

ELHM Miniature Load Cell

- ▣ Measurement ranges 0 ... 2.5 kN to 0 ... 50 kN
- ▣ Compression/Tension
- ▣ Non-linearity ± 0.3 % FSO
- ▣ Output signal 2 mV/V
- ▣ Supply voltage 5 VDC



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 ELFM is rated for a cycle life expectancy of typically 1×10^6 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
- Ranges from 2.5 kN to 50 kN
- 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

▣ Standard Ranges

Ranges		Overrange	Body Style		Output FSO (nom.)
kN	lbf		Compression	Tension & Compression	
2.5	500	1.5 x FS	ELHM-B2	--	2 mV/V
5	1000	1.5 x FS	ELHM-B2	--	2 mV/V
10	2000	1.5 x FS	ELHM-B3	ELTM-T3	2 mV/V
25	5000	1.5 x FS	ELHM-B4	ELHM-T4	2 mV/V
50	10000	1.5 x FS	ELHM-B4	ELHM-T4	2 mV/V

Note:

Type B units:

- positive output in compression.

Type T units:

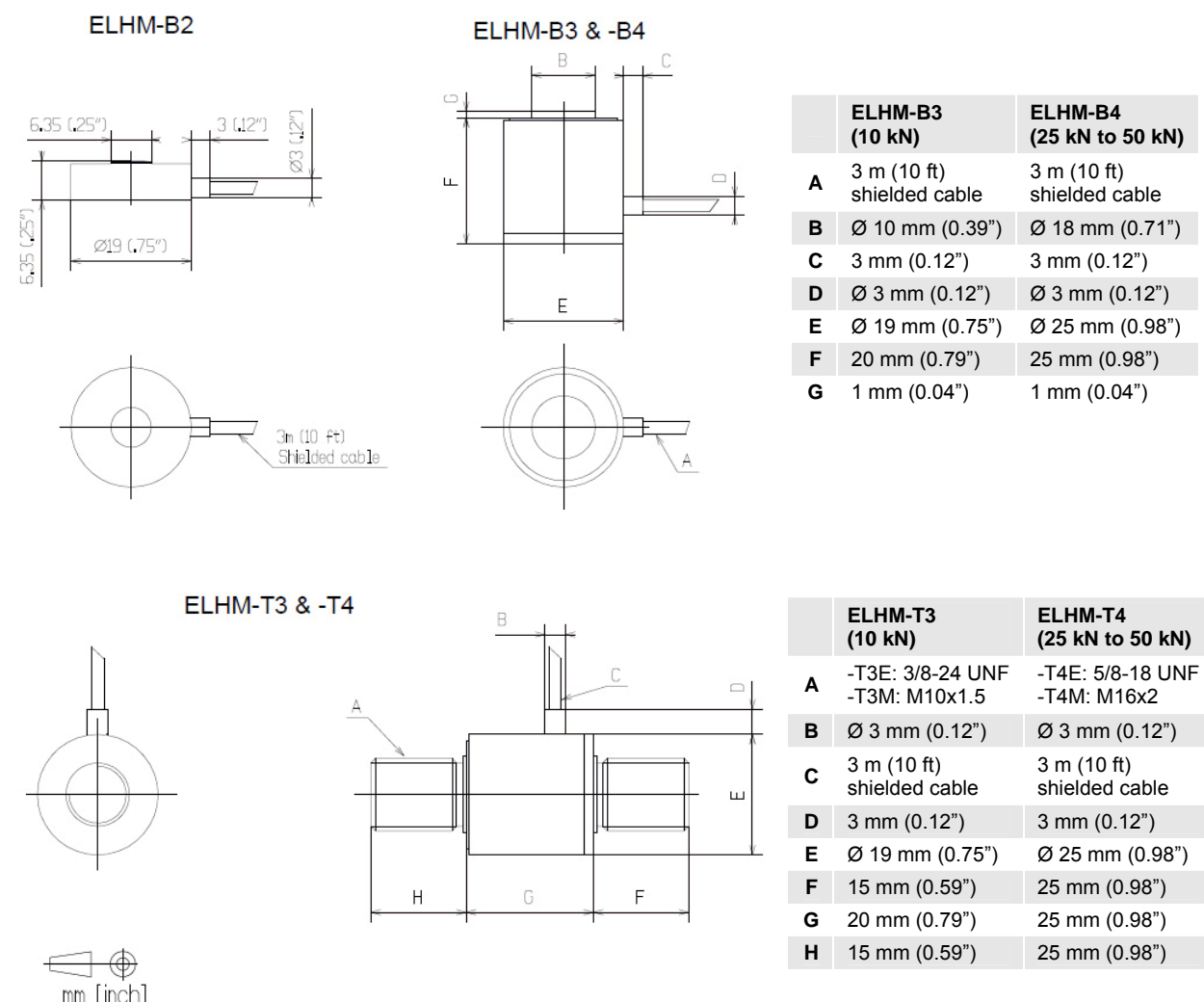
- positive output in tension.

■ Specifications

All values are typical at temperature 20 ±1 °C

Parameter	Value
Supply voltage:	5 VDC
Input resistance:	350 Ω nom.
Output resistance:	350 Ω nom.
Non-repeatability:	±0.25 % FSO
Non-linearity:	±0.3 % FSO
Hysteresis:	±0.1 % FSO
Thermal Zero Shift "TZS":	±0.02 % FSO/K
Thermal Sensitivity Shift "TSS":	±0.02 % /K
Operating temperature:	-50 ... +120 °C
Compensated temperature:	+20 ... +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

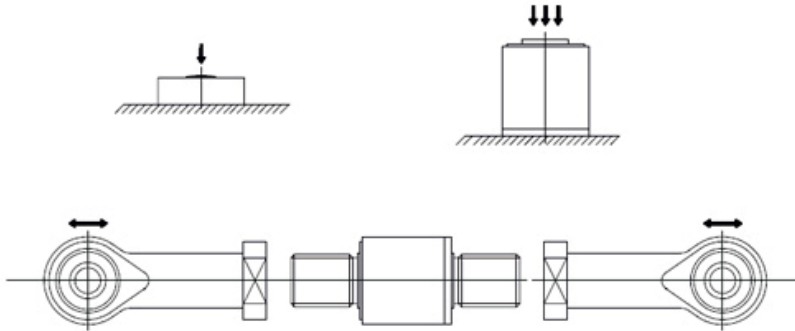
■ Dimensions



All dimensions in mm [inch], approx. values.

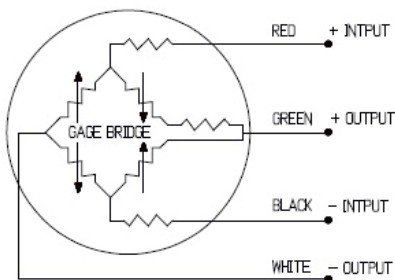
These drawings are for information only and not intended for construction purpose.
Please ask for detailed drawings.

Installation



Wiring

LOAD CELL



Ordering Information

ELHM	-	B2 M	-	5KN	-	/Z1/L2M/C
Model		B2, B3, B4, T3 or T4, M = metric or E = SAE		Range with N or L		Options or blank

Comp. temperature ranges:	Z0	=	-40 ... +20 °C
	Z1	=	-20 ... +40 °C
	Z2	=	0 ... +60 °C
	Z*	=	Non-Standard, contact factory
Supply voltage:	V00	=	Replace "00" with excitation between 1 and 10 V.
Special cable length:	L00F	=	Replace "00" with total length in ft
	L00M	=	Replace "00" with total length in m
Connector wired to cable:	C	=	Microtech type male or equivalent
	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

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.

Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.