Novatech
Loadcell Design & Manufacture

F257 Axial Compensated Loadcell

Standard Ranges 80, 120, 160 and 240kN (8 to 24tonnef)

- High accuracy
- Misalignment error compensation
- Highly adaptable inert end fixings
- Standard 1 year warranty
- Output rationalised to 2mV/V
- Traceable calibration with certificate included in the standard price

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.1	% RL
Hysteresis	±0.1	% RL
Creep - 20 minutes	±0.05	% AL
Repeatability	±0.02	% RL
Rated output - Rationalised	2.0	mV/V
Rationalisation tolerance (applies to single direction calibrations)	±0.1	% RL
Zero load output	±4	% RL
Temperature effect on rated output per Â°C	±0.002	% AL
Temperature effect on zero load output per Â°C	±0.005	% RL
Temperature range - Compensated	-10 to +50	°C
Temperature range - Safe	-10 to +80	°C
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	20	V
Bridge resistance	700	Î©

Insulation resistance - Minimum at 50Vdc	500	MÎ©
Inclined load error - concentric at 3Â°	±0.25	% RL
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Sealing - R option	IP65	
Sealing - S option	IP67	
Weight - Nominal (excluding cable)	5.5 to 6.5	kg
All standard ranges are manufactured in stainless steel.		

Geometry: Beam and diaphragm combination. Tension, compression and bi-directional options are available. All standard bi-directional loadcells are calibrated in both modes.

The loadcell's unique strain system compensates for typical force misalignment in force measurement rigs and industrial weighing systems. Its various end fixing options are all inert and easily modified for direct inclusion in mechanical assemblies. The basic versions of the F257 are all sealed to IP65. If better sealing is required IP67 is available as an option. Integral 4 to 20mA or ±10V output amplifiers can be fitted as an option. Additional information can be found in Engineering Application Sheet E032 and the ICA6H data-sheet. We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for operation up to +250°C. Please consult our engineering department.

Order Codes

Code	Description
F257CFR0KN	Compression, flat base, IP65
F257LFR0KN	Compression, convex base, IP65
F257TFR0KN	Tension, stud base, IP65
F257DFR0KN	Compression, stud base, IP65
F257UFR0KN	Bi-directional, stud base, IP65
All F257s are rationalised as standard. Change R to an S for IP67. Integral amplifiers are available with all options.	

Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
80	8.0 x 108
120	1.2 x 109
160	1.6 x 109
240	2.4 x 109

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 16-2-4C.

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

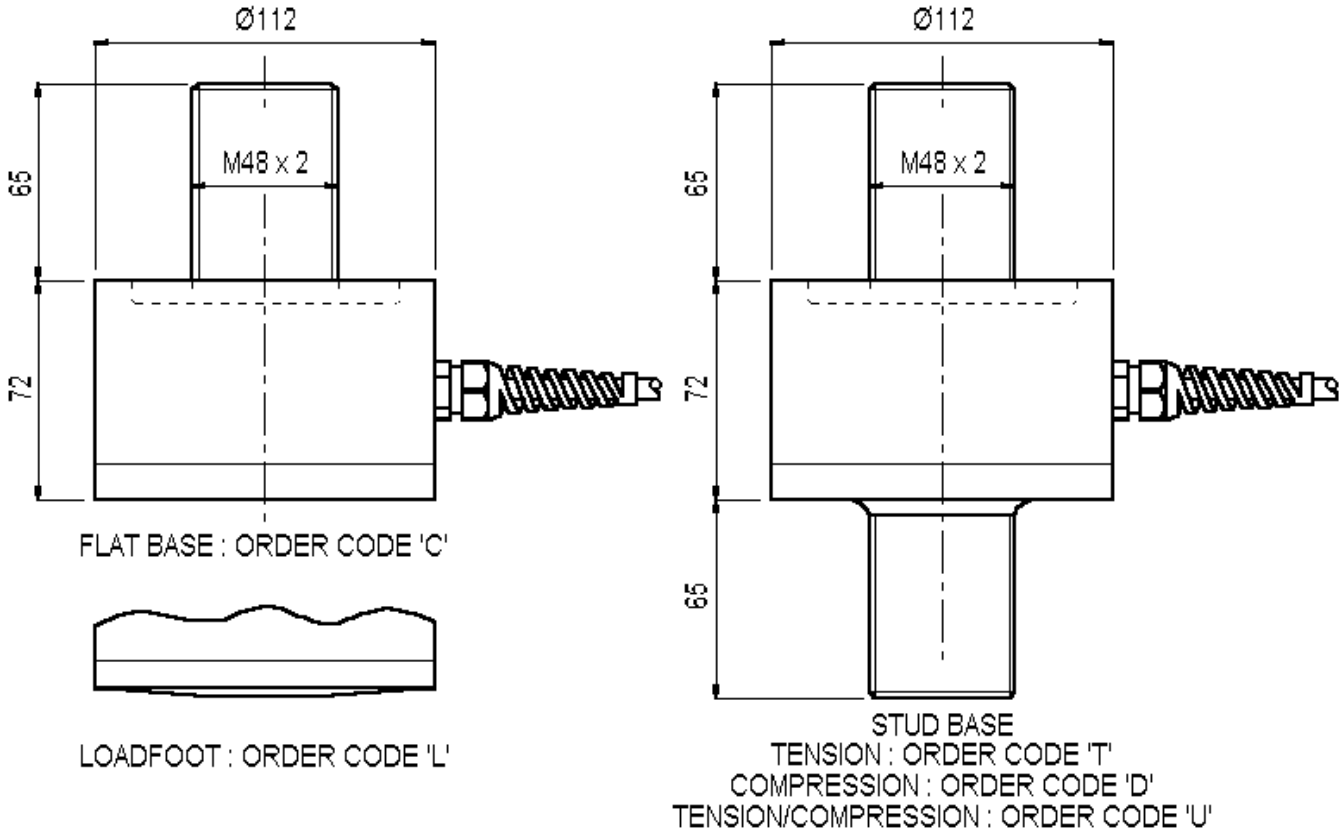
Reverse the signal connections to obtain a positive signal in tension mode. The screen is not connected to the loadcell body.

Files

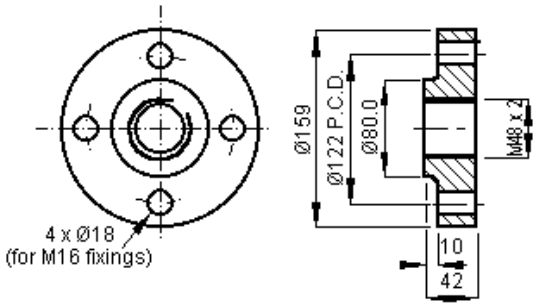
Type	Title	Download
STEP File	F257CFR0KN All standard ranges	Download
STEP File	F257LFR0KN All standard ranges	Download
STEP File	F257-T/D/U-FR0KN All standard ranges	Download
STEP File	F257 Loadbutton	Download
STEP File	F257 Top plate	Download
STEP File	F257 Locknut	Download

STEP File	F257 Base plate	Download

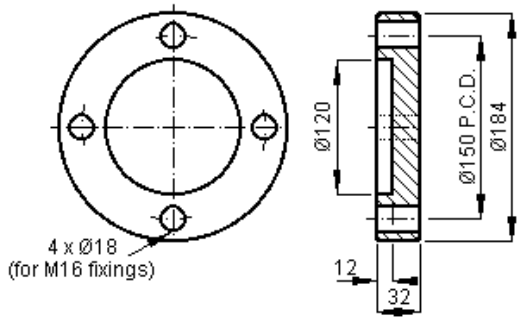
Outline



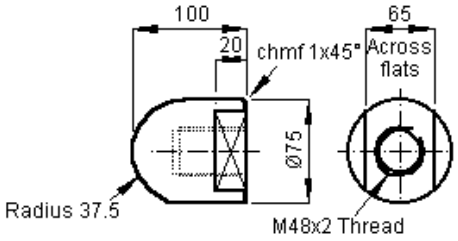
Fittings



Top Mounting Plate 257 207



Bottom Mounting Plate 257 208



Loadbutton 257 205

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