

RLC Load Cell



Tank Weighing

The RLC load cell with capacity range from 250kg to 10t, allows the weighing of mid sized tanks, vessel and hoppers. The stainless steel design, hermetic sealing and IP68 protection provides the best reliability in tank weighing applications.



Ring Torsion Load Cells



Sanitary Application

The stainless steel housing is welded in place to create a hermetic seal to prevent moisture from entering the interior of the load cell. This prevents deterioration of performance and subsequent failures.

0970 RingMount

The optional METTLER TOLEDO 0970 RingMount weigh module adds suspension, checking and anti-tipping to your RLC load cell and includes top and bottom mounting plates to simplify installation. Available in 316 stainless steel.



SLRLC Load Cell

Every SLRLC load cell features:

- OIML C3 3000e and NTEP IIIM 5000d approvals
- Option OIML C6 6000e
- ATEX Zone 1/2 and 21/22 approved
- FM Class I,II,III Div 1 & 2 approved
- Stainless steel
- Hermetically sealed design
- IP68 protection class
- Low Profile
- Symmetrical center loading
- Built-in overload protection

Global metrology and hazardous area approvals allow use in most applications, regardless of the location.

SLRLC Load Cell Specifications

Parameter		unit of measure	Specification											
Model No.			SLRLC											
Class			C3 / III M n:5000					C6 / III L M n:10000						
Rated Capacity (R.C.)		kg (lb, nominal)	250 (551)	500 (1102)	1000 (2205)	2000 (4409)	3500 (7716)	5000 (11023)	10000 (22046)	1000 (2205)	2000 (4409)	3500 (7716)	5000 (11023)	
Rated Output		mV/V @R.C.	1.75 ± 0.1%	2 ± 0.1%					2.05 ± 0.1%	2 ± 0.1%				
Zero load Output		%R.C.	≤ 1.0					≤ 1.0						
Combined Error ^{1), 2)}		%R.C.	≤ 0.018					≤ 0.013						
Repeatability Error		%A.L. ³⁾	≤ 0.01					0.004						
Creep, 30 minute		%A.L.	≤ 0.0167					≤ 0.0083						
Min. Dead Load Output Return (DR), 30 min		%A.L.	≤ 0.0167					≤ 0.0083						
Temperature Min. Dead load Output		%R.C./°C (./°F)	≤ 0.0020 (0.0011)					≤ 0.0012 (0.0006)						
Effect on Sensitivity ²⁾		%A.L./°C (./°F)	≤ 0.0009 (0.0005)					≤ 0.0004 (0.0002)						
Temperature Range		Compensated	-10 ~ +40 (+14 ~ +104)											
		Operating	-30 ~ +70 (-22 ~ +160)											
		Safe Storage	-50 ~ +80 (-58 ~ +176)											
OIML Cert. No.			-											
European Cert. No.			D09-00.08											
OIML / European Approval ⁴⁾		Class	C3					C6						
		nmax	3000					6000						
		Y	7100					12050						
		PLC	0.7											
Humidity Symbol			none											
Min. dead load		kg (lb)	10 (22)	0 (0)										
NTEP Approval ⁴⁾		Number		00-124						00-124				
		Class		III M						III L M				
		nmax		5000						10000				
		Vmin	kg (lb)		R.C./7100 (R.C./7100)						R.C./12050 (R.C./12050)			
Min. dead load		kg (lb)		0 (0)										
Number, cat. 2			KEMA 03ATEX1372 X											
Number, cat. 3			KEMA 03ATEX1373 X											
ATEX Approval ⁴⁾		Rating	II 2 G Ex ib IIC T6...T4											
			II 2 D Ex tD A21 IP6X T70°C											
			II 3 G Ex nA II T6...T4											
			II 3 G Ex nL IIC T6...T4											
Entity Parameters			II 3 D Ex tD A22 IP6X T70°C											
Number			Ui = 25V, li = 1A, Pi = 1.3W (T6), Pi = 2.75W (T4), Ci = 0.4nF, Li = 0µH 3039904											
Factory Mutual Approval ⁴⁾		Rating	IS / I,II,III / 1 / ABCDEFG / T4											
			NI / I / 2 / ABCD / T4											
			S / II,III / 2 / EFG / T4											
Entity Parameters			Ui = 20V, li = 600mA, Pi = 1.3W, Ci = 0, Li = 0											
System Drawing No			64069516											
Excitation Voltage Recommended		V AC/DC	10											
Max.			30											
Terminal Resistance Excitation		Ω	1100 ± 50	1110 ± 50				1100 ± 50	1110 ± 50					
Output			1025 ± 50	1025 ± 25				1025 ± 50	1025 ± 25					
Insulation Resistance @50VDC		MΩ	> 5000											
Breakdown Voltage		V AC	> 500											
Material		Spring Element	stainless steel											
		Enclosure	stainless steel											
		Cable entry fitting	stainless steel											
		Cable	PVC											
Protection		Type	glass-to-metal seal											
		IP Rating	IP68											
		NEMA Rating	NEMA 6/6P											
Safe Load Limit		%R.C.	150											
Ultimate			300											
Safe Dynamic Load		%R.C.	70											
Fatigue Life		cycles @R.C.	> 1000000											
Direction of Loading			compression											
Deflection @ R.C., nominal		mm (in)	0.12 (0.005)											
Weight, nominal		kg (lb)	0.73 (1.6)	0.96 (2.2)				1.2 (2.6)	0.73 (1.6)	0.96 (2.2)				
Cable Length		m (ft)	5 (16.4)					10 (32.8)	5 (16.4)					
Barometric Pressure Effect on Zero Load Output		kg/kPa (lb/in.Hg)	none											
Safe Side Load		%R.C.	100											
Overload Protection			-											
Mounting Screw		Grade	10.9 (grade 8)											
		Size/thread	M6											
		Engaged Length	mm (in)	8 (0.31)										
		Torque, nominal	N.m (ft-lb)	13 (9.6)										

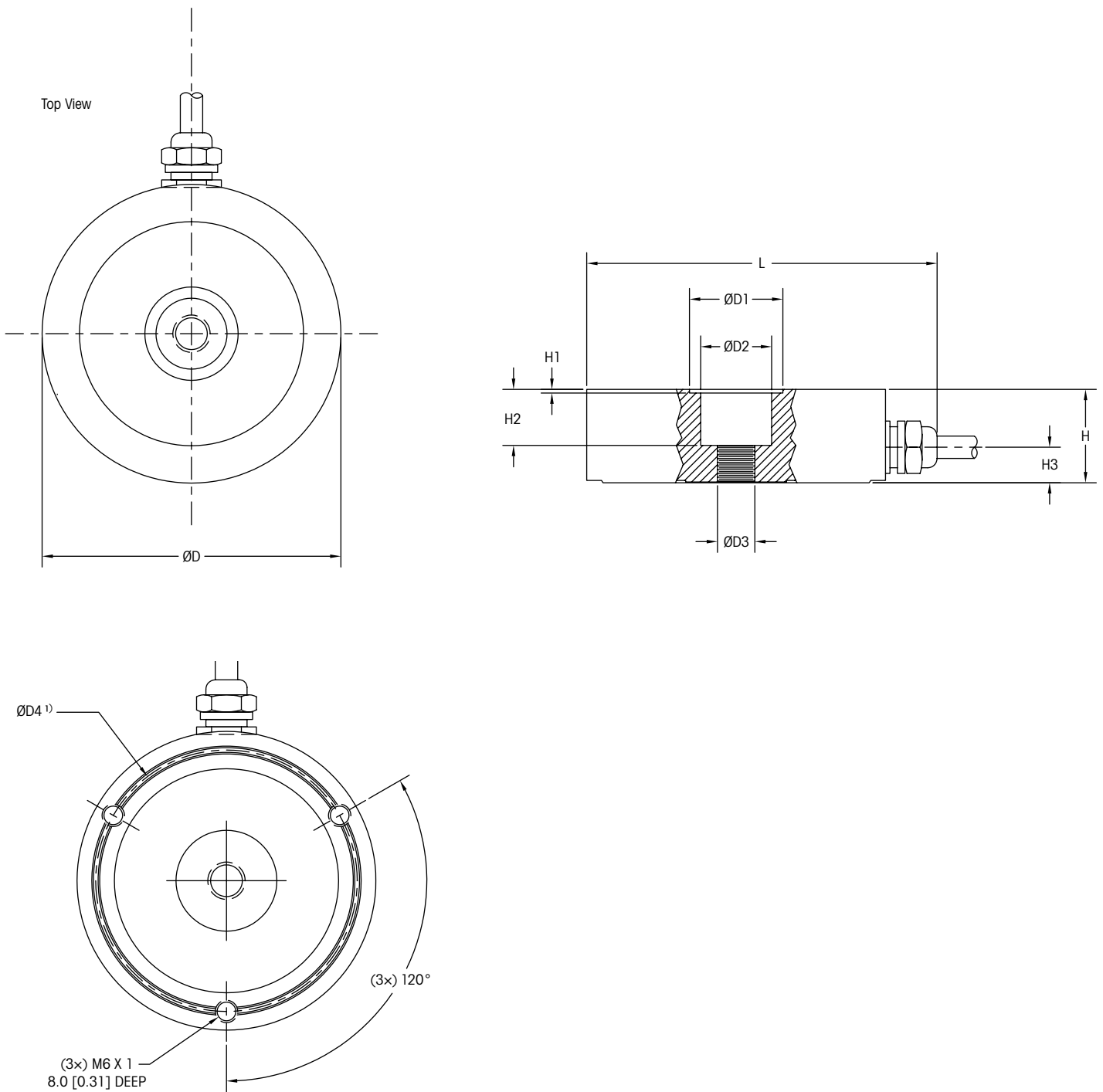
¹⁾ Error due to the combined effect of non-linearity and hysteresis

²⁾ Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44.

³⁾ A.L. = Applied Load

⁴⁾ See certificate for complete information.

RLC Load Cell Dimensions mm [inch]



Dimensions and Locations

Capacity	D	D1	D2	D3	D4 ¹⁾	H	H1	H2	H3	L
250 – 1000 kg [551 – 2205 lb]	80.0 [3.15]	25.0 [0.98]	19.0 [0.75]	M10 × 1.5	70.0 [2.76]	25.0 [0.98]	1.0 [0.04]	15.0 [0.59]	9.5 [0.37]	97.5 [3.84]
2000 – 5000 kg [4409 – 11023 lb]	80.0 [3.15]	25.0 [0.98]	19.0 [0.75]	15.0 [0.59]	70.0 [2.76]	30.0 [1.18]	6.0 [0.24]	20.0 [0.79]	8.5 [0.33]	97.5 [3.84]
10000 kg [22046 lb]	95.0 [3.74]	NA	29.1 [1.15]	24.9 [0.98]	83.0 [3.27]	35.0 [1.38]	NA	14.8 [0.58]	10.0 [0.39]	112.5 [4.43]

¹⁾ Dia. of circle through CL of M6 mounting holes.

RLC Load Cell Order Information

Description	Item No.
Load cell, model no. RLC, 250kg C3	61037713
Load cell, model no. RLC, 500kg C3	61038019
Load cell, model no. RLC, 1000kg C3	61036052
Load cell, model no. RLC, 2000kg C3	61037137
Load cell, model no. RLC, 3500kg C3	61037854
Load cell, model no. RLC, 5000kg C3	61038020
Load cell, model no. RLC, 10000kg C3	61038876
Load cell, model no. RLC, 1000kg C6	61038021
Load cell, model no. RLC, 2000kg C6	61037497
Load cell, model no. RLC, 3500kg C6	61038948
Load cell, model no. RLC, 5000kg C6	61037496

SLRLC Load Cell Cable Colors

Colour	Function
Pink	+ Excitation
Gray	- Excitation
Brown	+ Signal
White	- Signal
clear	Shield