

F303 Low Cost Axial Force Sensor

Standard Ranges 20 and 40kN (2 and 4tonnef)

- ✓ Low profile
- ✓ Sealed to IP65
- ✓ Low cost
- ✓ Hardened stainless steel
- ✓ Standard 1 year warranty



Specification

Parameter	Value	Unit
Non-linearity - Terminal	± 2.0	% RL
Hysteresis	± 2.0	% RL
Creep - 20 minutes	± 0.1	% AL
Repeatability	± 0.1	% RL
Rated output - Nominal	$2 \pm 20\%$	mV/V
Rated output - Rationalised	2.0	mV/V
Rationalisation tolerance	± 1	% RL
Zero load output	± 6	% RL
Temperature effect on rated output per $\hat{A}^{\circ}\text{C}$	± 0.04	% AL
Temperature effect on zero load output per $\hat{A}^{\circ}\text{C}$	± 0.05	% RL
Temperature range - Compensated	-10 to +50	$^{\circ}\text{C}$
Temperature range - Safe	-10 to +80	$^{\circ}\text{C}$
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	10	V
Bridge resistance	350	$\hat{\Omega}$
Insulation resistance - Minimum at	500	$\text{M}\hat{\Omega}$

50Vdc		
Overload - Safe	50	% RL
Overload - Ultimate	200	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	120	g
All standard ranges are manufactured in stainless steel.		

The F303 is aimed at the volume OEM user who requires a reliable high quality axial sensor at a low price for low accuracy compressive force measurement in equipment.

It is manufactured from stainless steel and sealed to IP65 for long life in typical industrial operating conditions. The sensor is designed for simple mounting on a smooth flat surface. Each sensor is labelled with its output for full range. A calibration certificate is not supplied as standard. We are happy to design variants of this loadcell to meet your specific requirements. Please consult our engineering department.

Order Codes

Code	Description
F303CFROHO	Compression, IP65, unrationalised
F303CFROHN	Compression, IP65, rationalised

Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
20	9.9 x 10 ⁸
40	2.1 x 10 ¹⁰

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

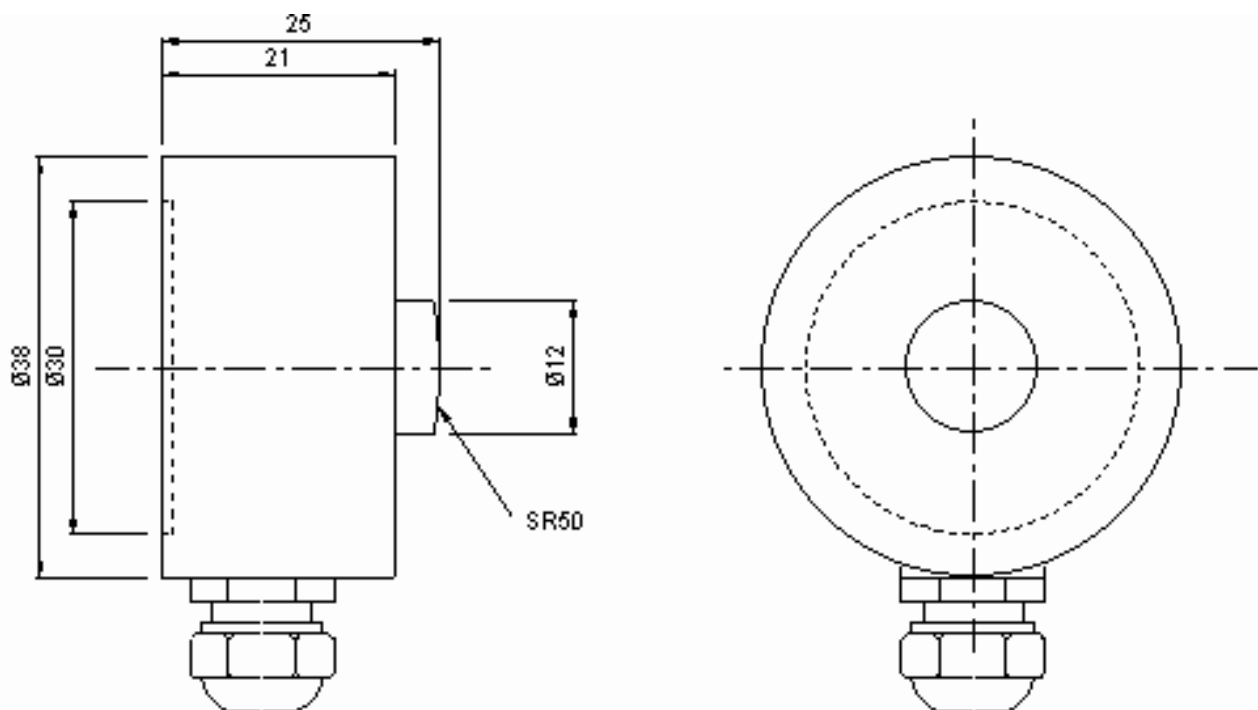
The screen is not connected to the loadcell body.

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.

☁ Files

Type	Title	Download
STEP File	F303CFR0H0 All standard ranges	Download

Outline



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