Novatech
Loadcell Design & Manufacture

F232/3 Multi-Axis Loadcell

Ranges 100N to 5kN (10 to 500kgf)

- 2 & 3 axis versions
- Custom force ranges
- Simple installation
- Direct output from each axis without calculation
- Traceable calibration with certificate included in the standard price
- Standard 1 year warranty

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.5	% RL
Hysteresis	±0.5	% RL
Creep - 20 minutes	±0.1	% AL
Repeatability	±0.02	% RL
Maximum cross talk	3	% RL
Calibration force centre	x=0, y=0, z=-4.5	mm
Rated output - Nominal	1.2	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	±0.01	% 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 X & Y axis	350	Î©
Z axis	700	Î©

Insulation resistance - Minimum at 50Vdc	500	MÎ©
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Weight - Nominal (excluding cable)	200	g

The F232 measures forces in two axes at 90° and the F233 measures forces in 3 mutually perpendicular axes. Apart from error evaluations, each output is pure and requires no mathematical manipulation.

The loadcell is moment sensitive requiring calibration to be carried out at a specified force centre. The standard centre is specified in the specification. If this is not suitable for your application please consult our engineering department about alternative calibrations. The F232/3 is ideally suited to many industrial and scientific applications, including automotive and medical research. The loadcell can be manufactured with force ranges to suit the application. The Z axis can have a different force range from the X and Y axes. Please consult our engineering department about the viability of the required ranges. The example shown in the picture and drawing is a 500N model; there will be small differences in the dimensions for other ranges. We are happy to design variants of this loadcell to meet your specific requirements. Other types of multi-axis loadcell can be supplied with ranges up to 20kN. Versions can be manufactured for higher temperature operation. Please consult our engineering department. Additional information on specifying a multi-axis loadcell can be found in Engineering Sheet E015.

Order Codes

Code	Description
Most F232/3 loadcells are manufactured to special requirements and are given an F232-Zxxxx or F233-Zxxxx number.	

Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
100 N (per axis)	
5 kN (per axis)	

Notes

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

Connections

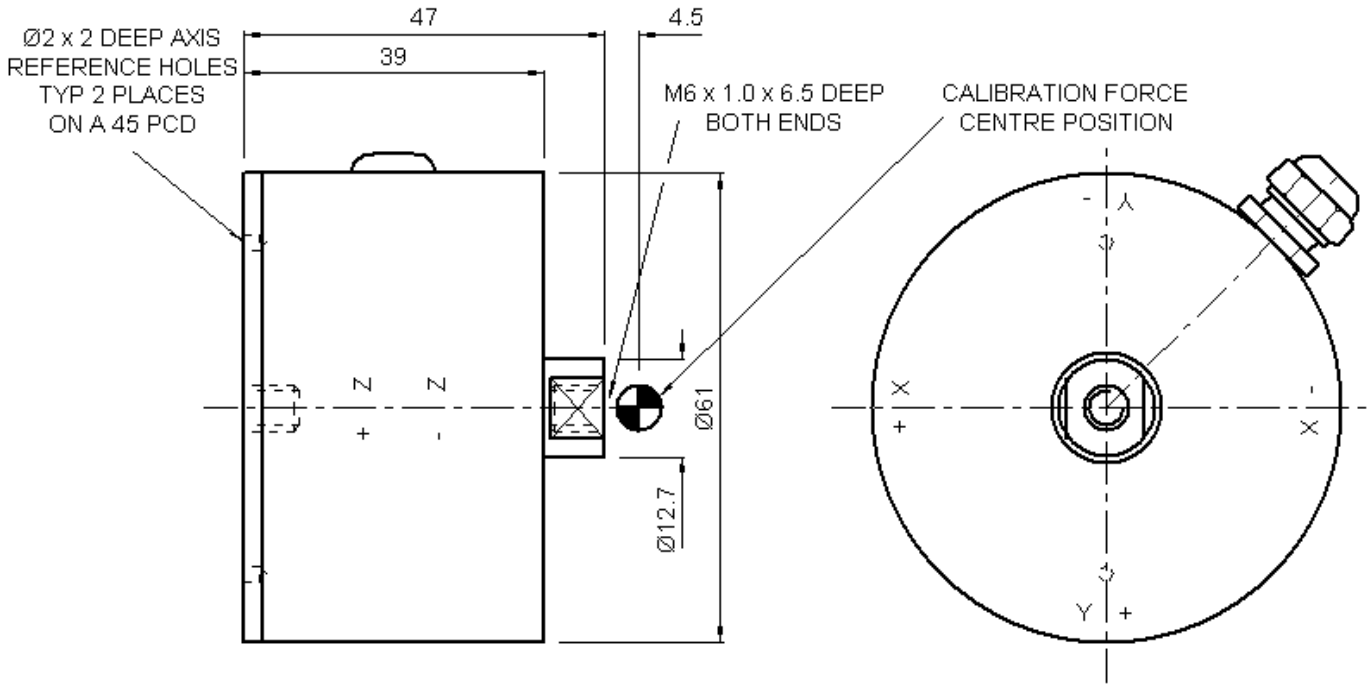
The F232 is fitted with 2 metres of PVC insulated 9 core screened cable type 7-1-9C. The F233 is fitted with 2 metres of PVC insulated 12 core screened cable type 7-1-12C. The screen is not connected to the loadcell body.

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

Files

Type	Title	Download
STEP File	F232/3-C/T/U-FR000 Standard 500N range	Download

Outline



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