N ALF203

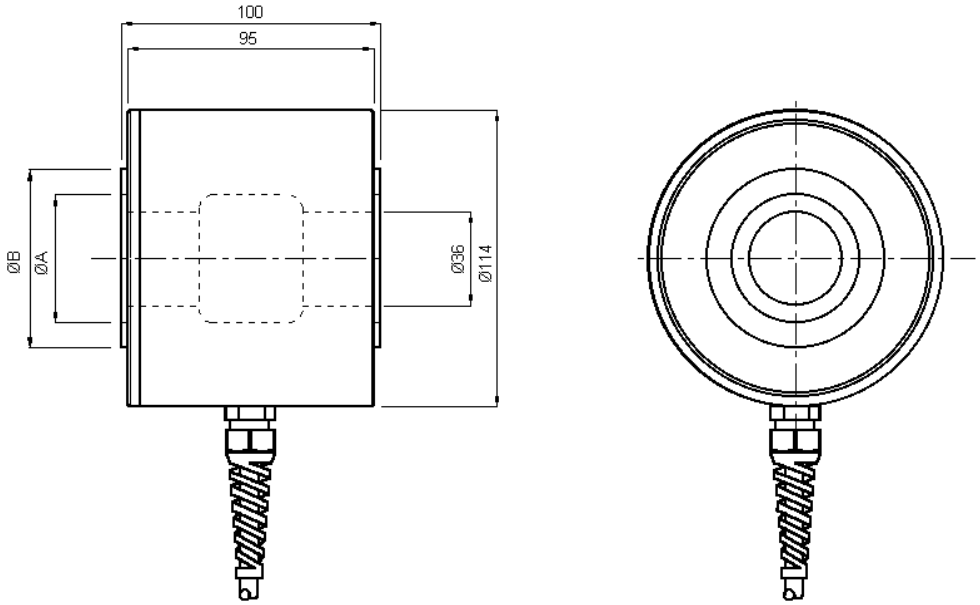
Description

- Measurement ranges 0 ... 400 kN and 0 ... 800 kN
- Compression
- Non-linearity 0.25 % RL
- Output 1.2 mV/V or rationalised 1.0 mV/V ±0.5 %
- Supply voltage 10 VDC, max. 20 VDC
- Optional with integrated electronics

The ALF203 is ideally suited to engineering force measurements including through centre safety testing of cables, rods and bolts. It is designed for easy installation, usually between two flat faces bearing on its loading rings, either unattached or with retaining spigots positioned in the centre hole. Alternatively tensile load transfer can be achieved via a tie rod assembly through the centre hole. In this way the loadcell can indirectly measure tensile loads in a "fail-safe" mode.

Geometry:
Axial strain cylinder in weather sealed case, with raised end load bearing faces and hole right through. For use in compression or in fail-safe tensile applications.

Dimensions



Rated load	ØA	ØB
400 kN	49 mm	68.5 mm
800 kN	49 mm	88 mm

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

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Specifications

Rated load:	400 kN / 800 kN
Calibration:	Compression
Non-linearity, terminal:	±0.25 % RL
Hysteresis:	±0.25 % RL
Creep, 20 min:	±0.05 % AL
Repeatability:	±0.02 % 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:	±0.03 % 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:	150 % RL
Overload, ultimate:	400 % RL
Dynamic load capacity:	70 % RL Sealing:
	IP65
Weight (excl. Cable)	approx. 5 kg to 5.5 kg
Material	Stainless steel

Rated load	Structural stiffness, nom.	Rated load	Structural stiffness, nom.
400 kN	1 x 10^{10} N/m	800 kN	2 x 10^{10} 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.
5. It is essential to use load cells with rationalised output when operating several load cells (e. g. hopper, platform etc.) in parallel mode!

Electrical Connection

The load cell is fitted with 2 m of PVC insulated 4 core screened cable type 16-2-4C.
The screen is not connected to the load cell body.

Wiring:	
red	+ supply voltage
blue	- supply voltage
yellow	+ output signal
green	- output signal
orange	screen

Option: Integrated Electronics

The amplifier is build onto the load cell in an additional housing. The dimensions of the load cell will change.

Integrated amplifier with 4 ... 20 mA output 2-wire, supply voltage 24 VDC (20 ... 36 VDC)
Integrated amplifier with 4 ... 20 mA output 3-wire, supply voltage 12 VDC (11.5 ... 12.5 VDC)
Integrated amplifier with 4 ... 20 mA output 3-wire, supply voltage 24 VDC (15 ... 30 VDC)
Integrated amplifier with voltage output 0 ... 10 V, supply voltage 14 ... 27 VDC

Ordering Codes

ALF203CFR0K0	Compression, IP65	ALF203CFR0KN	Compression, IP65, rationalised

Option integrated amplifier: a special order no. ALF203-Zxxx will be created
Please add range in the required units.

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

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