N ALF 241

Description

- Measurement ranges 0 ... 30 N to 0 ... 300 N
- Tension / compression
- Non-linearity 0.5 % RL
- Output signal 2.2 mV/V or rationalised 2.0 mV/V ±0.1 %
- Supply voltage 10 VDC

The load cell ALF241 is ideally suited to low range engineering force measurements and process weighing. When precision and easy installation are required various configurations allow the load cell to be used in both tensile and compressive applications.

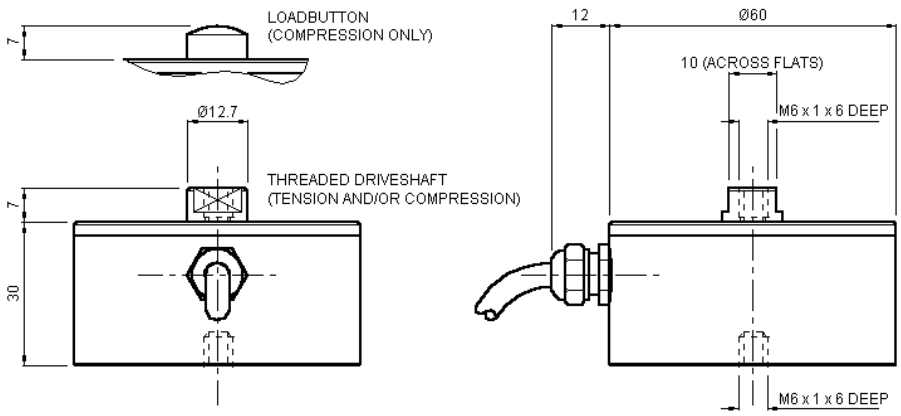
Geometry:

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.

Features

- High accuracy
- Easy installation
- Misalignment error compensation
- Integral overload protection option
- Traceable calibration with certificate included

Dimensions



Dimensions in „mm", approx. values
These drawings are for information only and not intended for construction purpose.
Please contact us for detailed drawings.

Note: The case height increases to 42 mm on the overload stop version

02.2016 | version 201504 - Rev 2.01

Specifications

Rated load:	30 N, 50 N, 100 N, 300 N
Non-linearity, terminal:	±0.05 % RL
Hysteresis:	±0.05 % RL
Creep, 20 min:	±0.05 % AL
Repeatability:	±0.02 % RL
Rated output, nominal:	2.2 mV/V
Rated output, rationalised:	2.0 mV/V ±0.1 % RL Rationalisation tolerance applies to single direction calibrations only
Zero load output:	±4 % RL
Temperature effect on rated output:	±0.002 % AL/K
Temperature effect on zero load output:	±0.005 % RL/K
Compensated temperature range:	-10 ... +50 °C
Operating temperature range:	-10 ... +80 °C
Supply voltage, recommended:	10 V
Supply voltage, max.:	10 V
Bridge resistance:	350 Ω
Insulation resistance, minimum at 50 VDC:	500 MΩ
Overload, safe:	120 % RL
Overload, ultimate:	200 % RL
Dynamic load capacity:	70 % RL
Weight (excl. cable):	approx. 240 g to 260 g
Material:	Aluminium

Rated load	Structural stiffness, nom.	Rated load	Structural stiffness, nom.
30 N	1.5 x 10^5 N/m	100 N	5.0 x 10^5 N/m
50 N	2.5 x 10^5 N/m	300 N	1.5 x 10^6 N/m

Notes:
1. RL = rated load
2. AL = applied load
3. Temperature coefficients apply over the compensated range.

Electrical Connection

The load cell is fitted with 2 m of PVC insulated 4 core screened cable type 7-2-4C.

Wiring:	
Red	+ Supply voltage
Blue	- Supply voltage
Yellow	+ Output signal
Green	- Output signal
Orange	Screen

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

Ordering Codes

ALF241CF00H0	Compression, load button	ALF241CF00HN	Compression, load button, rationalised
ALF241DF00H0	Compression, thread	ALF241DF00HN	Compression, thread, rationalised
ALF241TF00H0	Tension	ALF241TF00HN	Tension, rationalised
ALF241UF00H0	Bi-directional	ALF241UF00HN	Bi-directional, rationalised

Please add range in the required units.
Change the first 0 to an R for the IP65 version (for ranges up to 50 N a reduction in accuracy may occur)

Safety note:
When using the load cell in tension mode it is essential to provide additional safety precautions like safety chains etc. for catching the load in a breakage, which cannot be excluded completely.

Due to continuous product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

02.2016 | version 201504 - Rev 2.01