

F203 Donut Loadcell

Standard Ranges 400 and 800kN (40 and 80tonnef)

- ✓ Hardened stainless steel body
- ✓ Sealed to IP65
- ✓ Standard 1 year warranty
- ✓ Tensile applications are 'fail-safe'
- ✓ Very high structural load limit
- ✓ Traceable calibration with certificate included in the standard price



Specification

| Parameter | Value | Unit |
|---|------------|------|
| Non-linearity - Terminal | ±0.25 | % RL |
| Hysteresis | ±0.25 | % RL |
| Creep - 20 minutes | ±0.05 | % AL |
| Repeatability | ±0.02 | % RL |
| Rated output - Nominal | 1.2 | mV/V |
| Rated output - Rationalised | 1.0 | mV/V |
| Rationalisation tolerance | ±0.5 | % RL |
| Zero load output | ±4 | % RL |
| Temperature effect on rated output per °C | ±0.005 | % AL |
| Temperature effect on zero load output per °C | ±0.03 | % RL |
| Temperature range - Compensated | -10 to +50 | °C |
| Temperature range - Safe | -10 to +80 | °C |
| Excitation voltage - Recommended | 10 | V |
| Excitation voltage - Maximum | 20 | V |
| Bridge resistance | 700 | Ω |
| Insulation resistance - Minimum at | 500 | MΩ |

| | | |
|--|----------|------|
| 50Vdc | | |
| Overload - Safe | 50 | % RL |
| Overload - Ultimate | 400 | % RL |
| Sealing | IP65 | |
| Weight - Nominal (excluding cable) | 5 to 5.5 | kg |
| All standard ranges are manufactured in stainless steel. | | |

F203 - Geometry: Axial strain cylinder in a sealed case, with raised end load bearing faces and hole right through. For use in compression or in fail-safe tensile applications.

The F203 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. We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for operation up to +250°C. Please consult our engineering department.

Order Codes

| Code | Description |
|------------|-----------------------------------|
| F203CFR0K0 | Compression, IP65, unrationalised |
| F203CFR0KN | Compression, IP65, rationalised |

Structural Stiffness - Nominal

| Range (kN) | Stiffness (N/m) |
|------------|----------------------|
| 400 | 1 x 10 ¹⁰ |
| 800 | 2 x 10 ¹⁰ |

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 16-2-4C.

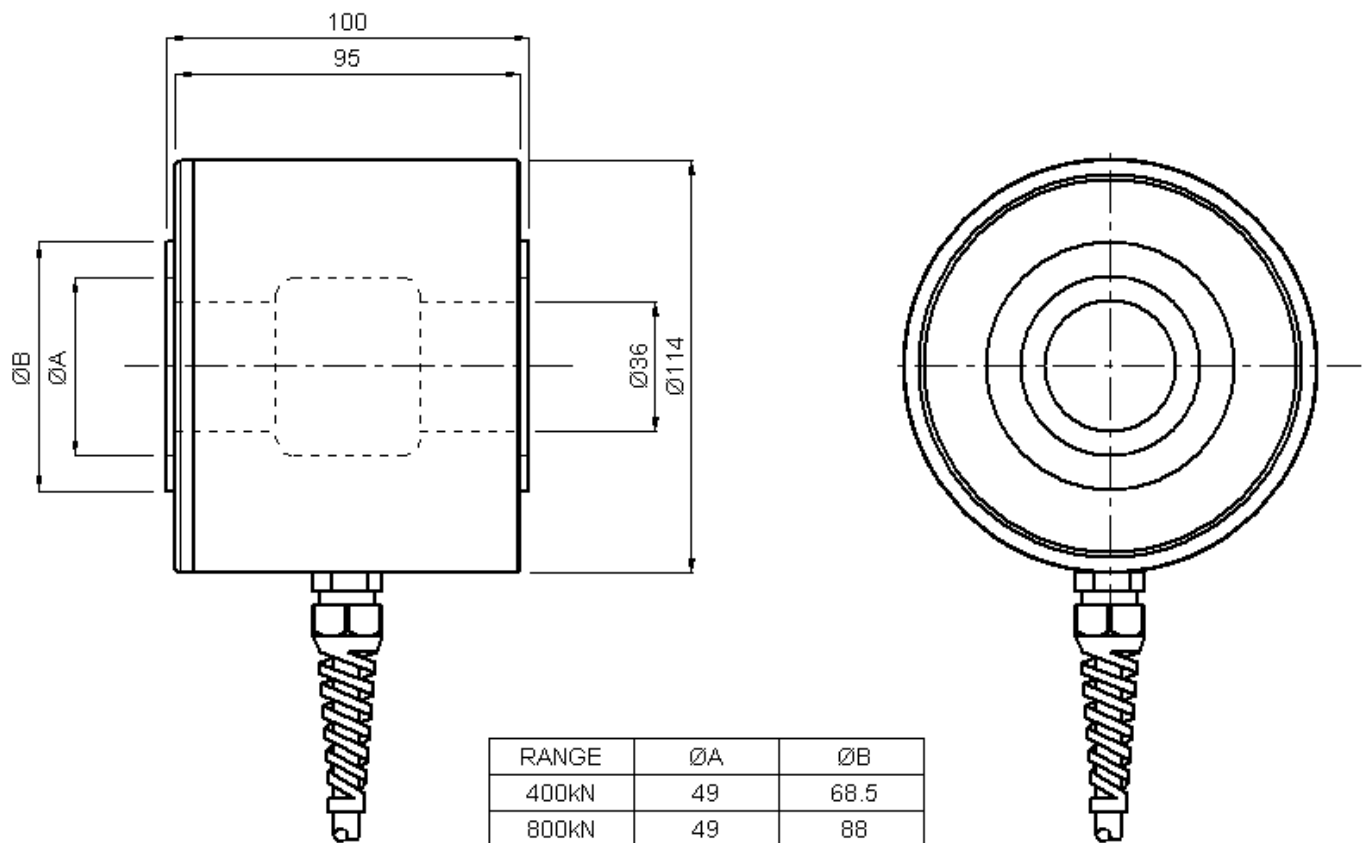
Excitation + = Red, Excitation - = Blue, Signal + = Yellow, Signal - = Green, Screen = Orange.

The screen is not connected to the loadcell body.

Files

| Type | Title | Download |
|-----------|--------------------------------|--------------------------|
| STEP File | F203CFR0K0 400kN (40tonnef) | Download |
| STEP File | F203CFR0K0 800kN (80tonnef) | Download |
| STEP File | F203 400kN Loadbutton | Download |
| STEP File | F203 800kN Loadbutton | Download |

Outline



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