Novatech
Loadcell Design & Manufacture

F327 Canister Loadcell

Standard Ranges 10, 20, 50, 100, 200, 500, 1000 and 2000kN (1 to 200tonnef)

- Low contact pressure
- Load spreading base
- Spigot or recess loacation
- Sealed to IP67
- Flying lead or connector option
- Traceable calibration with certificate included in the standard price

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.05 (10 - 50kN) / ±0.1 (100 - 1000kN) / ±0.4 (2000kN)	% RL
Hysteresis	±0.05 (10 - 50kN) / ±0.4 (100 - 1000kN) / ±0.4 (2000kN)	% RL
Creep - 20 minutes	±0.05 (10 - 50kN) / ±0.05 (100 - 1000kN) / ±0.05 (2000kN)	% AL
Repeatability (excluding rotational effects)*	±0.02 (10 - 50kN) / ±0.03 (100 - 1000kN) / ±0.03 (2000kN)	% RL
Rated output - Nominal	1.2 (10 - 50kN) / 1.2 (100 - 1000kN) / 1.2 (2000kN)	mV/V
Rated output - Rationalised	1.0 (10 - 50kN) / 1.0 (100 - 1000kN) / 1.0 (2000kN)	mV/V
Rationalisation tolerance	±0.5 (10 - 50kN) / ±0.5 (100 - 1000kN) / ±0.5 (2000kN)	% RL
Zero load output	±4 (10 - 50kN) / ±4 (100 - 1000kN) / ±4 (2000kN)	% RL
Temperature effect on rated output per Â°C	±0.005 (10 - 50kN) / ±0.005 (100 - 1000kN) / ±0.005 (2000kN)	% AL
Temperature effect on zero load output per Â°C	±0.01 (10 - 50kN) / ±0.01 (100 - 1000kN) / ±0.01 (2000kN)	% RL

Temperature range - Compensated	-10 to +50	°C
Temperature range - Safe	-10 to +80	°C
Excitation voltage - Recommended	10 (10 - 50kN) / 10 (100 - 1000kN) / 10 (2000kN)	V
Excitation voltage - Maximum	20 (10 - 50kN) / 20 (100 - 1000kN) / 20 (2000kN)	V
Bridge resistance	700 (10 - 50kN) / 700 (100 - 1000kN) / 700 (2000kN)	Î©
Insulation resistance - Minimum at 50Vdc	500 (10 - 50kN) / 500 (100 - 1000kN) / 500 (2000kN)	MÎ©
Overload - Safe	50 (10 - 50kN) / 50 (100 - 1000kN) / 50 (2000kN)	% RL
Overload - Ultimate	200 (10 - 50kN) / 200 (100 - 1000kN) / 200 (2000kN)	% RL
Sealing	IP67	
Weight - Nominal (excluding cable)	1.6 (10 - 50kN) / 8 to 24.1 (100 - 1000kN) / 28.3 (2000kN)	kg
All standard ranges are manufactured in stainless steel. All standard ranges are manufactured in stainless steel. * Repeatability errors will increase if the loadcell is rotated to ±0.06% of RL		

The F327 is a robust canister loadcell that is ideally suited to compression force measurement applications in harsh conditions.

The loadcell is deliberately over engineered to achieve a low contact surface pressure under high loading. Smaller column type loadcells, such as the F218, are available and we can cover the F327 load ranges with smaller designs. Please consult our engineering department.

Order Codes

Code	Description
F327CFS0K0	Compression, IP67, unrationalised
F327CFS0KN	Compression, IP67, rationalised
Change the F to a P for the connector version.	

Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
10	2.2 x 108
20	4.3 x 108
50	1.1 x 109
100	1.6 x 109
200	3.2 x 109
500	8.1 x 109
1000	8.3 x 109
2000	8.7 x 109

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.

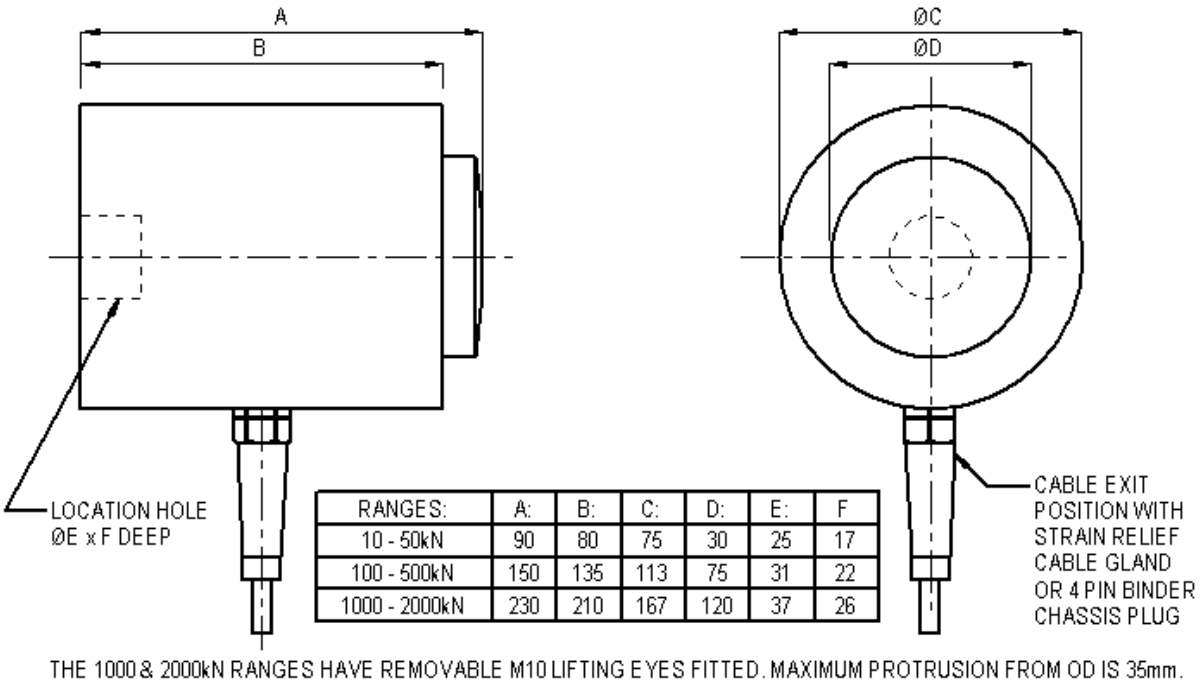
The screen is not connected to the loadcell body.

Files

Type	Title	Download
STEP File	F327CFS0K0 10 to 50kN (1 to 5tonnef)	Download
STEP File	F327CFS0K0 100 to 500kN (10 to 50tonnef)	Download

STEP File	F327CFS0K0 1000 to 2000kN (100 to 200tonnef)	Download
STEP File	F327CPS0K0 10 to 50kN (1 to 5tonnef)	Download
STEP File	F327CPS0K0 100 to 500kN (10 to 50tonnef)	Download
STEP File	F327CPS0K0 1000 to 2000kN (100 to 200tonnef)	Download

Outline



RANGES:	A:	B:	C:	D:	E:	F
10 - 50kN	90	80	75	30	25	17
100 - 500kN	150	135	113	75	31	22
1000 - 2000kN	230	210	167	120	37	26

THE 1000 & 2000kN RANGES HAVE REMOVABLE M10 LIFTING EYES FITTED. MAXIMUM PROTRUSION FROM OD IS 35mm.

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