

Applications

Materials testing

Bi-directional force monitoring

Force & load measurement applications

Suspended hoppers

General in-line force monitoring in limited space applications

Geo-technical test equipment

Tensile testing machines

U4000 Series

Universal Tension/Compression Load Cell

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.

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 and they all offer excellent linearity characteristics for both tension and compression use.

Features

- Stainless steel construction
- High frequency response
- Low deflection
- 1-5000kg ranges available

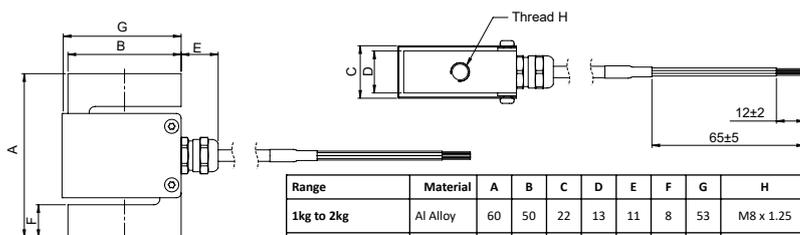
Benefits

- Custom versions available
- Operating range -20 to 80°C
- Available in compression, tension or both

	Excitation (+)
Blue	Excitation (-)
Green	Output (+)
Yellow	Output (-)
Orange	Sense (+)
White	Sense (-)
Screen	Not Connected to load cell body

SIDEVIEW

PLAN VIEW



Range	Material	A	B	C	D	E	F	G	H
1kg to 2kg	Al Alloy	60	50	22	13	11	8	53	M8 x 1.25
5kg to 25kg	Stainless Steel	60	50	22	13	11	8	53	M8 x 1.25
50kg to 250kg	Stainless Steel	70	48	27	18	16	13	50	M8 x 1.25
500kg to 1000kg	Stainless Steel	75	48	39	30	16	14	50	M12 x 1.75
1500kg	Stainless Steel	75	48	39	30	16	13	50	M16 x 2
2500kg to 5000kg	Stainless Steel	90	63	47	38	16	23	66	M16 x 2

Specifications

Specifications by Range @+20°C (+68°F)

1kg, 2kg, 5kg, 10kg, 25kg, 50kg, 100kg,
250kg, 500kg, 1000kg, 2500kg, 5000kg

Operational mode	Compression/tension	
Static Error Band	± % Full Scale(max)	0.25
Overload Capacity	% Full Scale	150
Maximum SideLoad	% Full Scale	50
Deflection at RatedLoad	mm (max)	0.03
Thermal Zero Shift	%FRO/°C(max)	0.02
Thermal Sensitivity	%Reading/°C (max)	0.005

Electrical

Full ScaleOutput	mV/Volt (nom)	2.0
RecommendedExcitation Voltage	Volts dc	10
Maximum ExcitationVoltage	Volts dc	15
Input Resistance	Ω (nom)	750
Output Resistance	Ω (nom)	700

Environmental Characteristics

Operating Temperature Range	°C	-20 to 80
Compensated Temperature Range	°C	0 to 60
Environmental Protection Level	IEC529	IP54 (IP65 Option ≥ 500 kg)

Notes

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

Model Designation & Ordering Code

U 4 0 0 0 - kg
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 kg Range