F256

Axial Compensated Loadcell

Standard Ranges 200, 400, 800N and 1.25, 2.5, 5, 10, 20, 40, 60kN (20kg to 6tonnef)

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

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. Maximum error in axial force component measurement is limited to 0.25% within a 3° angle swept through 360° around the loadcell axis. Its various end-fixing options are all inert and easily modified for direct inclusion in mechanical assemblies.
The basic versions are all sealed to IP65 with IP67 available as an option. Integral 4 to 20mA or ±10V output amplifiers can be fitted as an option, see the ordering code section. See Engineering Application Sheet E032 and the ICA6H data-sheet for more information.
We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for fully compensated operation up to +250°C. Please consult our engineering department.
Details of our other loadcell families can be found in the Product List and the Loadcell Specifier Guide. If you require copies 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 range in the required units.		
F256CFR0KN	Compression, flat base, IP65	F256EFR0KN	Tension, eye base, IP65
F256LFR0KN	Compression, convex base, IP65	F256AFR0KN	Compression, female base, IP65
F256TFR0KN	Tension, stud base, IP65	F256GFR0KN	Tension, female base, IP65
F256DFR0KN	Compression, stud base, IP65	F256JFR0KN	Bi-directional, female base, IP65
F256UFR0KN	Bi-directional, stud base, IP65		
All F256s are rationalised as standard. Change R to an S for IP67. Integral amplifiers are not available with A, G or J options in the standard body height. We can manufacture specials with increased height if integral amplifiers are required.			

F256 Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.05	% RL
Hysteresis	±0.05	% 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
Output symmetry	±0.3	% AO
Zero load output	±4	% RL
Temperature effect on rated output per ºC	±0.002	% AL
Temperature effect on zero load output per ºC	±0.005	% RL
Temperature range - Compensated	-10 to +50	ºC
Temperature range - Safe	-10 to +80	ºC
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	20	V
Bridge resistance	700	Ω
Insulation resistance - Minimum at 50Vdc	500	MΩ
Inclined load error - concentric at 3°	±0.25	% RL
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Sealing - R option IP65	-S option	IP67
Weight - Nominal (T version excluding cable) 200-800N 0.1 1.25-5kN 0.3 10-60kN 1.0		kg

Ranges up to 800N are manufactured in aluminium; all other ranges are manufactured in stainless steel.

Structural stiffness - Nominal					
Range (N)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
200	7.8×10^6	1.25	1.9×10^7	20	2.0×10^8
400	2.3×10^7	2.5	3.9×10^7	40	4.0×10^8
800	1.2×10^7	5	7.8×10^7	60	6.0×10^8
		10	1.0×10^8		

Notes

1. AL = Applied load.
2. RL = Rated load.
3. Temperature coefficients apply over the compensated range.
4. AO = Average of tension and compression outputs for full load.

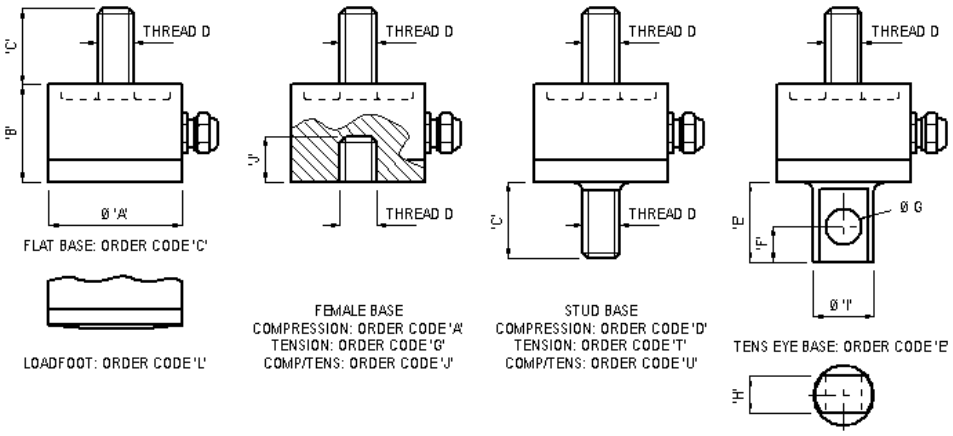
Connections

For ranges up to 5kN the loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 7-2-4C. Ranges above 5kN are fitted with 16-2-4C cable.

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.

LOADCELL SIZE	Ø 'A'	'B'	'C'	THREAD 'D'	'E'	'F'	Ø 'G'	'H'	'I'	'J'
SIZE 1 200N - 5kN	44	32	25	M12 x 1.75	26.5	12	12	12	20	15
SIZE 2 10kN - 60kN	66	45	35	M24 x 2	51.5	24	24	24	40	25



Novatech reserves the right to vary the foregoing details without prior notice 01/2013

NOVATECH MEASUREMENTS LTD

*** Manufacturing loadcells since 1972 ***

83 CASTLEHAM ROAD, ST LEONARDS ON SEA, EAST SUSSEX, TN38 9NT, ENGLAND

Tel: 01424 852744 email: info@novatechloadcells.co.uk Fax: 01424 853002

www.novatechloadcells.co.uk