

## ELHM Load Cell



- **Ranges: 500 through 10,000 lbf (2.5KN to 50KN)**
- **Ultra compact button or threaded stud design**
- **Output FSO: 2 mV/V nominal**
- **High stability**
- **Compression or tension/compression**

### DESCRIPTION

The ELHM load cell is a compact package able to fit into many applications where others cannot. The low noise Wheatstone bridge consists of metal foil strain gages which provide typically 2 mV/V of full scale output. 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 ELHM is rated for a cycle life expectancy of typically  $1 \times 10^6$  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.

### FEATURES

- Low mass compression style or tension compression with studs
- From 500 to 10000 lbf ranges (2.5KN to 50KN)
- Low noise
- High reliability

### APPLICATIONS

- Theatrical rigging loads
- Assembly forces
- Weighing
- Tool forces
- Thrust measurements
- Demanding longer term measurements
- Product validation testing
- Material test
- Hoist and winch loads

# ELHM Load Cell

## STANDARD RANGES

Ranges		Overrange	Body style		Output "FSO" (nom.)
N	lbf		Compression	Tension & Compression	
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

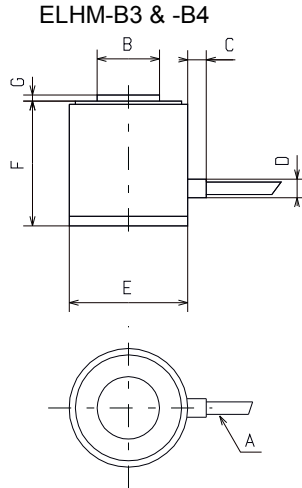
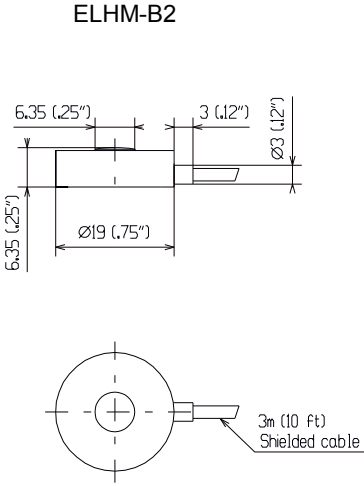
Note: type B units: positive output in compression. Type T units: positive output in tension.

## PERFORMANCE SPECIFICATIONS

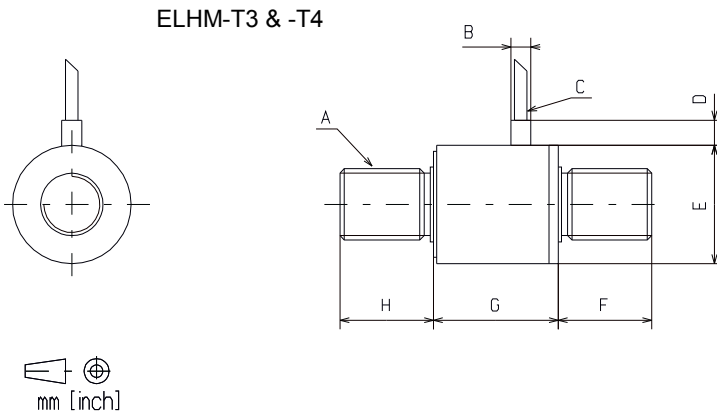
PARAMETERS	VALUES	NOTES
Supply voltage	5VDC	
Input resistance	350Ω nom.	
Output resistance	350Ω nom.	
Non-repeatability	±0.25 % FSO	
Non-linearity	±0.3%FSO	
Hysteresis	±0.1%FSO	
Thermal Zero Shift "TZS"	±0.02%FSO /°C	
Thermal Sensitivity Shift "TSS"	±0.02% /°C	
Operating temperature	-50°C to 120°C	
Compensated temperature	20°C to 80°C	See option table for other temperatures
Zero offset at 23°C	±2 % FSO typ.	
CE conformance according to	EN 61010-1, EN 50081-1, EN 50082-1	

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## DIMENSIONS



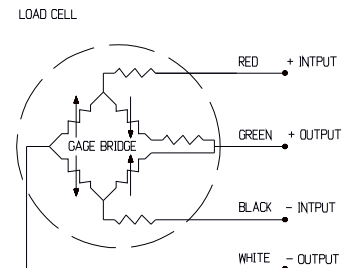
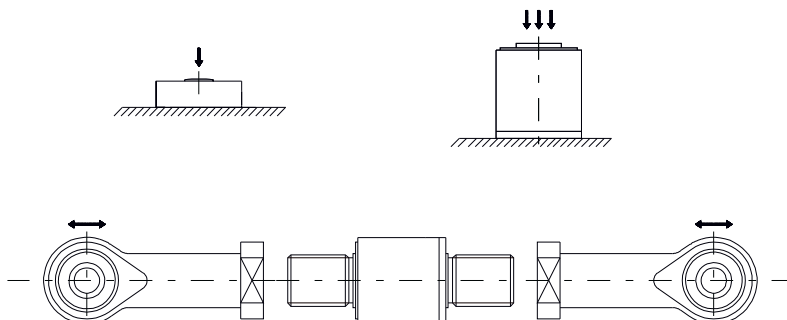
ITEM	ELHM-B3 2KLb 10KN	ELHM-B4 5KLb to 10KLb 25KN to 50KN
A	3m (10 ft) shielded cable	3m (10 ft) shielded cable
B	ø 10 (0.39")	ø 18 (0.71")
C	3 (0.12")	3 (0.12")
D	ø 3 (0.12")	ø 3 (0.12")
E	ø 19 (0.75")	ø 25 (0.98")
F	20 (0.79")	25 (0.98")
G	1 (0.04")	1 (0.04")



ITEM	ELHM-T3 2KLb 10KN	ELHM-T4 5KLb to 10KLb 25KN to 50KN
A	-T3E : 3/8-24 UNF -T3M : M10x1.5	-T4U : 5/8-18 UNF -T4M : M16x2
B	ø 3 (0.12")	ø 3 (0.12")
C	3m (10 ft) shielded cable	3m (10 ft) shielded cable
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



# ELHM Load Cell

## OPTIONS AND ACCESSORIES

OPTIONS	CODES	DESCRIPTIONS
Compensated temperature ranges	Z0	-40°C to 20°C
	Z1	-20°C to 40°C
	Z2	0°C to 60°C
	Z*	Non-standard, contact MEAS
Supply voltage	V00	Replace "00" with voltage between 1 and 10.
Special cable length	L00F	Replace "00" with total length in feet with Lb range.
	L00M	Replace "00" with total length in meters with N range.
Connector wired to cable	C	Microtech type male or equivalent (w/o mate)
	RS	RJ telephone type male (w/o mate)
Calibration	AC	Alternate calibration: units with studs are calibrated in tension by default. Option AC provides compression calibration in addition to tension calibration

## ORDERING INFORMATION

Model	-	Body	Thread Type	-	Range & Unit <sup>(1)</sup>		-	/Options
ELHM	-	B2 B2 B3/T3 B4/T4	M : Metric U, 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 /AC

(1)Note : L=lbf ; N=Newton. Metric threaded units must have Newtons range specified. SAE threaded units must have lbf range specified. Metric threaded units must have cable lengths specified in meters. SAE threaded units must have cable lengths specified in inches.

Example of model construction: ELHM-T3E-2KL-/Z1/L10F/C

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