

# F214

## Loadstud

Standard Ranges 15, 30 and 60kN (1.5 to 6tonnef)

- ◆ **Hardened stainless steel body**
- ◆ **Compact ‘in line’ installation**
- ◆ **Small diameter**
- ◆ **Low cost**
- ◆ **Traceable calibration with certificate included in the standard price**
- ◆ **Standard 2 year warranty**



Geometry: Axial strain rod in weather sealed case, with external fixing threads. For use in tension or compression.

With bi-directional versions there is a small difference between the output signal for compression and tension. All standard bi-directional loadcells are calibrated in both modes and the output for each direction is stated on the test / calibration certificate.

The F214 is ideally suited to engineering force measurements, particularly with push pull actuator / linkage arrangements where self-alignment and axial force transmission is achieved by hardware design.

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 Product List and the Loadcell Specifier Guide. If you require copies 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.	
F214CFR0H0	Compression, IP65, unrationalised	F214CFR0HN	Compression, IP65, rationalised
F214TFR0H0	Tension, IP65, unrationalised	F214TFR0HN	Tension, IP65, rationalised
F214UFR0H0	Bi-directional, IP65, unrationalised	F214UFR0HN	Bi-directional, IP65, rationalised

## F214 Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.1	% RL
Hysteresis	±0.1	% 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 (applies to single direction calibrations)	±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	MΩ
Overload - Safe	50	% RL
Overload - Ultimate	200	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	140 to 200	g

All standard ranges are manufactured in stainless steel.

When this loadcell is rationalised the resistors are housed in a capsule located in the loadcell cable 100mm from the free end. Capsule dimensions are Ø10mm by 57mm.

Structural stiffness - Nominal					
Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
15	$9.5 \times 10^8$	30	$1.9 \times 10^9$	60	$3.8 \times 10^9$

### Notes

1. AL = Applied load.
2. RL = Rated load.
3. Temperature coefficients apply over the compensated range.
4. 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

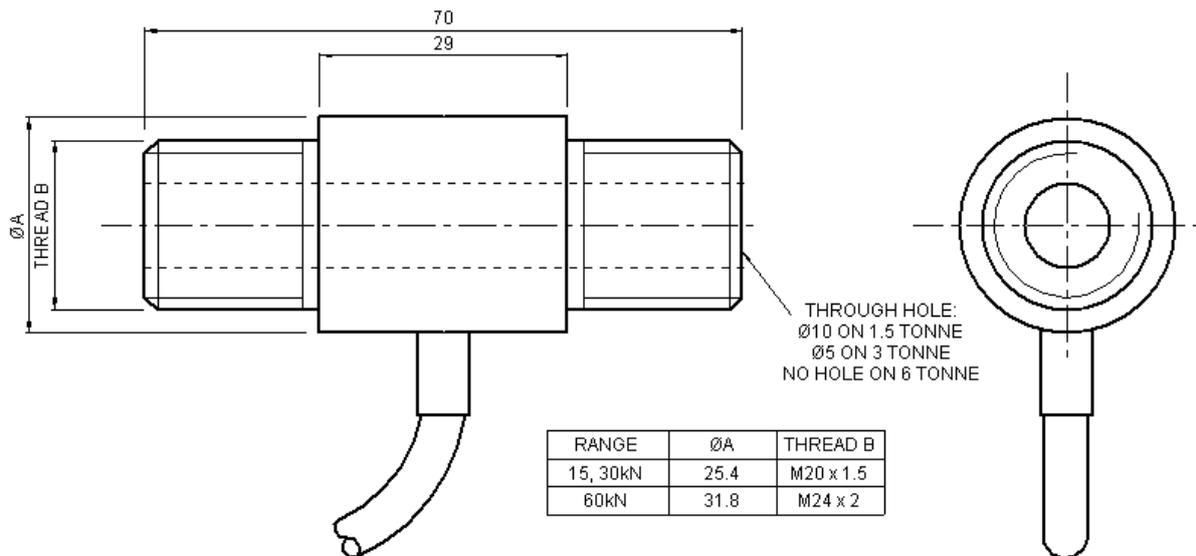
Signal + = Yellow

Screen = Orange

Excitation - = Blue

Signal - = Green

The screen is not connected to the loadcell body.



Novatech reserves the right to vary the foregoing details without prior notice

01/2013

## NOVATECH MEASUREMENTS LTD

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