ELHM

Miniature Load Cell

SPECIFICATIONS

- **Compression or tension/compression**
- **Ranges from 2.5 kN to 50 kN (500 lbf to 10 klbf)**
- **Metal foil strain gages for high stability**

FEATURES

- Low mass compression style or tension compression with studs
- Sensitivity FSO: 2mV/V
- Low noise
- High reliability

APPLICATIONS

- Theatrical rigging loads
- Assembly forces
- Weighing
- Tool forces
- Thrust measurements
- Long period force measurements
- Product validation testing
- Hoist and winch loads

The **ELHM** load cell is a compact package able to fit into many applications where others cannot.

When compact design and superior stability are required, the **ELHM** load cell is the sensor for your application. The ELHM is provided with either SAE or metric threads for tension and compression applications.

Care should be exercised to isolate your **ELHM** from off-axis loads. The **ELHM** is a Poisson column design providing low full scale input deflection and superior stability for longer term measurements. Designed specifically to provide high zero stability, the **ELFM** is rated for a cycle life expectancy of typically 1 x 10^6 0-FS cycles of zero to full rated load.

The **ELHM** can be configured with a variety of different options to fine tune the instrument to your application: select from several standard compensated temperature ranges, input voltages, lead lengths or specify entirely unique combinations of these options.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

STANDARD RANGES

Ranges		Overrange	Body style		Sensitivity "FSO"
N	lbf		Compression	Tension & Compression	(nom.)
2.5K	500	1.5 x FS	ELHM-B2	-	2 mV/V
5K	1K	1.5 x FS	ELHM-B2	-	2 mV/V
10K	2K	1.5 x FS	ELHM-B3	ELHM-T3	2 mV/V
25K	5K	1.5 x FS	ELHM-B4	ELHM-T4	2 mV/V
50K	10K	1.5 x FS	ELHM-B4	ELHM-T4	2 mV/V

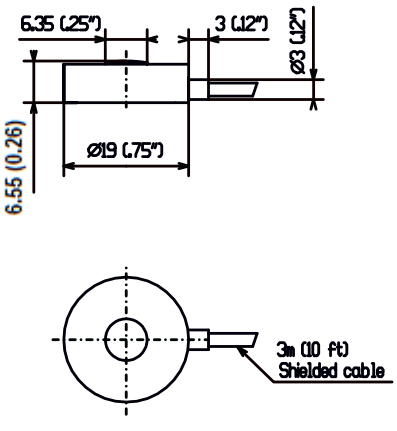
PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

PARAMETERS	VALUES	NOTES
Sensitivity “FSO”	2mV/V	
Supply voltage	5Vdc	
Input resistance	350Ω nom.	
Output resistance	350Ω nom.	
Non-repeatability	±0.25% FSO	
Non-linearity	±0.3%FS	
Hysteresis	±0.25%FS	
Thermal Zero Shift "TZS"	±0.02%FS /°C	
Thermal Sensitivity Shift "TSS"	±0.02% of reading /°C	
Operating temperature	-50°C to 120°C	
Compensated temperature	20°C to 80°C	See option table for other temperatures
Zero offset	±0.04 mV/V	

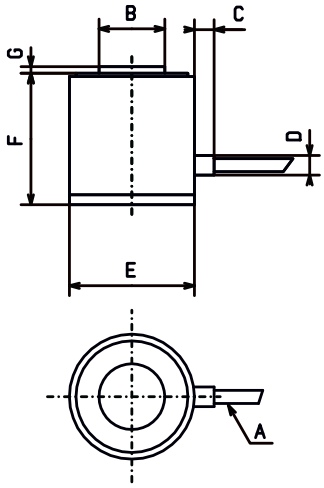
Note:
1. Electrical Termination: 3m shielded cable output as standard
2. Type B units have positive output in compression. Type T units have positive output in tension.
3. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

DIMENSIONS (in metric and imperial)

ELHM-B2

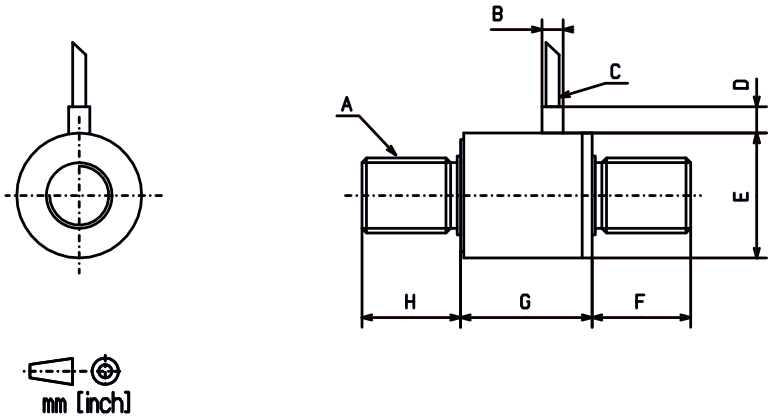


ELHM-B3 & -B4



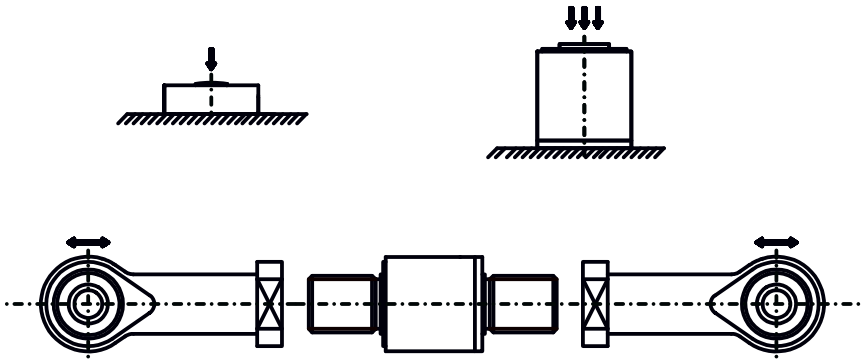
ITEM	ELHM-B3 10kN (2 klbf)	ELHM-B4 25 to 50 kN (5 to 10klbf)
A	3m (10 ft)	3m (10 ft)
B	ø 10 (0.39")	ø 18 (0.71")
C	3 (0.12")	3 (0.12")
D	ø 3 (0.12")	ø 3 (0.12")
E	ø 19 (0.75")	ø 25 (0.98")
F	20 (0.79")	25 (0.98")
G	1 (0.04")	1 (0.04")

ELHM-T3 & -T4

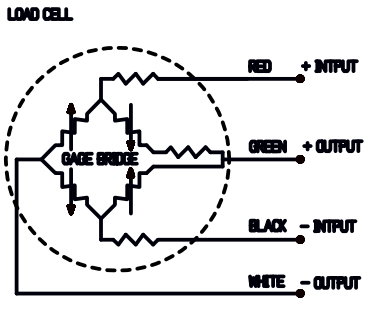


ITEM	ELHM-T3 10 kN (2 klbf)	ELHM-T4 25 to 50 kN (5 to 10 klbf)
A	-T3E : 3/8-24 UNF -T3M : M10x1.5	-T4E : 5/8-18 UNF -T4M : M16x2
B	ø 3 (0.12")	ø 3 (0.12")
C	3m (10 ft)	3m (10 ft)
D	3 (0.12")	3 (0.12")
E	ø 19 (0.75")	ø 25 (0.98")
F	15 (0.59")	25 (0.98")
G	20 (0.79")	25 (0.98")
H	15 (0.59")	25 (0.98")

INSTALLATION



CONNECTIONS



OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated temperature ranges	**Z0** **Z1** **Z2** **Z***	-40°C to 20°C -20°C to 40°C 0°C to 60°C Non-standard, contact factory
Supply voltage	**V00**	Replace “00” with voltage between 1 and 10.
Special cable length	**L00F** **L00M**	Replace “00” with total length in feet with Lb range. Replace “00” with total length in meters with N range.
Connector wired to cable	**C** **RS**	Microtech type male or equivalent (w/o mate) RJ telephone type male (w/o mate)

ORDERING INFORMATION

Model	-	Body	Thread Type	-	Range & Unit (1)		-	/Options
ELHM	-	B2 B2 B3/T3 B4/T4	M : Metric E : SAE	-	2.5KN 5KN 10KN 25KN 50KN	500L 1KL 2KL 5KL 10KL	-	/Z0, Z1, Z2, or Z* /V1 thru V10 or V* /L00F or L00M /C or RS

(1)Note : L=lbf ; N=Newton.
Metric threaded units must have range in Newton and cable length in meters specified.
SAE threaded units must have range in lbf and cable length in inches specified.
Options can be multiple if compatible (e.g. **ELHM-T3E-2KL-/Z1/L10F/C**)

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