

Button Load Cell Specification



Product Description

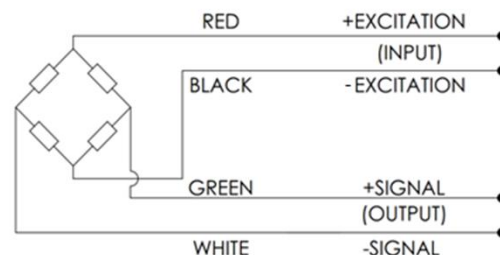
Button Load Cells are strain gauge-based transducers with temperature compensation and excellent overall performance. This type provides a range of capacities up to 200 kN or 50 klb with better than $\pm 0.5\%$ (full scale) non-linearity. Three tapped holes are provided on the underside for ease of mounting. Amplified and digitised versions are available on request.

Performance Specifications

Parameter	Range	Notes
Capacity (metric)	100, 200, 500, 1000, 2000, 5k, 10k, 15k, 20k, 50k, 100k, 150k, 200k N	With metric threads as standard
Capacity (lb)	25, 50, 100, 250, 500, 1000, 2000, 3k, 4k, 5, 7.5k, 10k, 15k, 20k, 30k, 50k lbf	With UNF threads as standard
Allowable maximum load	150% full scale	No effect on performance
Non-linearity	$\pm 0.5\%$ FS MAX	
Hysteresis	$\pm 0.3\%$ FS MAX	
Repeatability	$\pm 0.1\%$ FS MAX	
Total error	$\pm 0.8\%$ FS MAX	Non-linearity and hysteresis
Zero balance	2% FS MAX	
Zero temp coefficient	0.01% FS / °C	
Span temp coefficient	0.02% of load / °C	
Compensated temp range	-15 °C TO 70 °C	Wider range available to order
Operating temp range	-20 °C TO 80 °C	Wider range available to order
Output	2mV/V Nominal (1mV/V for 100N and 25lbf)	Amplified and digitised versions available to order.
IP Rating	IP64 – Bonded Cover	Bonded cover is standard.
Excitation	5V Recommended, 10V Max	
Bridge resistance	350-450 Ohms – (100N – 500N) & (25lbf – 100lbf) 700-900 Ohms Nom. – above 1kN & 250lbf	

Wiring

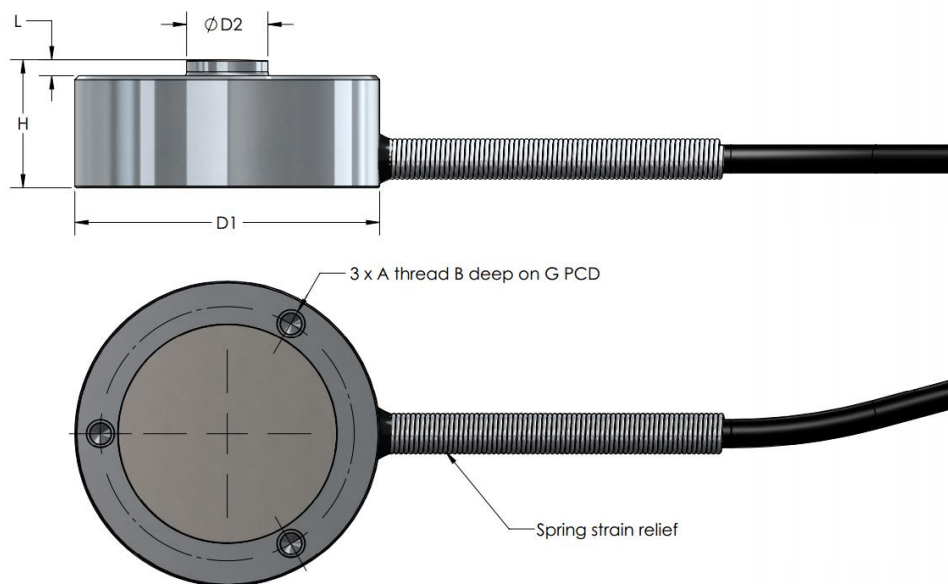
The load button is provided with 4x32 AWG (100N -500N & 25lb – 100lb), 4x28 AWG (1kN-200kN & 250lbf – 50klbf) wiring within a braided shielded cable (overall cable length 2m). Connector with integrated TEDS chip is available to order.



Button Load Cell Specification

Dimensions

Range	Capacity	D1 mm [in]	D2 mm [in]	H mm [in]	L mm [in]	A in	B mm [in]	G mm [in]
ALBM-1M	100 N 200 N 500 N	24.9 [0.98]	5,33 [0.21]	8.13 [0.32]	1,27 [0.05]	M3	5,59 [0.22]	19,05 [0.750]
ALBM-1U	25 lbf 50 lbf 100 lbf	24.9 [0.98]	5,33 [0.21]	8.13 [0.32]	1,27 [0.05]	#4-40 UNC	5,59 [0.22]	19,05 [0.750]
ALBM-2M	1 kN 2 kN 5 kN 10k N	31,75 [1.25]	8,13 [0.32]	9,91 [0.39]	1,27 [0.05]	M4	6,35 [0.25]	25,4 [1.000]
ALBM-2U	250 lbf 500 lbf 1 klb 2 klb	31,75 [1.25]	8,13 [0.32]	9,91 [0.39]	1,27 [0.05]	#6-32 UNC	6,35 [0.25]	25,4 [1.000]
ALBM-3M	15 kN 20 kN 50 kN	38,1 [1.50]	10,16 [0.40]	16,0 [0.63]	2,03 [0.08]	M4	6,35 [0.25]	31,75 [1.250]
ALBM-3U	5 klb 7.5klb 10 klb	38,1 [1.50]	10,16 [0.40]	16,0 [0.63]	2,03 [0.08]	#6-32 UNC	6,35 [0.25]	31,75 [1.250]
ALBM-4M	100 kN 150 kN	50.3 [1.98]	15.24[0.60]	25.4 [1.00]	3.05 [0.12]	M4	6,35 [0.25]	41.3 [1.625]
ALBM-4U	15 klb 20 klb 30 klb	50.3 [1.98]	15.24[0.60]	25.4 [1.00]	3.05 [0.12]	#6-32 UNC	6,35 [0.25]	41.3 [1.625]
ALBM-5M	200kN	75.70 [2.98]	19.80 [0.78]	38.10 [1.50]	4.60 [0.18]	M4	6.40 [0.25]	60.50 [2.375]
ALBM-5U	50 klb	75.70 [2.98]	19.80 [0.78]	38.10 [1.50]	4.60 [0.18]	#6-32 UNC	6.40 [0.25]	60.50 [2.375]



Capacity	Deflection (Nom) mm [in]
100N, 25lbf	0.02 [.001]
200N, 50lbf	0.04 [.002]
500N, 100lbf	0.03 [.001]
1kN, 250lbf	0.03 [.001]
2kN, 500lbf	0.03 [.001]
5kN, 1klbf	0.03 [.001]
10kN, 2klbf	0.03 [.001]
15kN	0.04 [.002]
20kN, 5klbf, 7.5klbf	0.05 [.002]
50kN, 10klbf	0.06 [.002]
100kN, 15klbf, 20klbf	0.08 [.003]
150kN, 30klbf	0.09 [.003]
200kN, 50klbf	0.10 [.004]