

## F209 Donut Loadcell

**Standard Ranges 1000, 2000 and 4000kN (100 to 400tonnef)**

- ✓ Hardened stainless steel body
- ✓ Very high structural load limit
- ✓ Standard 1 year warranty
- ✓ Tensile applications are 'fail-safe'
- ✓ Flying lead or connector option
- ✓ Traceable calibration with certificate included in the standard price



### Specification

Parameter	Value	Unit
Non-linearity - Terminal	±1.0	% RL
Hysteresis	±1.0	% RL
Creep - 20 minutes	±0.1	% AL
Repeatability	±0.02	% RL
Rated output - Nominal	1.2	mV/V
Rated output - Rationalised (1000 and 2000kN)	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	10	V
Bridge resistance	350	Ω

Insulation resistance - Minimum at 50Vdc	500	MÎ©
Overload - Safe	50	% RL
Overload - Ultimate	400	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	7 to 9	kg
All standard ranges are manufactured in stainless steel.		

## **F209 Donut Loadcell. 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 F209 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. Please consult our engineering department.

### Order Codes

Code	Description
F209CFR0H0	Compression, IP65, unrationalised
F209CFR0HN	Compression, IP65, rationalised
Change the F to a P for the connector version.	

### Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
1000	4.0 x 10 <sup>10</sup>
2000	8.0 x 10 <sup>10</sup>
4000	1.6 x 10 <sup>11</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 16-2-4C or a 4 pin Binder 723 series chassis plug.

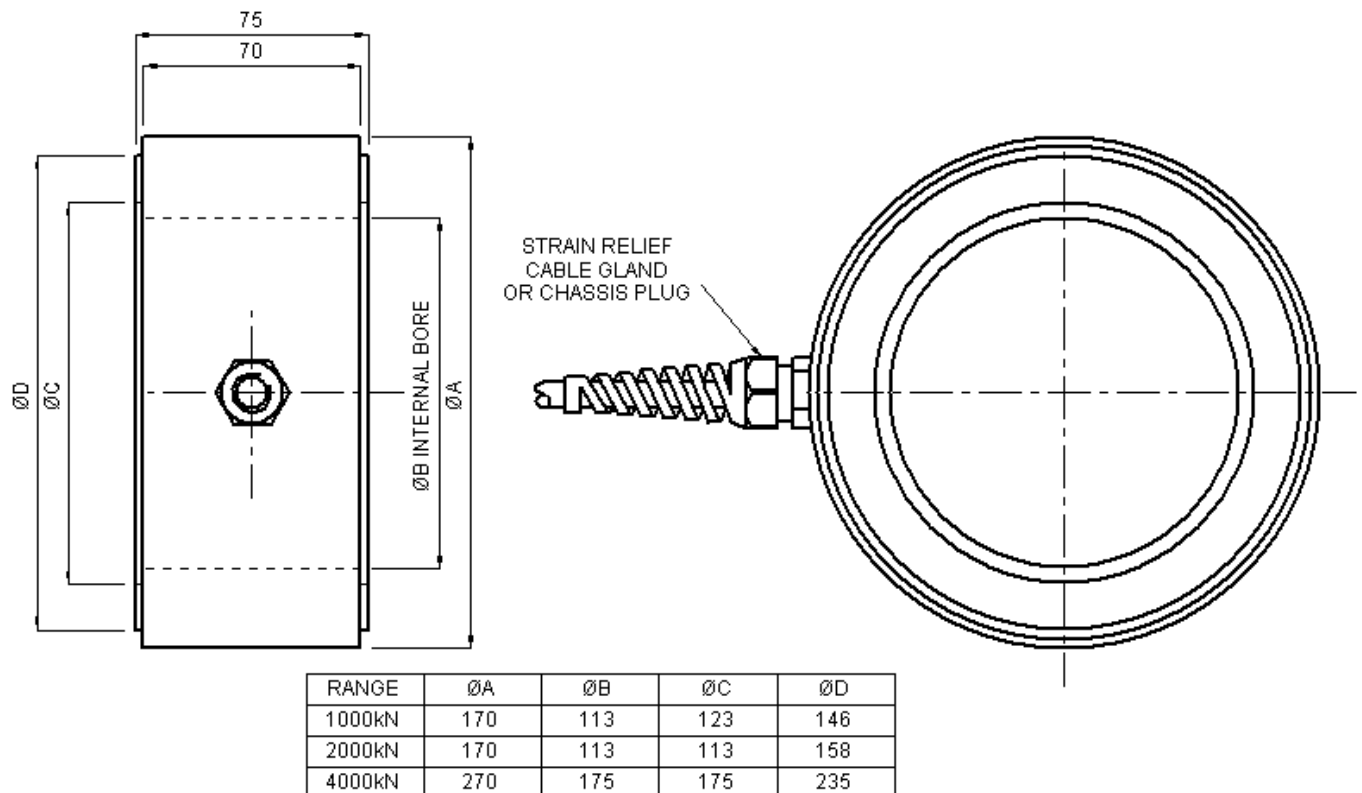
Excitation + = Red or pin 1, Excitation - = Blue or pin 2, Signal + = Yellow or pin 3, Signal - = Green or pin 4, Screen = Orange.

The screen is not connected to the loadcell body.

## Files

Type	Title	Download
STEP File	F209CFR0H0 1000kN (100tonnef)	<a href="#">Download</a>
STEP File	F209CFR0H0 2000kN (200tonnef)	<a href="#">Download</a>
STEP File	F209CFR0H0 4000kN (400tonnef)	<a href="#">Download</a>
STEP File	F209CPR0H0 1000kN (100tonnef)	<a href="#">Download</a>
STEP File	F209CPR0H0 2000kN (200tonnef)	<a href="#">Download</a>
STEP File	F209CPR0H0 4000kN (400tonnef)	<a href="#">Download</a>

## Outline



### Novatech Measurements Limited

83 Castleham Road, St Leonards on Sea, East Sussex, TN38 9NT, England.

**Telephone:** +44 (0)1424 852744

**Fax:** +44 (0)1424 853002

**E-mail:** [info@novatechloadcells.co.uk](mailto:info@novatechloadcells.co.uk)