

N ALF216

# Description

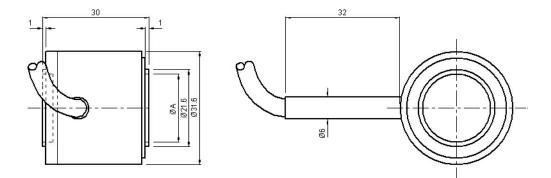
- Measurement ranges 0 ... 5 kN to 0 ... 40 kN
- Compression
- Non-linearity from 0.05 % t
- Output signal 1.2 mV/V or rationalised 1.0 mV/V  $\pm$ 0.5 %
- Supply voltage 10 VDC, max. 20 VDC

The ALF216 load cell is ideally suited to engineering force measurements. It is designed for easy installation, usually between two flat faces bearing on its loading rings. The small size of this load cell makes it an ideal force sensor for mounting in existing machinery. It has been used in presses and printing machines.

## Geometry:

Axial strain cylinder in weather sealed case, with raised end load bearing faces. For use in compression mode.

#### Dimensions



| Rated load | ØA   |
|------------|------|
| 5 kN       | 19.1 |
| 10 kN      | 19.1 |
| 20 kN      | 19.1 |
| 40 kN      | 12.5 |

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:                               | 5 / 10 / 20 / 40 kN   |
|---|-----------------------|
| Non-linearity, terminal:                  | ±0.5 % RL             |
| Hysteresis:                               | ±0.5 % 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 ΜΩ                |
| Overload, safe:                           | 150 % RL              |
| Overload, ultimate:                       | 400 % RL              |
| Sealing:                                  | IP65                  |
| Weight (excl. Cable)                      | approx. 90 g to 100 g |
| Material                                  | Stainless steel       |

| Rated load | Structural stiffness, nom. | Rated load | Structural stiffness, nom. |
|------------|----------------------------|------------|----------------------------|
| 5 kN       | 2.4 x 10 <sup>8</sup> N/m  | 20 kN      | 9.6 x 10 <sup>8</sup> N/m  |
| 10 kN      | 4.8 x 10 <sup>8</sup> N/m  | 40 kN      | 1.9 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 Connection

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

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

The screen is not connected to the load cell body.

## Ordering Information

| ALF216CFR0K0                            | Compression, IP65 | ALF216CFR0KN | Compression, IP65, rationalised |  |  |
|---|-------------------|--------------|---------------------------------|--|--|
| 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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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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