

ALF 321

Description

- Measurement range ±200 N
- Tension / compression
- Non-linearity 0.5 % RL
- Output signal 1.0 mV/V
- Supply voltage 10 VDC

Dimensions

The ALF321 gear shift load cell measures gear lever forces required to achieve gear selection. An ergonomically designed gear knob senses the force from a human hand or a mechanical actuator. The three axis force components are represented by three pure load cell output signals. The gear shift load cell is supplied calibrated and ready to use, no in- situ calibration or mathematical computation is required.

Easy fitment is achieved with mechanical axis referencing and simple attachment to a male thread or adapter.

The gear shift load cell, like all our automotive products, can be produced for environmental test chamber temperature requirements of -40 to 80 °C.



Dimensions in "mm", approx. values

These drawings are for information only and not intended for construction purpose. Please contact us for detailed drawings.



SENSORS & CONTROLS



Specifications

Rated load:		±200 N
Non-linearity, terminal:		±0.5 % RL
Hysteresis:		±0.5 % RL
Creep, 20 min:		±0.1 % AL
Repeatability:		±0.02 % RL
Maximum cross talk:		3 % RL
Rated output, nominal:		1.0 mV/V
Zero load output:		±4 % RL
Temperature effect on rated output:		±0.005 % AL/K
Temperature effect on zero load output:		±0.01 % 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:	X and Y axis	350 Ω
	Z axis	700 Ω
Insulation resistance, minimum at 50 VDC:		500 ΜΩ
Structural stiffness, nominal:	X and Y axis	2.0 x 10 ⁶ N/m
	Z axis	1.3 x 10 ⁶ N/m
Overload, safe:		150 % RL
Overload, ultimate:		200 % RL
Dynamic load capacity:		70 % RL
Weight (excl. cable):		арргох. 150 д
Material:		Aluminium

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 ALF321 is fitted with 2 m of PVC insulated 12 core screened cable type 7-1-12C. The screen is not connected to the load cell body.

Wiring:				
Function	X axis	Y axis	Z axis	
+ supply voltage	red	violet	orange	
- supply voltage	blue	black	turquoise	
+ output signal	yellow	brown	pink	
- output signal	green	white	grey	
screen	orange (thick)			

Ordering Codes

ALF321UF0000

bi-directional

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

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