

ALF245

Axial compensated load cell

- ▣ Measurement ranges 0 ... 100 N to 0 ... 800 N
- ▣ Tension / compression
- ▣ Non-linearity 0.1 % RL
- ▣ Output signal 2.2 mV/V or rationalised 2.0 mV/V ± 0.1 %
- ▣ Supply voltage 10 VDC

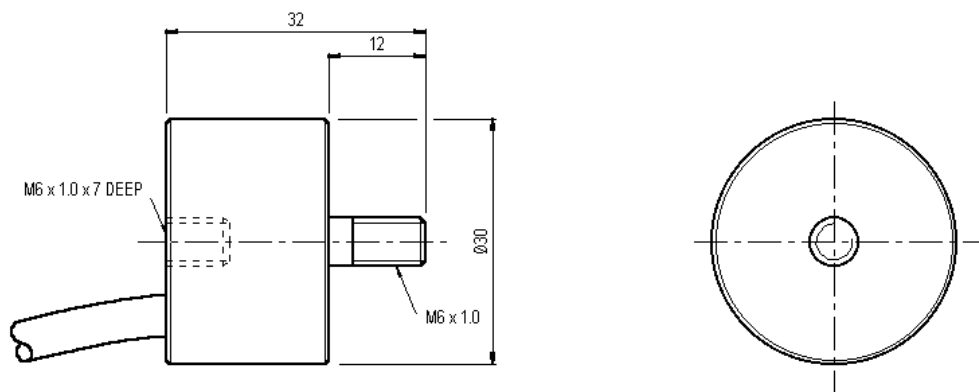


The ALF245 is ideally suited to low range engineering force measurements and process weighing. When precision and easy installation are required various configurations allow the load cell to be used in both tensile and compressive applications.

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.

▣ Dimensions



Dimensions in „mm“, approx. values

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

■ Specification

| | |
|---|--|
| Rated load: | 100 N / 200 N / 400 N / 800 N |
| Non-linearity, terminal: | ±0.1 % RL |
| Hysteresis: | ±0.1 % RL |
| Creep, 20 min: | ±0.1 % AL |
| Repeatability: | ±0.02 % RL |
| Rated output, nominal: | 2.2 mV/V |
| Rated output, rationalised: | 2.0 mV/V ±0.1 % RL |
| 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 |
| Weight (excl. cable): | approx. 40 g to 50 g |
| Material: | ranges 100 N and 200 N: aluminium body and stainless steel case ranges 400 N and 800 N: stainless steel |

| Rated load | Structural stiffness, nom. | Rated load | Structural stiffness, nom. |
|------------|----------------------------|------------|----------------------------|
| 100 N | 3.2×10^6 N/m | 400 N | 3.0×10^6 N/m |
| 200 N | 6.4×10^6 N/m | 800 N | 6.0×10^6 N/m |

Notes:

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

■ Electrical Connections

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

| Wiring: | | |
|---------|------------------|---|
| red | + supply voltage | Reverse the signal connections to obtain a positive signal in tension mode. |
| blue | - supply voltage | |
| yellow | + output signal | The screen is not connected to the load cell body. |
| green | - output signal | |
| orange | screen | |

■ Ordering Codes

| | | | |
|--------------|----------------|--------------|------------------------------|
| ALF245CF00H0 | compression | ALF245CF00HN | compression, rationalised |
| ALF245TF00H0 | tension | ALF245TF00HN | tension, rationalised |
| ALF245UF00H0 | bi-directional | ALF245UF00HN | bi-directional, rationalised |

Change the first 0 to an R for the IP65 version.
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 continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.