

# MINIATURE HIGH-CAPACITY "TOP HAT" LOAD CELL

## STANDARD AND METRIC MODELS

### Compression

**0-250 lb to 0-100,000 lb**  
**0-1 to 0-500 kN**

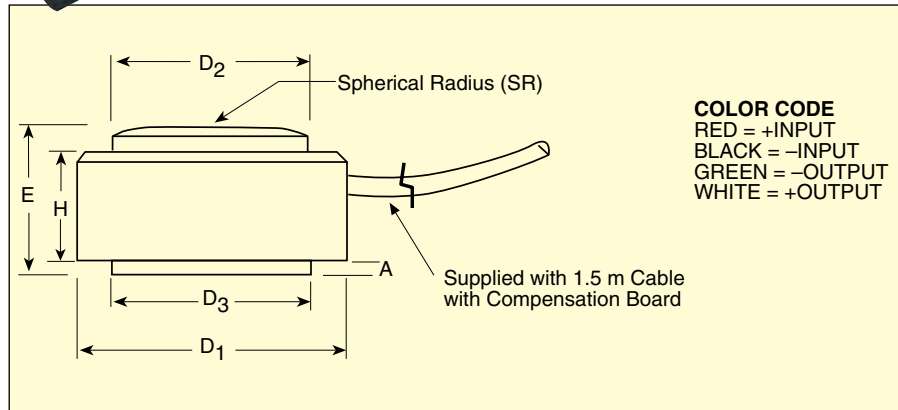
1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kg = 2204 lb



## LC307/LCM307 Series



Small in size but not in performance, Series LC307/LCM307 top hat load cells are designed for applications with minimum space and high-capacity loads up to 100,000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is done by a miniature circuit board in the load cell's cable. These cells are designed to be mounted on a smooth, flat surface.



### SPECIFICATIONS

**Excitation:** 5 Vdc

**Output:** 1.5 mV/V nominal

**Accuracy:** 0.75% FS BFSL (includes linearity, hysteresis and repeatability)

**Zero Balance:** ±2% FSO

**Operating Temp Range:**  
-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**  
16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Span:** ±0.018% rdg/°C

**Zero:** ±0.018% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Full Scale Deflection:** 0.001 to 0.003"

**Electrical Connection:**

1.5 m (5') 4-conductor cable with compensation board

**Protection Class:** IP54

### STANDARD Dimensions: mm (inch)

CAPACITY (lb)	D1	D2	D3	E	H
250	12.7 (0.50)	6.9 (0.27)	10.16 (0.40)	9.7 (0.38)	8.13 (0.320)
500	12.7 (0.50)	7.1 (0.28)	10.16 (0.40)	9.7 (0.38)	8.13 (0.320)
1000	12.7 (0.50)	7.9 (0.31)	10.16 (0.40)	9.7 (0.38)	8.13 (0.320)
2000	12.7 (0.50)	10 (0.41)	10.16 (0.40)	9.7 (0.38)	8.13 (0.320)
3000	12.7 (0.50)	11 (0.45)	10.16 (0.40)	9.7 (0.38)	8.13 (0.320)
5000	16.0 (0.63)	13.5 (0.53)	10.16 (0.40)	15 (0.60)	13.54 (0.533)
7500	22.2 (0.88)	17 (0.67)	10.16 (0.40)	16 (0.63)	13.97 (0.55)
10,000	22.2 (0.88)	19.3 (0.76)	10.16 (0.40)	16 (0.63)	13.97 (0.55)
50,000	44.5 (1.75)	31.8 (1.25)	10.16 (0.40)	35 (1.38)	31.34 (1.234)
100,000	50.8 (2.00)	38.1 (1.50)	10.16 (0.40)	41 (1.63)	37.33 (1.470)

### METRIC Dimensions: mm (inch)

CAPACITY (kN)	D1	D2	D3	E	H	A
1 to 10	12.7 (0.500)	10.16 (0.400)	7.62 (0.300)	9.53 (0.375)	8.13 (0.320)	0.254 (0.010)
20	16.00 (0.630)	13.46 (0.530)	13.54 (0.533)	15.24 (0.600)	13.54 (0.533)	0.381 (0.015)
50	22.22 (0.875)	19.30 (0.760)	13.97 (0.550)	16.00 (0.630)	13.97 (0.550)	0.381 (0.015)
200	44.45 (1.750)	31.75 (1.250)	25.40 (1.000)	35.05 (1.380)	31.34 (1.234)	0.381 (0.015)
500	50.8 (2.000)	38.10 (1.500)	30.48 (1.200)	41.40 (1.630)	37.33 (1.470)	0.762 (0.030)

## STANDARD MODELS

### To Order

CAPACITY		MODEL NO.	COMPATIBLE METERS**
lb	kN		
250	1.11	<b>LC307-250</b>	DPiS, DP41-S, DP25B-S
500	2.22	<b>LC307-500</b>	DPiS, DP41-S, DP25B-S
1000	4.45	<b>LC307-1K</b>	DPiS, DP41-S, DP25B-S
2000	8.90	<b>LC307-2K</b>	DPiS, DP41-S, DP25B-S
3000	13.3	<b>LC307-3K</b>	DPiS, DP41-S, DP25B-S
5000	22.2	<b>LC307-5K</b>	DPiS, DP41-S, DP25B-S
7500	33.4	<b>LC307-7.5K</b>	DPiS, DP41-S, DP25B-S
10,000	44.5	<b>LC307-10K</b>	DPiS, DP41-S, DP25B-S
50,000	222	<b>LC307-50K</b>	DPiS, DP41-S, DP25B-S*
100,000	445	<b>LC307-100K</b>	DPiS, DP41-S, DP25B-S*

LCM307-500,  
shown larger  
than actual size.



Comes complete with 5-point  
NIST-traceable calibration and 59 k $\Omega$  shunt data.

\* 4-digit meter.

**Ordering Examples:** **LC307-5K**,  
5000 lb capacity top hat  
load cell.

**LC307-500**, 500 lb capacity top hat  
load cell.

**LCM307-50KN**, 50 kN capacity top hat  
load cell.

**LCM307-10KN**, 10 kN capacity top hat  
load cell.

### METRIC MODELS

CAPACITY		MODEL NO.	COMPATIBLE METERS
kN	lb		
1	225	<b>LCM307-1KN</b>	DPiS, DP41-S, DP25B-S
2	450	<b>LCM307-2KN</b>	DPiS, DP41-S, DP25B-S
5	1124	<b>LCM307-5KN</b>	DPiS, DP41-S, DP25B-S
10	2248	<b>LCM307-10KN</b>	DPiS, DP41-S, DP25B-S
20	4496	<b>LCM307-20KN</b>	DPiS, DP41-S, DP25B-S
50	11,240	<b>LCM307-50KN</b>	DPiS, DP41-S, DP25B-S
200	44,960	<b>LCM307-200KN</b>	DPiS, DP41-S, DP25B-S
500	112,400	<b>LCM307-500KN</b>	DPiS, DP41-S, DP25B-S