

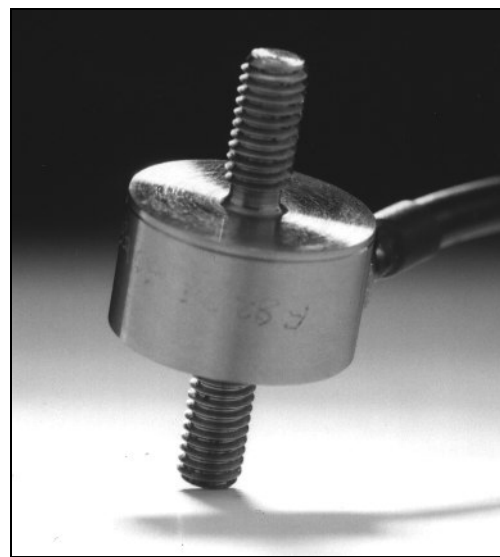


F259

Miniature Diaphragm Loadcell

Standard Ranges 25, 50 and 100kg (250 to 1000N)

- ◆ Tension / compression / bi-directional calibration
- ◆ Easy installation
- ◆ 12.7mm diameter
- ◆ Hardened stainless steel body
- ◆ Standard 2 year warranty



Geometry: Very small loadbutton cell for force measurement in confined spaces. Used in compression and/or tension on a wide range of OEM or end-user applications.

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 F259 is ideally suited to force measurements in confined spaces in both tension and compression for control of critical parameters in all kinds of industrial processes. Their versatility is such that they are also applied in a great number of important fields of scientific and engineering test work, mobile as well as workshop, static and dynamic.

We are happy to design variants of this loadcell to meet your specific requirements. 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.

| | | | |
|--|---|------------|------------------------------------|
| Ordering Codes: | See the loadcell ordering code sheet for more details. Add range in the required units. | | |
| F259CFR0H0 | Compression, IP65, unrationalised | F259CFR0HN | Compression, IP65, rationalised |
| F259TFR0H0 | Tension, IP65, unrationalised | F259TFR0HN | Tension, IP65, rationalised |
| F259UFR0H0 | Bi-directional, IP65, unrationalised | F259UFR0HN | Bi-directional, IP65, rationalised |
| Change the C to a D for compression with thread fitting. | | | |

F259 Specification

| Parameter | Value | Unit |
|---|------------|------|
| Non-linearity - Terminal | ±0.5 | % RL |
| Hysteresis | ±0.5 | % RL |
| Creep - 20 minutes | ±0.2 | % AL |
| Repeatability | ±0.1 | % RL |
| Rated output - Nominal | 1.6 | 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 | 5 | V |
| Excitation voltage - Maximum | 10 | V |
| Bridge resistance | 350 | Ω |
| Insulation resistance - Minimum at 50Vdc | 500 | MΩ |
| Overload - Safe | 50 | % RL |
| Overload - Ultimate | 100 | % RL |
| Sealing | IP65 | |
| Weight - Nominal (excluding cable) | 6 to 7.5 | 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 (N) | Stiffness (N/m) | Range (N) | Stiffness (N/m) | Range (N) | Stiffness (N/m) |
| 250 | 1.3×10^7 | 500 | 2.6×10^7 | 1000 | 4.7×10^7 |

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 7-1-4C.

Excitation + = Red

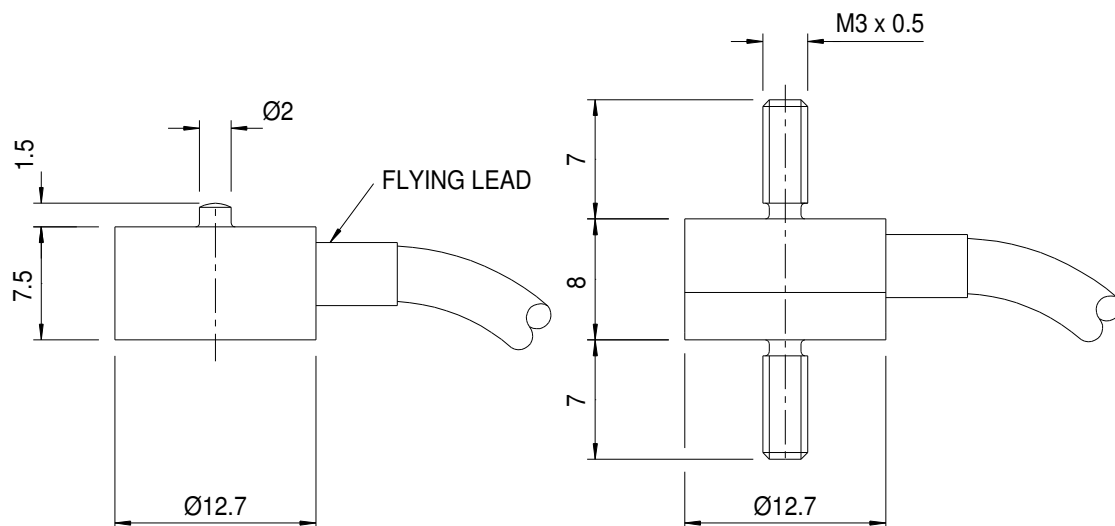
Signal + = Yellow

Screen = Orange

Excitation - = Blue

Signal - = Green

Reverse the signal connections to obtain a positive signal in tension mode. The screen is not connected to the loadcell body.



LOADBUTTON VERSION
COMPRESSION ONLY

STUD VERSION
TENSION AND/OR COMPRESSION

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

08/2007

NOVATECH MEASUREMENTS LTD

83 CASTLEHAM ROAD, ST LEONARDS ON SEA, EAST SUSSEX, TN38 9NT, ENGLAND

Tel: 01424 852744

email: info@novatechloadcells.co.uk

Fax: 01424 853002

www.novatechloadcells.co.uk