Novatech
Loadcell Design & Manufacture

F329 Deci-Newton Loadcell

Standard Range 0.1N (10gf)

- Low force high resolution loadcell
- Best resolution 4 microNewton
- Passive Wheatstone bridge
- Foil strain gauges
- High thermal stability
- Durable design
- Translational deflection

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.2	% RL
Hysteresis	±0.1	% RL
Creep - 20 minutes	±0.2	% AL
Repeatability	±0.025	% RL
Rated output - Nominal	0.35 to 0.55	mV/V
Zero load output (loadcell orientated vertically)	±10	% RL
Temperature effect on rated output per Â°C	±0.005	% AL
Temperature effect on zero load output per Â°C	±0.029	% 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	2500	Î©
Insulation resistance - Minimum at 50Vdc	500	MÎ©
Mechanical stiffness	1.3 x 103	N/m

Overload - Safe	50	% RL
Live mass	0.5	g
The standard range is manufactured in aluminium.		

The F329 is a specialist force measurement device.

Due to its finely balanced strain system and delicate structure there are some restrictions with respect to its use that need to be considered: The loadcell's self mass will influence the zero load output upon changes of orientation and with acceleration therefore dynamic applications are limited. The low stiffness characteristic requires the force system to provide enough deflection for the equilibrium deflection to be achieved. The robust strain system allows judicious application of probes or structure fixings. Input torque to the live force input boss must be minimal, normal frictional torques achieving thread insertion should not be exceeded i.e. thread locking by adhesive is suggested. Additional information can be found in Engineering Sheet E038. We are happy to design variants of this loadcell to meet your specific requirements. Please consult our engineering department.

Order Codes

Code	Description
F329CF00A0	Compression, unrationalised
F329TF00A0	Tension, unrationalised
F329UF00A0	Bi-directional, unrationalised

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.
- Tare mass is limited to 25% RL, higher values are possible by prior arrangement with our engineering department.
- Orientation effects will create errors if the loadcell changes orientation during the measurement process.
- Due to the very low stiffness we advise you to consult our engineering department to discuss the viability of your application for this loadcell.

Connections

The loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 7-1-4C.

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

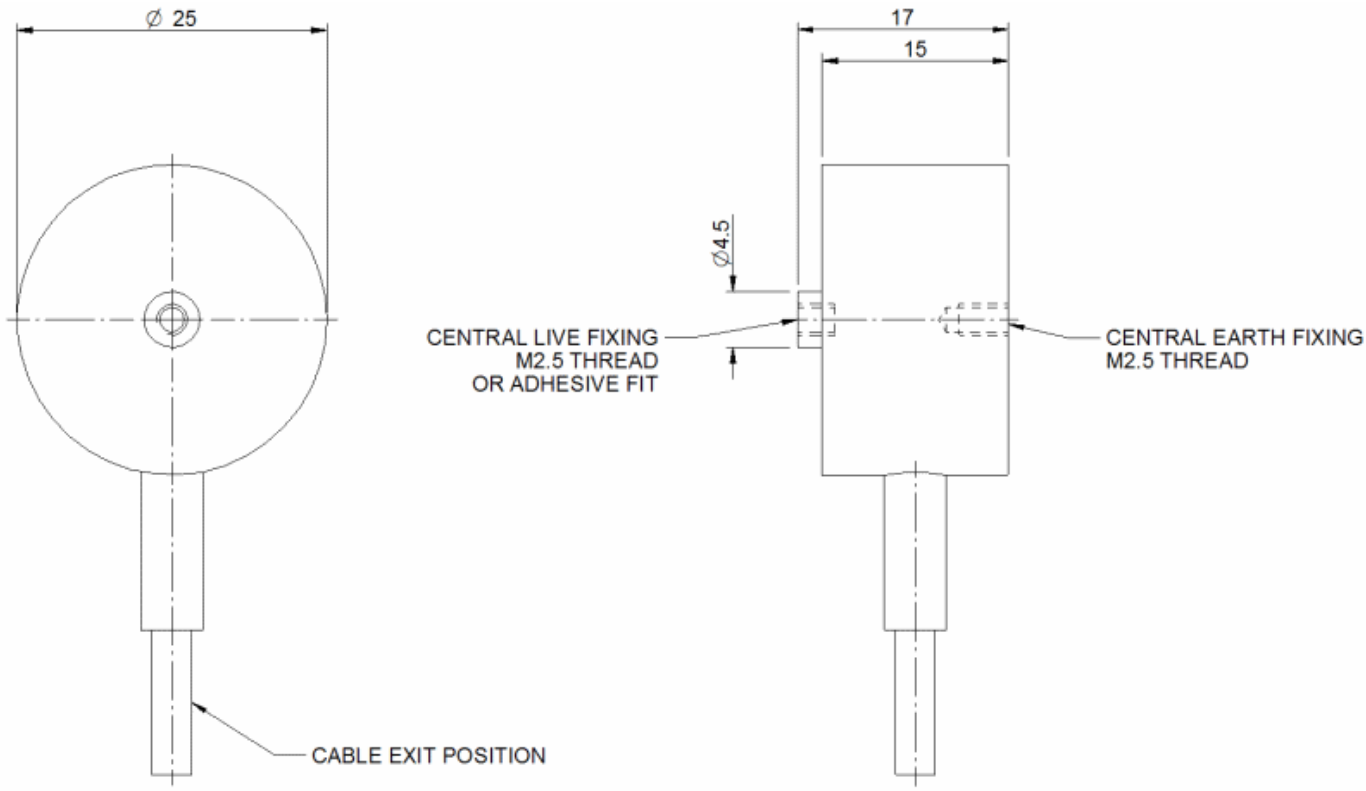
Reverse the signal connections to obtain a positive signal in tension mode. The screen is not connected to the loadcell body.

This loadcell has compensation components housed in a capsule located in the loadcell cable 100mm from the free end. Capsule dimensions are Ø10mm by 57mm.

Files

Type	Title	Download
STEP File	F329-C/T/U-F00A0 0.1N (10gf)	Download

Outline



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