

## F202 Donut Loadcell

**Standard Ranges 10, 25, 50, 100 and 200kN (1 to 20tonnef)**

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



### Specification

Parameter	Value	Unit
Non-linearity - Terminal	$\pm 0.1$	% RL
Hysteresis	$\pm 0.1$	% RL
Creep - 20 minutes	$\pm 0.05$	% AL
Repeatability	$\pm 0.02$	% RL
Rated output - Nominal	1.2	mV/V
Rated output - Rationalised	1.0	mV/V
Rationalisation tolerance	$\pm 0.5$	% RL
Zero load output	$\pm 4$	% RL
Temperature effect on rated output per $^{\circ}\text{C}$	$\pm 0.005$	% AL
Temperature effect on zero load output per $^{\circ}\text{C}$	$\pm 0.03$	% RL
Temperature range - Compensated	-10 to +50	$^{\circ}\text{C}$
Temperature range - Safe	-10 to +80	$^{\circ}\text{C}$
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	20	V
Bridge resistance	700	$\hat{\Omega}$
Insulation resistance - Minimum at	500	M $\hat{\Omega}$

50Vdc		
Overload - Safe	50	% RL
Overload - Ultimate	400	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	1.6 to 1.8	kg
All standard ranges are manufactured in stainless steel.		

## **F202 - 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 F202 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. A load button and base plate are available for the F202. 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
F202CFR0K0	Compression, IP65, unrationalised
F202CFR0KN	Compression, IP65, rationalised

### Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
10	$2.7 \times 10^8$
25	$6.8 \times 10^8$
50	$1.4 \times 10^9$
100	$2.7 \times 10^9$
200	$5.4 \times 10^9$

## 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.

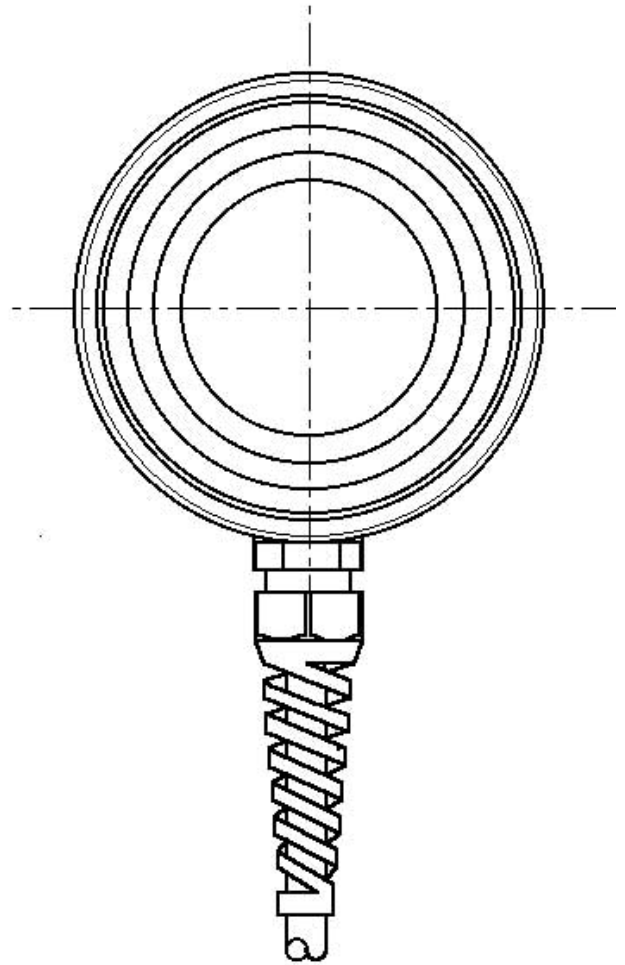
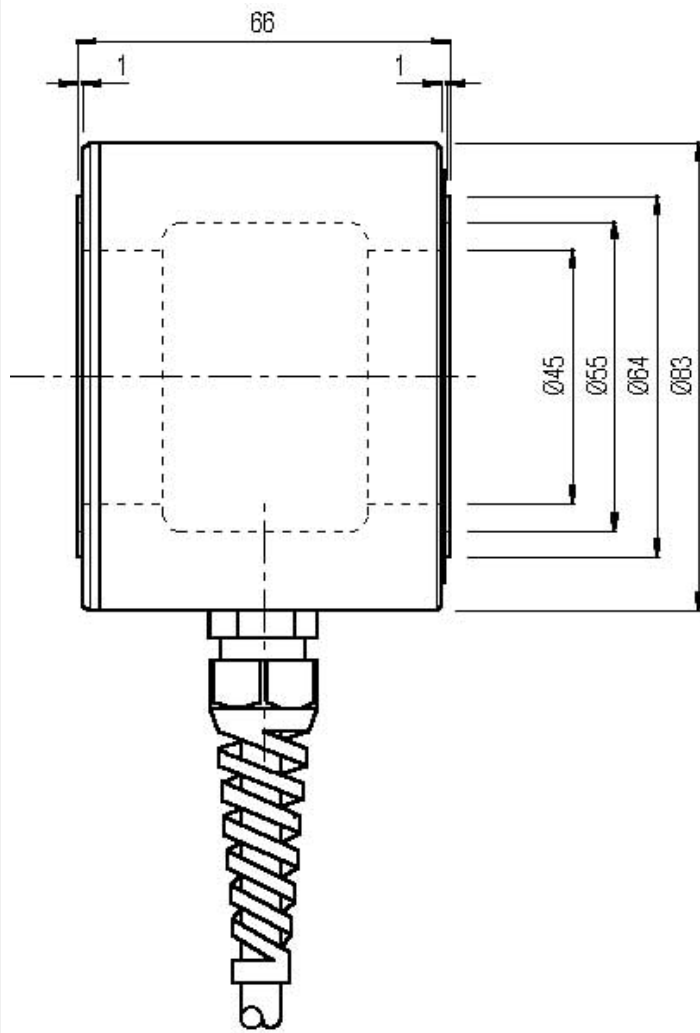
Excitation + = Red, Excitation - = Blue, Signal + = Yellow, Signal - = Green, Screen = Orange.

The screen is not connected to the loadcell body.

## Files

Type	Title	Download
STEP File	F202CFR0K0 All standard ranges	<a href="#">Download</a>
STEP File	F202 Base plate	<a href="#">Download</a>
STEP File	F202 Loadbutton	<a href="#">Download</a>

## Outline



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