F314-Zxxxx number.	

F314 Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.1	% RL
Hysteresis	±0.1	% RL
Creep - 20 minutes	±0.1	% AL
Repeatability	±0.02	% RL
Maximum cross talk	1	% RL
Rated output - Nominal	1.2	mV/V
Zero load output	±4	% 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	50	% RL
Overload - Ultimate	100	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	0.3 to 0.8	kg

All standard ranges are manufactured in stainless steel.

Structural stiffness - Nominal					
Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
2(per axis)	1.5×10^7	10(per axis)	8×10^7		

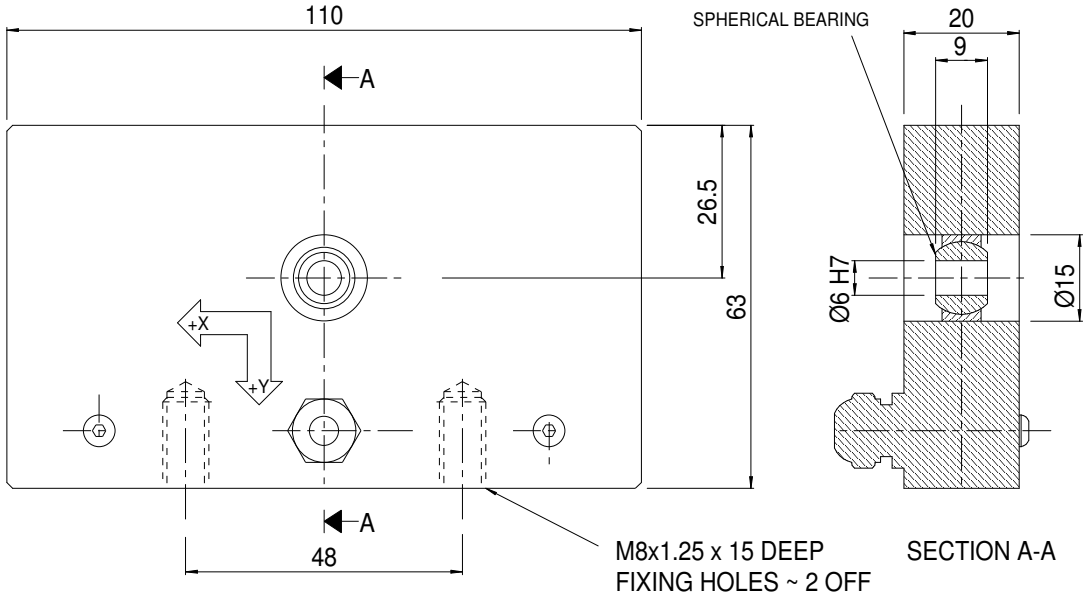
Notes

1. AL = Applied load.
2. RL = Rated load.
3. Temperature coefficients apply over the compensated range.
4. Values apply to all axes unless otherwise specified.

Connections

The F314 is fitted with 2 metres of PVC insulated 9 core screened cable type 7-1-9C.

Function	Wire Colour	
	X axis	Y axis
Excitation +	Red	Violet
Excitation -	Blue	Black
Signal +	Yellow	Brown
Signal -	Green	White
Screen	Orange (thick)	



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