U2000 Series
Miniature Low-Profile Load Cell

Sherborne Sensors

.... the first choice in precision

Introduction

The compactness of the U2000 load cell makes it ideal for use in applications where space is limited. The robust shear web design uses multiple strain gauges, strategically placed to counteract and minimise errors due to side loads and non-axial forces. The extremely low deflection and high frequency response are beneficial in high-speed measurements, especially where peak loads are being monitored.

The U2000 can be supplied calibrated with Sherborne instrumentation products to provide a complete force measuring system.

Features

- Ultra low profile
- High frequency response
- Low deflection
- Integral electrical connector
- Stainless steel construction
- 2.5 to 25kN ranges available

Specifications
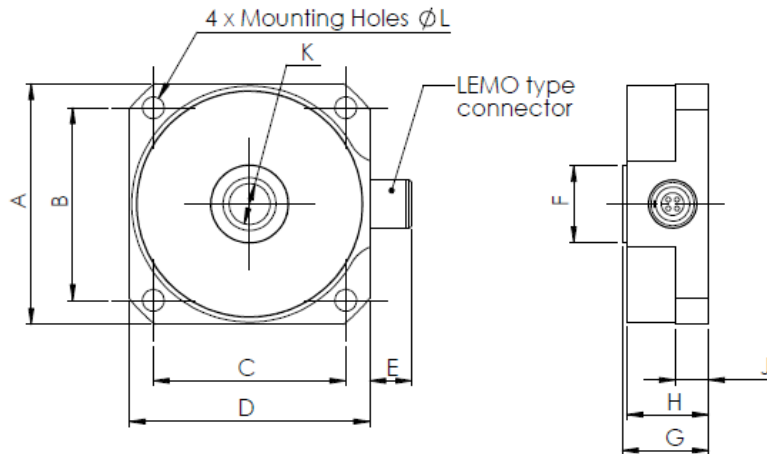
Standard Ranges	kN	2.5, 5, 10, 25
Operational mode		Compression/tension
Recommended Excitation Voltage	VDC	10
Maximum Excitation Voltage	VDC	15
Full Scale Output	mV/Volt (nominal)	2.0
Static Error Band	± % Full Scale (max)	0.25
Operating Temperature Range	°C	-20 to +80
Compensated Temperature Range	°C	0 to +60
Thermal Zero Shift	% Full Scale/°C (max)	0.02
Thermal Sensitivity Shift	% Reading/°C (max)	0.005
Input Resistance	Ω (nominal)	750
Output Resistance	Ω (nominal)	700
Overload Capacity	% Full Scale	150
Maximum Side Load	% Full Scale	50
Deflection at Rated Load	mm (max)	0.03
Environmental protection level	IEC529	IP54
Documentation		Individual calibration data sheet

Outline Dimensions

Range kN	A	B	C	D	E	F	G	H	J	K	L	Weight kg
2.5 - 25	50	40	40	50	9	16	18	17	7	M10 x 1.5	4.5	0.15
50	85	71	71	85	9	32.5	25	22	-	M16 x 1.5	ø6.5	0.8

Notes

1. Signal polarity shown is for compression operation.
2. Each unit is supplied with a 5m-cable connector assembly.
3. A spherical load button accessory is available that screws into the centre of the load cell for compression use.
4. Calibration in compression only is standard.