



N ALF 307

Description

- Measurement ranges ± 10 kN and ± 20 kN per axis (different ranges per axis are possible)
- Tension / compression
- Non-linearity 0.3 % RL
- Output signal 1.5 mV/V
- Supply voltage 10 VDC

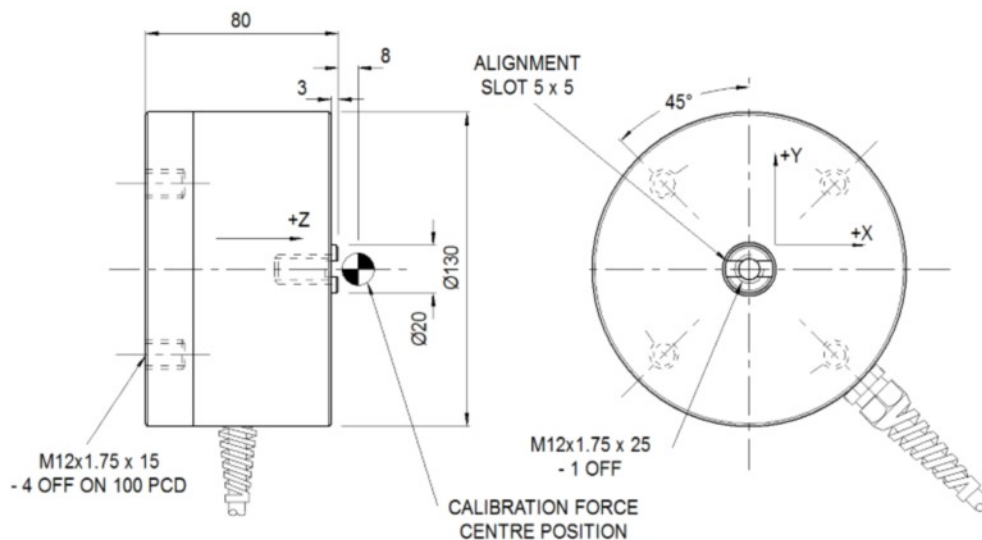


The ALF307 load cell provides a bi-directional direct measurement of the X, Y and Z components resulting from a force vector. Apart from error evaluations, each output is pure and requires no mathematical manipulation.

The ALF307 is ideally suited to many industrial and scientific applications, including automotive research. The performance specification is valid for moments up to 50 Nm.

The load cell can be manufactured with force ranges to suit the application. The axes can have different force ranges.

Dimensions



Dimensions in „mm“, approx. values

These drawings are for information only and not intended for construction purpose.

Please contact us for detailed drawings.

Specifications

The performance specification is valid for moments up to 50 Nm. For moments up to 200 Nm ask for our application sheet.

Rated load:	10 kN, 20 kN	
Non-linearity, terminal:	±0.3 % RL	
Hysteresis:	±0.4 % RL	
Creep, 20 min:	±0.1 % AL	
Repeatability:	±0.02 % RL	
Maximum cross talk:	3 % RL	
Rated output, nominal:	1.5 mV/V	
Zero load output:	±4 % RL	
Temperature effect on rated output:	±0.005 % AL/K	
Temperature effect on zero load output:	±0.007 % 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:	700 Ω	
Insulation resistance, minimum at 50 VDC:	500 MΩ	
Structural stiffness, X and Y axis	10 kN:	6.2 x 10 ⁷ N/m
	20 kN:	6.6 x 10 ⁷ N/m
Structural stiffness, Z axis	10 kN:	8.7 x 10 ⁷ N/m
	20 kN:	9.4 x 10 ⁷ N/m
Overload, safe:	150 % RL	
Overload, ultimate:	200 % RL	
Dynamic load capacity:	70 % RL	
Overload moment, safe	250 Nm	
Overload moment, ultimate (excl. cable):	500 Nm Weight approx. 3.1 kg	
Material:	Stainless steel	

Notes:

1. RL = rated load
2. AL = applied load
3. Temperature coefficients apply over the compensated range.
4. Values apply to all axes unless otherwise specified.

Electrical Connections

The ALF307 is fitted with 2 m of PVC insulated 12 core screened cable, type 7-1-12C, terminated with a 25 pin D type plug. The screen is not connected to the load cell body.

Function	Wire colours and pin numbers:		
	X axis	Y axis	Z axis
+ supply voltage	red 1	violet 9	orange 14
- supply voltage	blue 2	black 10	turquoise 15
+ output signal	yellow 3	brown 11	pink 16
- output signal	green 4	white 12	grey 17
screen	orange (thick) 5, 13 and 18		

Ordering Codes

ALF307UF00K0 bi-directional

Please add range in the required units.

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.

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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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