

## F218 Column Loadcell

- ✓ Hardened stainless steel body
- ✓ Low profile
- ✓ Sealed to IP65
- ✓ Bottom or side cable entry
- ✓ Traceable calibration with certificate included in the standard price
- ✓ Standard 1 year warranty



### Specification

| Parameter  | Value              | Unit                      |
|--|--------------------|---------------------------|
| Non-linearity - Terminal   | $\hat{A}\pm 0.5$   | % RL                      |
| Hysteresis   | $\hat{A}\pm 0.5$   | % RL                      |
| Creep - 20 minutes   | $\hat{A}\pm 0.05$  | % AL                      |
| Repeatability  | $\hat{A}\pm 0.02$  | % RL                      |
| Rated output - Nominal   | 2.3                | mV/V                      |
| Rated output - Rationalised  | 2.0                | mV/V                      |
| Rationalisation tolerance  | $\hat{A}\pm 0.5$   | % RL                      |
| Zero load output   | $\hat{A}\pm 4$     | % RL                      |
| Temperature effect on rated output per $\hat{A}^{\circ}\text{C}$     | $\hat{A}\pm 0.005$ | % AL                      |
| Temperature effect on zero load output per $\hat{A}^{\circ}\text{C}$ | $\hat{A}\pm 0.005$ | % RL                      |
| Temperature range - Compensated                                      | -10 to +50         | $\hat{A}^{\circ}\text{C}$ |
| Temperature range - Safe   | -10 to +80         | $\hat{A}^{\circ}\text{C}$ |
| Excitation voltage - Recommended                                     | 10                 | V                         |
| Excitation voltage - Maximum   | 20                 | V                         |
| Bridge resistance  | 700                | $\hat{\Omega}$            |
| Insulation resistance - Minimum at 50Vdc                             | 500                | M $\hat{\Omega}$          |

|  |           |      |
|--|-----------|------|
| Overload - Safe  | 50        | % RL |
| Overload - Ultimate                                      | 300       | % RL |
| Sealing  | IP65      |      |
| Weight - Nominal (excluding cable)                       | 0.75 to 1 | kg   |
| All standard ranges are manufactured in stainless steel. |           |      |

## Geometry: Small column in a sealed case, with a domed top load bearing face. For use in compression.

The F218 is ideally suited to engineering force measurements. Its high structural load capacity and the frequency response characteristic of this principle of strain sensing make this loadcell ideal for non-sacrificial impact load measurements. We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for fully compensated operation up to +250°C. Please consult our engineering department.

### Order Codes

| Code  | Description                       |
|---|-----------------------------------|
| F218CFR0K0  | Compression, IP65, unrationalised |
| F218CFR0KN  | Compression, IP65, rationalised   |
| If a non-standard cable length is required add this to the description and change the F to B. If bottom cable entry is required add this to the description and |                                   |

### Structural Stiffness - Nominal

| Range (kN) | Stiffness (N/m)       |
|------------|-----------------------|
| 100        | 1.7 x 10 <sup>9</sup> |
| 200        | 3.4 x 10 <sup>9</sup> |
| 400        | 6.8 x 10 <sup>9</sup> |

## Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.
- The load must be applied directly through the central loading axis.

## Connections

The loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 7-2-4C.

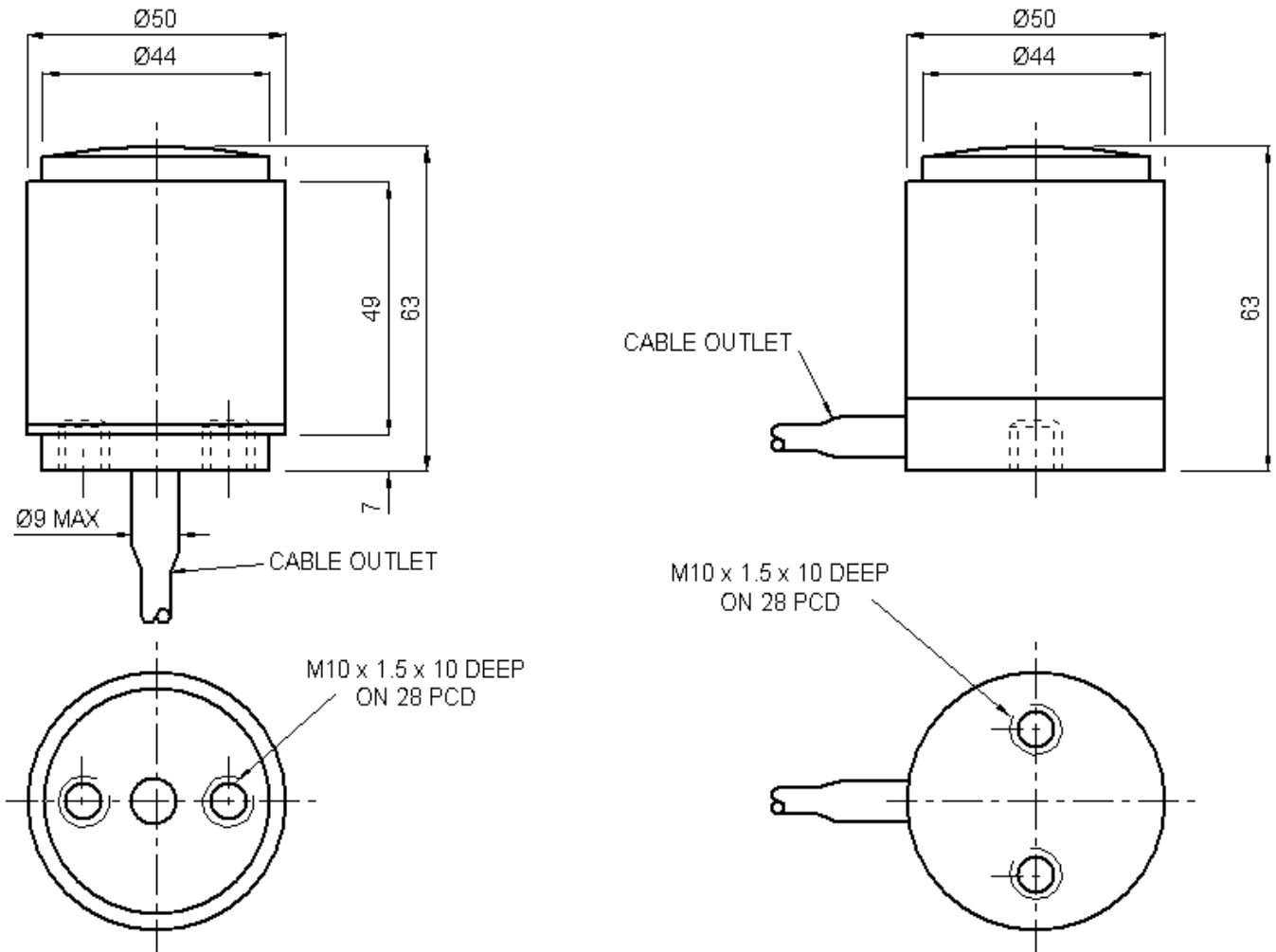
Excitation + = Red, Excitation - = Blue, Signal + = Yellow, Signal - = Green, Screen = Orange.

The screen is not connected to the loadcell body.

## Files

| Type      | Title  | Download                 |
|-----------|--|--------------------------|
| STEP File | F218CBR0K0 All standard ranges, axial cable  | <a href="#">Download</a> |
| STEP File | F218CFR0K0 All standard ranges, radial cable | <a href="#">Download</a> |

## Outline



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