



## N ALF327

### Description

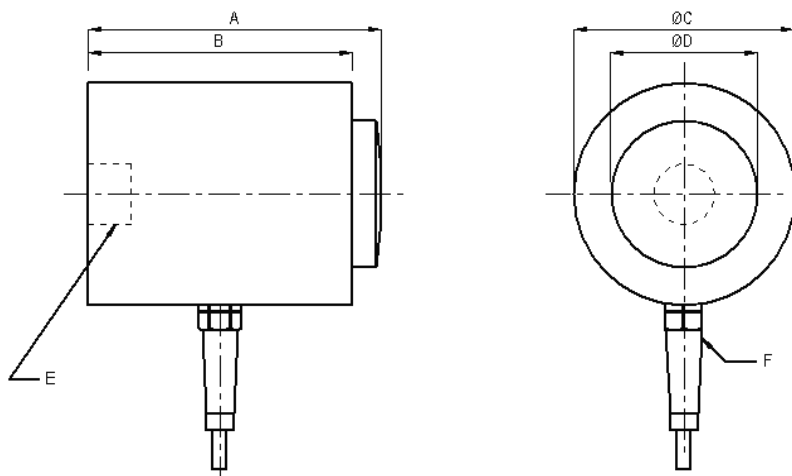
- Measurement ranges 0 ... 10 kN to 0 ... 2000 kN
- Compression
- Non-linearity from 0.05 % to 0.4 % RL, range dependent
- Output signal 1.2 mV/V or rationalised 1.0 mV/V  $\pm 0.5$  %
- Supply voltage 10 VDC, max. 20 VDC

The ALF327 is a robust canister load cell that is ideally suited to compression force measurement applications in harsh conditions. The load cell is deliberately over engineered to achieve a low contact surface pressure under high loading.

Smaller column type load cells, such as the ALF218, are available and we can cover the ALF327 load ranges with smaller designs.



### Dimensions



F: Cable exit position with strain relief cable gland or 4-pin Binder chassis plug

The 1000 kN and 2000 kN ranges have removable M10 lifting eyes fitted. Maximum protrusion from OD is 35 mm.

Rated load	A	B	C	D	E Ø	depth
10 to 50 kN	90	80	75	30	25	17
100 to 500 kN	150	135	113	75	31	22
1000 and 2000 kN	230	210	167	120	37	26

Dimensions in „mm“, approx. values

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

## Specifications

Model	Size 1	Size 2	Size 3
Rated load:	10 kN / 20 kN / 50 kN	100 kN / 200 kN / 500 kN /	1000 kN / 2000 kN
Non-linearity, terminal:	±0.05 % RL	±0.1 % RL	±0.4 % RL
Hysteresis:	±0.05 % RL	±0.4 % RL	±0.4 % RL
Creep, 20 min:	±0.05 % AL		
Repeatability, (excluding rotational effects)*:	±0.02 % RL	±0.03 % RL	±0.03 % RL
Rated output, nominal:	1.2 mV/V		
Rated output, rationalised:	1.0 mV/V ±0.5 % RL		
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.:	20 V		
Bridge resistance:	700 Ω		
Insulation resistance, minimum at 50 VDC:	500 MΩ		
Overload, safe:	200 % RL		
Overload, ultimate:	300 % RL		
Dynamic load capacity:	70 % RL		
Environmental sealing:	IP67		
Weight (excl. cable):	approx. 1.6 kg	approx. 8 to 24.3 kg	approx. 28.3 kg
Material:	Stainless steel		

\* Repeatability errors will increase if the load cell is rotated to ±0.06% of RL.

Rated load	Structural stiffness, nom.	Rated load	Structural stiffness, nom.
10 kN	2.2 x 10 <sup>8</sup> N/m	200 kN	3.2 x 10 <sup>9</sup> N/m
20 kN	4.3 x 10 <sup>8</sup> N/m	500 kN	8.1 x 10 <sup>9</sup> N/m
50 kN	1.1 x 10 <sup>9</sup> N/m	1000 kN	8.3 x 10 <sup>9</sup> N/m
100 kN	1.6 x 10 <sup>9</sup> N/m	2000 kN	8.7 x 10 <sup>9</sup> N/m

### Notes:

1. RL = rated load
2. AL = applied load
3. Temperature coefficients apply over the compensated range.
4. The load must be applied directly through the central loading axis.

## Electrical Connections

The load cell is fitted with 2 m of PVC insulated 4 core screened cable type 16-2-4C or a 4 pin Binder 723 series chassis plug.

The screen is not connected to the load cell body.

### Wiring:

+ supply voltage	red	pin 1
- supply voltage	blue	pin 2
+ output signal:	yellow	pin 3
- output signal:	green	pin 4
screen	orange	

## Ordering Codes

ALF327CFS0K0	Compression, IP67, cable	ALF327CFS0KN	Compression, rationalised, IP67, cable
ALF327CPS0K0	Compression, IP67, connector	ALF327CPS0KN	Compression, rationalised, IP67, connector
Please add range.			

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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