



N ALF314



Description

- 2 Axis Loadcell
- Ranges $\pm 200\text{kg}$ to ± 1 tonne ($\pm\text{kN}$ to $\pm 10\text{kN}$)
- Low cross talk
- Custom force ranges
- Simple installation
- Direct output from each axis without calculation
- Moment arm immune versions
- Standard 2 year warranty

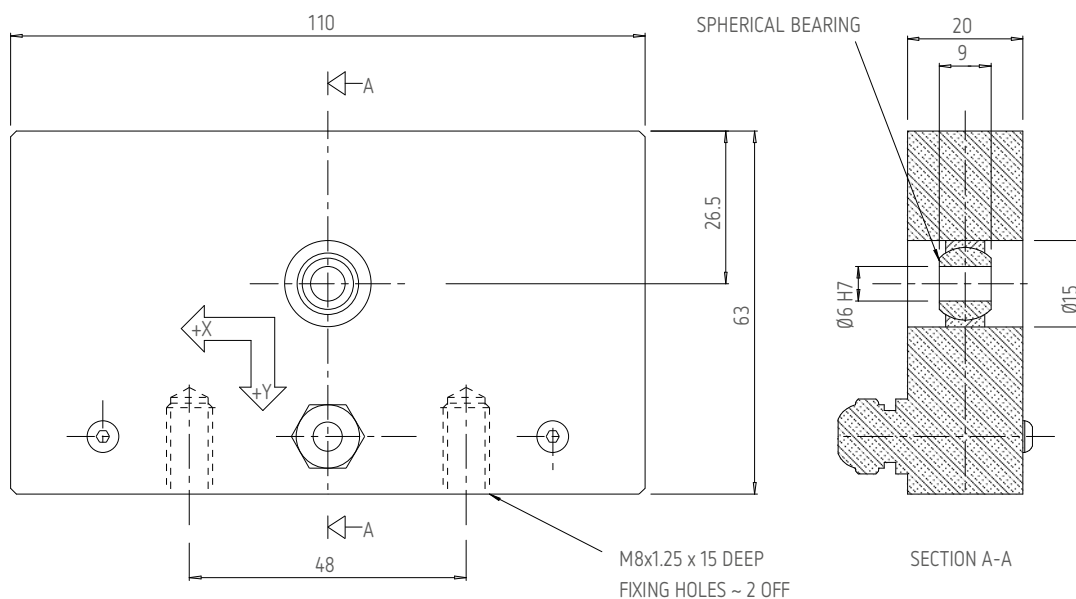
The ALF314 measures forces in two axes at 90° . Apart from error evaluations, each output is pure and requires no mathematical manipulation.

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 load cell. 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 $\pm 200\text{kg}$ 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.

Dimensions



Specifications

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 °C	± 0.005	% AL
Temperature effect on zero load output per °C	± 0.01	% 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	Ω
Insulation resistance - Minimum at 50V dc	500	MΩ
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Sealing	IP 65	
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 x10 ⁷	10 (per axis)	8 x10 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 FLF314 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)	

Ordering codes

See the loadcell ordering code sheet for more details. Add ranges in the required units.

Most FLF314 loadcells are manufactured to special requirements and are given an FLF314-Zxxxx number.

Due to continuous product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.