

## Globally Approved for Accuracy and Safety



### Tank Weighing

The RLC load cell with capacity range from 250 kg 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.



### 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.



### RLC Load Cell

Every RLC 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.

# RLC Load Cell Specifications

Parameter	unit of measure	Specification											
Model No.		RLC											
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%			
Zero load Output	%R.C.							≤ 1.0		≤ 1.0			
Combined Error <sup>1), 2)</sup>	%R.C.							≤ 0.018		≤ 0.013			
Repeatability Error	%A.L. <sup>3)</sup>							≤ 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 Effect on Min. Dead Load Output Sensitivity <sup>2)</sup>	%R.C./°C (./°F)							≤ 0.0020 (0.0011)		≤ 0.0012 (0.0006)			
Temperature Range	%A.L./°C (./°F)							≤ 0.0009 (0.0005)		≤ 0.0004 (0.0002)			
Temperature Range	°C (°F)							Compensated -10 ~ +40 (+14 ~ +104)					
								Operating -30 ~ +70 (-22 ~ +160)					
								Safe Storage -50 ~ +80 (-58 ~ +176)					
OIML / European Approval <sup>4)</sup>	OIML Cert. No.	-											
	European Cert. No.	D09-00.08											
	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 <sup>4)</sup>	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)					0 (0)				
ATEX Approval <sup>4)</sup>	Number, cat. 2	KEMA 03ATEX1372 X											
	Number, cat. 3	KEMA 03ATEX1373 X											
	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 II 3 D Ex tD A22 IP6X T70°C											
	Entity Parameters	Ui = 25V, li = 1A, Pi = 1.3W (T6), Pi = 2.75W (T4), Ci = 0.4nF, Li = 0µH											
	Number	3039904											
Factory Mutual Approval <sup>4)</sup>	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										
Load Limit	Safe	%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)										

<sup>1)</sup> Error due to the combined effect of non-linearity and hysteresis

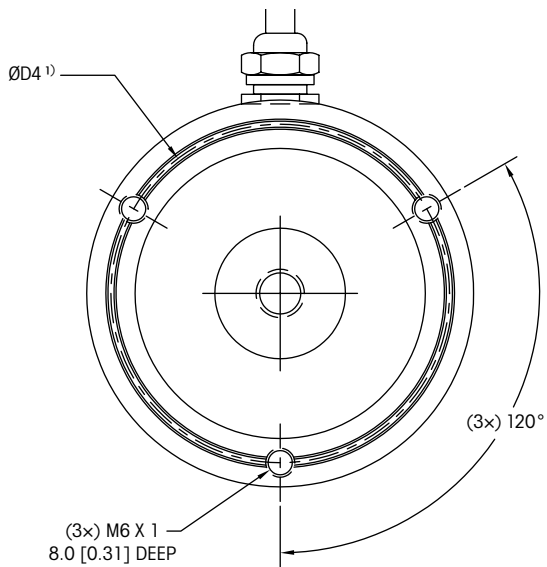
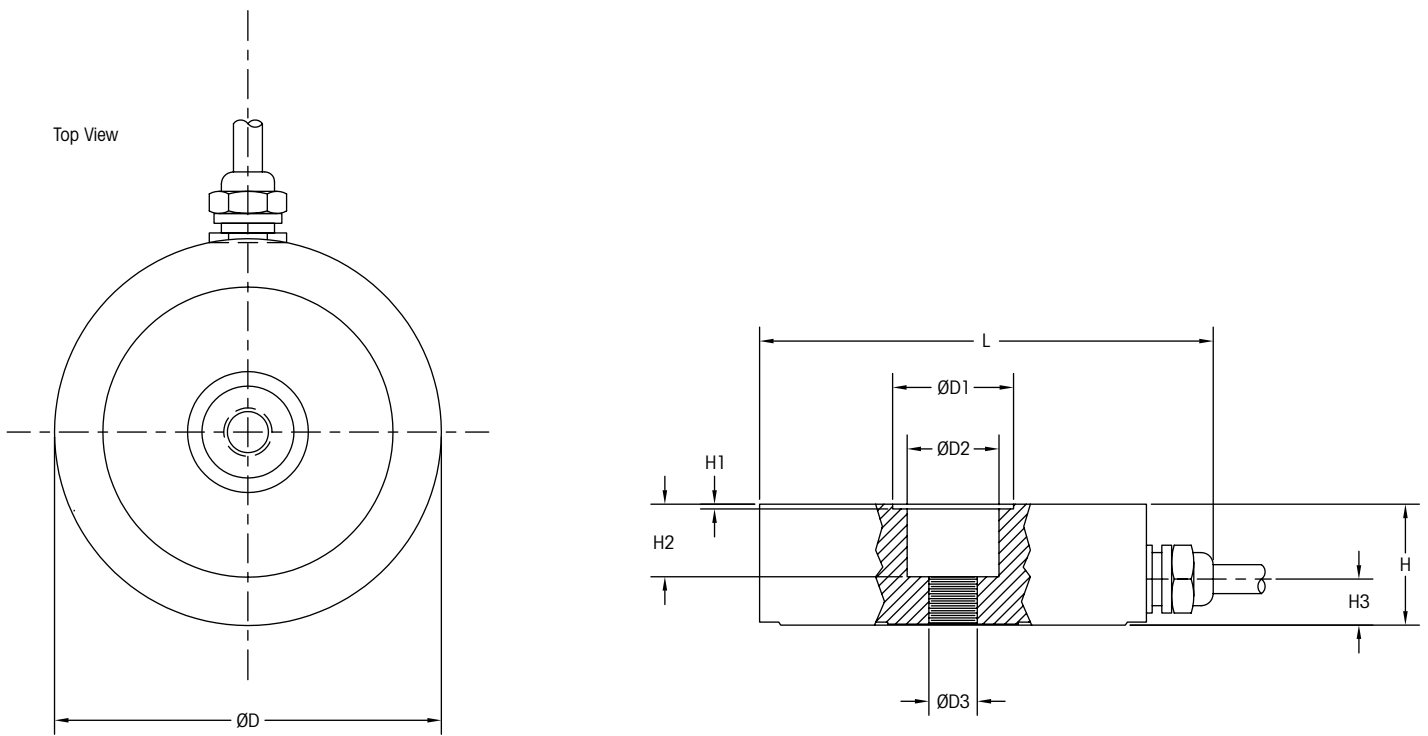
<sup>2)</sup> Typical values only. The sum of errors due to Combined Error and Temperature Effect on Sensitivity comply with the requirements of OIML R60 and NIST HB44.

<sup>3)</sup> A.L. = Applied Load

<sup>4)</sup> See certificate for complete information.



# RLC Load Cell Dimensions mm [inch]



**Dimensions and Locations**

Capacity	D	D1	D2	D3	D4 <sup>1)</sup>	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]

<sup>1)</sup> 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

## RLC Load Cell Cable Colors

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

## Global Approvals

The RLC is provided with all listed approvals. No need to think about options and additional charges. Simplifies the conduct of global business, order processing and service-part stocking.

## Full Connectivity

METTLER TOLEDO supplies various data communication interfaces that enable our sensors and instruments to communicate with your PLC, MES, or ERP systems.



## METTLER TOLEDO Service

Our extensive service network is among the best in the world and ensures maximum availability and service life of your product.

## Weighing Electronics

METTLER TOLEDO offers a complete family of electronics from simple weighing to application solutions for filling, stock control, batching, formulation, counting, and checkweighing.



Quality certificate ISO 9001  
Environment certificate ISO 14001

Subject to technical changes.  
© 07/2013 Mettler-Toledo AG  
Printed in Switzerland MTSI tbd  
MarCom Industrial

[www.mt.com](http://www.mt.com)

Visit for more information