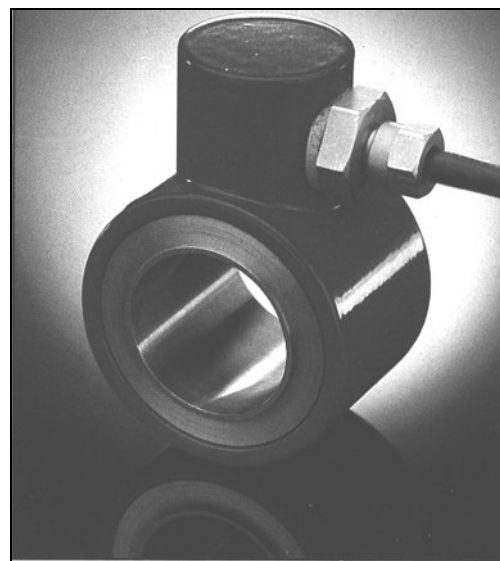


# F210

## Donut Loadcell

Standard Ranges 0.75, 1, 1.5, 2.5 and 5tonne (7.5 to 50kN)

- ◆ **Hardened stainless steel body**
- ◆ **Very high structural load limit**
- ◆ **Standard 2 year warranty**
- ◆ **Tensile applications are ‘fail-safe’**
- ◆ **Sealed to IP65**



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 F210 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 fully compensated operation up to +250°C. Please consult our engineering department.

Details of our other loadcell families can be found in the Loadcell Specifier Guide. If you require a copy please contact our sales department or look on our web site at [www.novatechloadcells.co.uk](http://www.novatechloadcells.co.uk).

<b>Ordering Codes:</b>	See the loadcell ordering code sheet for more details. Add range in the required units.		
F210CFR0K0	Compression, IP65, unrationalised	F210CFR0KN	Compression, IP65, rationalised

## F210 Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.5	% RL
Hysteresis	±0.5	% 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 50Vdc	500	MΩ
Overload - Safe	50	% RL
Overload - Ultimate	400	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	240 to 280	g

All standard ranges have a stainless steel body and a painted steel case.

Structural stiffness - Nominal					
Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
7.5	$5.0 \times 10^8$	15	$1.0 \times 10^9$	50	$3.3 \times 10^9$
10	$6.7 \times 10^8$	25	$1.7 \times 10^9$		

### 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.

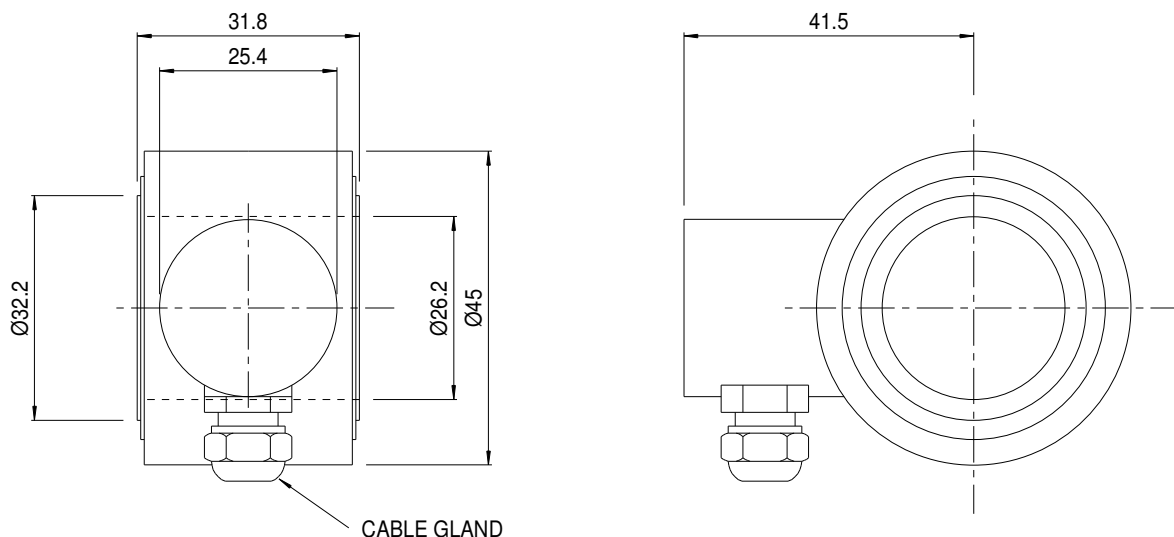
### Connections

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

Excitation + = Red                      Signal + = Yellow                      Screen = Orange

Excitation - = Blue                      Signal - = Green

The screen is not connected to the loadcell body.



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