ELHM Load Cell

Ranges: 500 through 10,000 lbf
Ultra Compact Button or Threaded Stud Design
Millivolt output: 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 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.

FEATURES

- Low Mass Compression Style or Tension Compression with Studs
- From 500 to 10000 lbf Ranges
- 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 performance parameters:	
Maximum Over Load:	150%
Recommended Excitation:	5 Vdc
Full Scale Output Span:	2mV/V nominal
Output at No Load (Zero Output):	+/- 2% FSO typical
Nonlinearity:	+/ - 0.3% FSO
Hysteresis:	+/ - 0.1% FSO
Temperature Compensation:	20 -80°C
Thermal Zero Shift:	+/- 0.01% FSO/°C
Thermal Sensitivity Shift:	+/- 0.01% /°C
Operating Temperature Range:	-50°C to 120°C
Impedance In:	350 ohm nominal
Impedance Out:	350 ohm nominal
Deflection at Rated Load:	< 0.03 mm nominal
Isolation Resistance:	1000 Megohm nominal at 50 Vdc
Cycle Life Expectancy:	10E6 0-FS cycles

Note: Type B units: Positive output in compression. Type T units: Positive output in tension. Alternate calibrations available; reference option AC.

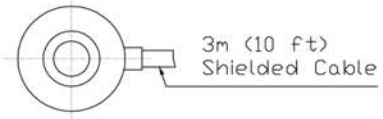
measurement SPECIALTIES

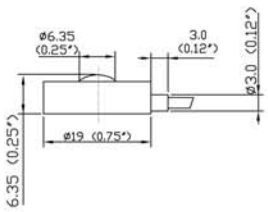
Measurement Specialties, Inc. • 1000 Lucas Way Hampton, VA 23666 USA • www.meas-spec.com • 757-766-1500 • 800-745-8008 • Fax 757-766-4297

ELHM Load Cell

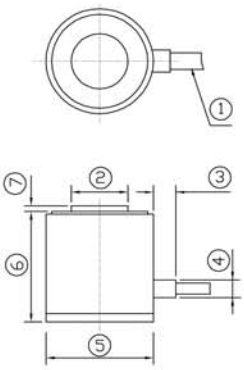
dimensions

ELHM-B2
500 to 1000Lb
2500 to 5000N



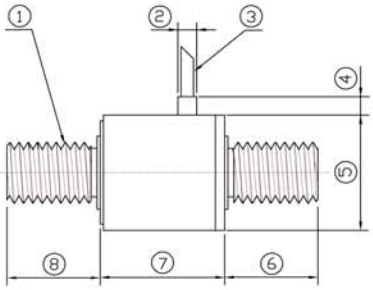


ELHM-B3 & -B4



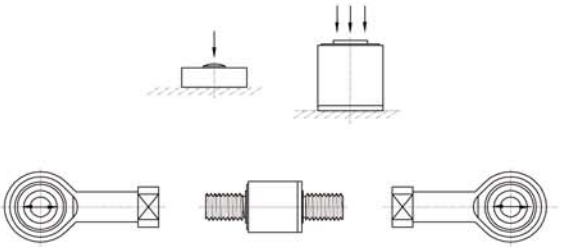
ELHM-T3 & -T4

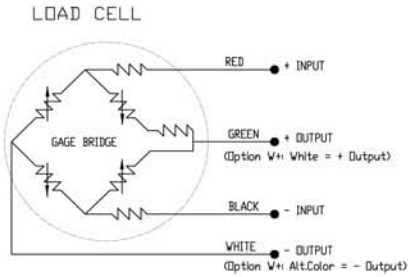
-T3E: 3/8-24 UNF
-T3M: M10 X 1.5
-T4U: 5/8-18 UNF
-T4M: M16 X 2



ITEM	ELHM-B3 2,000 Lb 10,000 N	ELHM-B4 5,000 to 10,000 Lb 25,000 to 50,000 N
①	3m (10 ft) SHIELDED CABLE	3m (10ft) SHIELDED CABLE
②	ø10 (0.39")	ø18 (0.71")
③	3 (0.12")	3 (0.12")
④	ø3 (0.12")	ø3 (0.12")
⑤	ø19 (0.75")	ø25 (0.98")
⑥	20 (0.79")	25 (0.98")
⑦	1 (0.04")	1 (0.04")

ITEM	ELHM-T3 2,000 Lb 10,000 N	ELHM-T4 5,000 to 10,000 Lb 25,000 to 50,000 N
①	-T3E: 3/8-24 UNF -T3M: M10 X 1.5	-T4U: 5/8-18 UNF -T4M: M16 X 2
②	ø3 (0.12")	ø 3(0.12")
③	3m(10 FT) SHIELDED CABLE	3m(10 FT) SHIELDED CABLE
④	3 (0.12")	3 (0.12")
⑤	ø19 (0.75")	ø25 (0.98")
⑥	15 (0.59")	25 (0.98")
⑦	20 (0.79")	25 (0.98")
⑧	15 (0.59")	25 (0.98")





ELHM Load Cell

options

Standard Compensation Range: +20 to +80ºC
Z0: -40ºC to +20ºC
Z1: -20ºC to +40ºC
Z2: 0ºC to +60ºC
Z*: Nonstandard compensation temp range

Excitation Voltage: 5 Vdc Standard
V00: Replace 00 with excitation between 1 and 10V.Sensitivity at excitations > 5V equals 10 mV FSO. (Note that input impedance increases from between 350 to 700 ohms nominal when excitations greater than 5 Vdc are specified)
V2.5: Sensitivity equals 5 mV FSO nominal
V10: Sensitivity equals 10 mV FSO nominal

Standard Cable Length = 10 ft (3 m)
L00F: Replace 00 with total cable length in feet. Specified only on units with SAE threads and lbf range
L00M: Replace 00 with total cable length in meters. Specified only on units with metric threads and N range
L6M: Units provided with 6 m total cable length. Specified only on units with metric threads and N range
L10M: Units provided with 10 m total cable length. Specified only on units with metric threads and N range

C: Microtech type male or equivalent (w/o mate)
R: RJ Telephone type male (w/o mate)
AN: Calibrate lbf range unit in Newtons
AL: Calibrate N range unit in lbf
AC: Alternate calibration: Units with studs are calibrated in Tension by default. Option AC provides compression calibration in addition to tension calibration.

SPECIAL NOTES: ELHM - T4E thread is discontinued and is replaced by T4U thread: 5/8-18 UNF
ELECTROMAGNETIC COMPATIBILITY RESIDENTIAL, COMMERCIAL AND LIGHT INDUSTRY

ordering information

	Family		Body	Thread Type		Range			Multiplier	Units		Options
Example:	ELHM	-	T4	E	-	25			K	N	-	/option1/option2/...optionX
						lbf	N	Body Style				* See above
			B2, B3, B4, T3, T4 Ref Note*	M:Metric U,E:SAE		500	2.5	B2	K: For ranges >1000	L=lbf N=Newton		
						1KL	5	B2				
						2KL	10	B3, T3				
						5KL	25	B4, T4				
						10KL	50	B4, T4				

NOTE: Metric threaded units must have Newtons range specified.
NOTE: SAE threaded units must have lbf range specified.
NOTE: Metric threaded units must have cable lengths specified in meters
NOTE: Nominal is defined as any value within the range of +50% to -30% of the stated value.
NOTE: Typical values: 50% of units is delivered with specifications greater than the typical value and 50% of units will be delivered with specifications less than the typical value stated.
*NOTE: DXXXX: Special Factory Designation for custom components. No options need to incorporated into the unit part numbers. SXXXX designation reserved for MEAS Spec European operations.

Distribuidor

Brasil e América do Sul

CONTATO

Endereço

Rua Sete de Setembro, 2671 - Centro
13560-181 - São Carlos - SP - Brasil

Telefone

+55 (16) 3371-0112

Fax

+55 (16) 3372-7800

Internet

www.metrolog.net
metrolog@metrolog.net

Metrolog Controles de Medição