



ALF254 Fatigue Rated Pancake Loadcell

Standard Ranges 25, 50, 100 and
200kN (2.5 to 20tonnef)

FEATURES

- Tension / compression / bi-directional calibration
- Low profile
- Custom modifications to suit your application
- Sealed to IP65
- Hardened stainless steel construction
- Traceable calibration with certificate included in the standard price



SPECIFICATIONS

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 - Nominal	2.1	mV/V
Rated output - Rationalised	2	mV/V
Rationalisation tolerance (applies to single direction calibrations)	±0.5	% RL
Output symmetry	±0.2	% AO
Fatigue life	108	±RL cycles
Zero load output	±4	% RL
Temperature effect on rated output per °C	±0.005	% AL
Temperature effect on zero load output per °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	Ω
Insulation resistance - Minimum at 50Vdc	500	MΩ
Fixing bolt torque (bolt grade 8.8) -25kN range	25	Nm
- Other ranges	48	Nm
Overload - Safe	50	% RL
Overload - Ultimate	200	% RL
Sealing	IP65	

All standard ranges are manufactured in stainless steel.



GEOMETRY:

Shear web structure with high vertical and lateral mechanical stiffness.

The ALF254 is designed for high levels of cyclic loading and is readily adapted to series mechanical connection within actuator rods or pistons by using our 'in-line' adapter. The loadcell has good output symmetry between compressi-

on and tension operation. All standard bi-directional loadcells are calibrated in both modes. If you require a recessed boss the ALF318 pancake loadcell may be more suitable. The ALF318 has standard ranges from 1 to 500kN. 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.

ORDER CODES

CODE	DESCRIPTION
ALF 254CFR0K0	Compression, IP65, unrationalised
ALF 254TFR0K0	Tension, IP65, unrationalised
ALF 254UFR0K0	Bi-directional, IP65, unrationalised
ALF 254CFR0KN	Compression, IP65, rationalised
ALF 254TFR0KN	Tension, IP65, rationalised
ALF 254UFR0KN	Bi-directional, IP65, rationalised

Change the F to a P for the connector version.

STRUCTURAL STIFFNESS - NOMINAL

RANGE (kN)	STIFFNESS (N/m)
25	1.3 x 10 ⁹
50	2.6 x 10 ⁹
100	1.7 x 10 ⁹
200	3.4 x 10 ⁹

NOTES

AL = Applied load.
RL = Rated load.
AO = Average of tension and compression outputs for full 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 or a 4 pin Binder 723 series chassis plug.

Excitation + = Red or pin 1, Excitation - = Blue or pin 2, Signal + = Yellow or pin 3, Signal - = Green or pin 4, Screen = Orange.

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



■ OUTLINE

