

F241 Axial Compensated Loadcell

Standard Ranges 30, 50, 100 and 300N
(3 to 30kgf)

- ✓ High accuracy
- ✓ Easy installation
- ✓ Misalignment error compensation
- ✓ Standard 1 year warranty
- ✓ Integral overload protection option
- ✓ Traceable calibration with certificate included in the standard price



Specification

Parameter	Value	Unit
Non-linearity - Terminal	$\hat{A}\pm 0.05$	% RL
Hysteresis	$\hat{A}\pm 0.05$	% RL
Creep - 20 minutes	$\hat{A}\pm 0.02$	% AL
Repeatability	$\hat{A}\pm 0.02$	% RL
Rated output - Nominal	2.2	mV/V
Rated output - Rationalised	2.0	mV/V
Rationalisation tolerance (applies to single direction calibrations)	$\hat{A}\pm 0.1$	% RL
Zero load output	$\hat{A}\pm 4$	% RL
Temperature effect on rated output per $\hat{A}^{\circ}\text{C}$	$\hat{A}\pm 0.005$	% AL
Temperature effect on zero load output per $\hat{A}^{\circ}\text{C}$	$\hat{A}\pm 0.005$	% RL
Temperature range - Compensated	-10 to +50	$\hat{A}^{\circ}\text{C}$
Temperature range - Safe	-10 to +80	$\hat{A}^{\circ}\text{C}$
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)	240 to 260	g
All standard ranges are manufactured in aluminium.		

Geometry: Flexure strain assembly in cylindrical housing, open or weather sealed with end internal fixing. For universal use in tension and compression, with compensation for off axis load inputs.

The F241 is ideally suited to low range engineering force measurements and process weighing. When precision and easy installation are required various configurations allow the loadcell to be used in both tensile and compressive applications. 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.

 Order Codes

Code	Description
F241CF00H0	Compression, unrationalised
F241TF00H0	Tension, unrationalised
F241UF00H0	Bi-directional, unrationalised
F241CF00HN	Compression, rationalised
F241TF00HN	Tension, rationalised
F241UF00HN	Bi-directional, rationalised
Change the C to a D for compression with thread fitting.	

Structural Stiffness - Nominal

Range (N)	Stiffness (N/m)
30	1.5 x 10 ⁵
50	2.5 x 10 ⁵
100	5.0 x 10 ⁵
300	1.5 x 10 ⁶

Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.

Connections

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

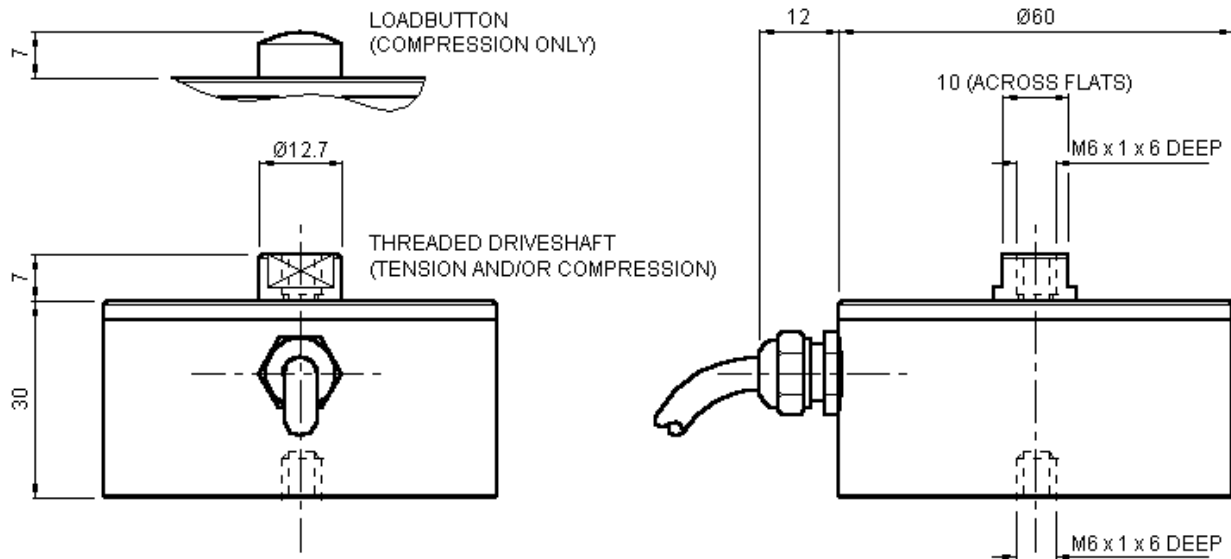
Excitation + = Red, Excitation - = Blue, Signal + = Yellow, Signal - = Green, Screen = Orange.

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

Files

Type	Title	Download
STEP File	F241CFR0K0 All standard ranges	Download
STEP File	F241-D/T/U-FR0K0 All standard ranges	Download
STEP File	F241TFR0K0 All standard ranges, tension overload stop	Download

Outline



The case height increases to 42mm on the overload stop version. Dimensions apply to all standard ranges. Please contact our engineering department for confirmation of critical dimensions before designing mountings or fittings.

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