

# U4000 Series

Universal Tension/Compression  
Load Cell

## Introduction

The U4000 series is a range of high performance tension-compression load cells that provide unrivalled performance in a wide range of force and load measurement applications.

During manufacture, special attention is paid to control the parallelism of the top and bottom mounting surfaces together with the alignment of the fixing threads, which makes the product ideal for direct mounting in materials testing machines.

All versions benefit from very low deflection under load, which is an important factor for many force measurement applications. Each load cell is individually compensated for thermal effects on zero and sensitivity and they all offer excellent linearity characteristics for both tension and compression use.

The U4000 can be supplied calibrated with Sherborne instrumentation products to provide a complete force measuring system.



## Features

- ❑ Stainless steel construction
- ❑ High frequency response
- ❑ Low deflection
- ❑ 50N to 50kN ranges available

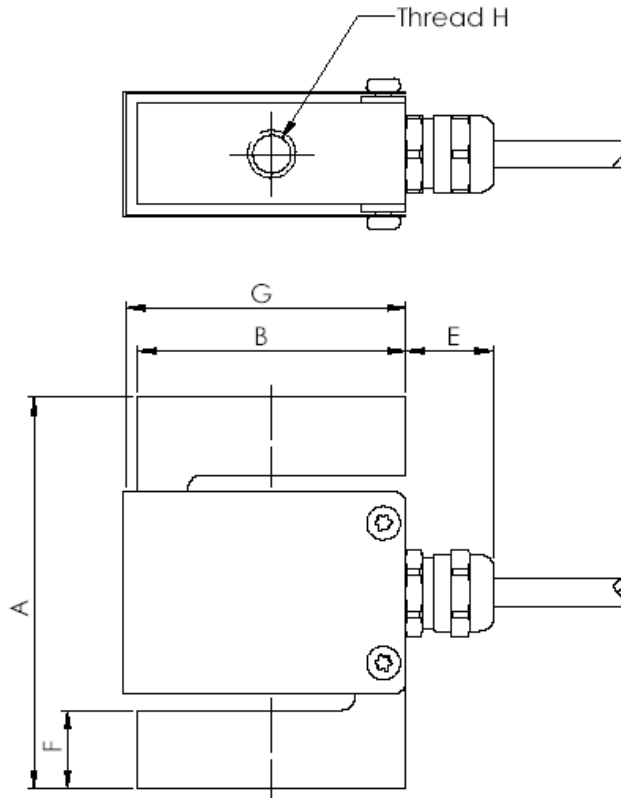
## Specifications

Standard Ranges	kg	1, 2, 5, 10, 25, 50, 100, 250, 500, 1000, 2500, 5000
Operational mode		Compression/tension
Recommended Excitation Voltage	VDC	10
Maximum Excitation Voltage	VDC	15
Full Scale Output	mV/Volt (nominal)	2.7
Combined Error	± % Full Scale (max)	0.03
Non-repeatability	± % Full Scale (max)	0.015
Operating Temperature Range	°C	-20 to +80
Compensated Temperature Range	°C	0 to +60
Thermal Zero Shift	% Full Scale/°C (max)	±0.002
Thermal Sensitivity Shift	% Reading/°C (max)	±0.002
Input Resistance	Ω (nominal)	375
Output Resistance	Ω (nominal)	350
Overload Capacity	% Full Scale	150
Environmental protection level	IEC529	IP54 (IP65 Option ≥ 500kg)
Documentation		Individual calibration data sheet

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## Outline Dimensions



Range	Material	A	B	C	D	E	F	G	H
1kg to 25kg	Al Alloy	60	50	22	13	11	8	53	M8 x 1.25
50kg to 250kg	Stainless Steel	70	48	27	18	16	14	50	M8 x 1.25
500kg to 1000kg	Stainless Steel	75	48	39	30	16	15	50	M12 x 1.75
2500kg to 5000kg	Stainless Steel	90	63	47	38	16	23	66	M16 x 2

## Notes

1. Signal polarity shown is for tension operation.
2. Each U4000 is supplied fitted with a 2m, 6-conductor shielded cable.