

RLC: Ring Torsion Load Cell

0.25t → 10t



DESCRIPTION:

The RLC is a low profile, high performance stainless steel ring torsion type load cell.

The product is suitable for small and medium platform scales, hoppers and process weighing.

The fully welded construction and glass-to-metal cable-entry ensure that this product can be used successfully in harsh environments found in the food, chemical and allied process industries.

This product meets the stringent Weights and Measures requirements throughout Europe.

FEATURES:

- Low profile, stainless steel construction
- Hermetically sealed, IP66/68
- Meets OIML R-60, 6000d
- High bridge impedance
- ATEX certified versions are available for use in potentially explosive atmospheres
- Outputs are matched to ensure easy and accurate parallel connection of multiple load cells
- Multi-interval and multiple-range versions are available
- Capacities: 250kg → 10,000kg

Standard Capacities (=E _{max})	t	0.25, 0.5, 1, 2, 3.5, 5, 10		0.5 ² , 1, 2, 3.5, 5		
Accuracy Class According to OIML R-60		C2	C3	C4	C5	C6
Max. Number of Verification Intervals (n ₁₀)		2000	3000	4000	5000	6000
Minimum Verification Interval (v _{min})		E _{max} /7500	E _{max} /10000	E _{max} /10000	E _{max} /15000	E _{max} /15000
Minimum Verification Interval type MR		E _{max} /15000	E _{max} /20000	E _{max} /20000	E _{max} /25000	E _{max} /28000
Combined Error	%S	≤ ± 0.0230	≤ ± 0.0230	≤ ± 0.0173	≤ ± 0.0140	≤ ± 0.0115
Hysteresis	%S	≤ ± 0.0250	≤ ± 0.0167	≤ ± 0.0125	≤ ± 0.0100	≤ ± 0.0083
Minimum Dead Load Output Return ¹	%S	≤ ± 0.0250	≤ ± 0.0167	≤ ± 0.0125	≤ ± 0.0100	≤ ± 0.0083
Creep Error (30 Minutes) ¹	%S	≤ ± 0.0245	≤ ± 0.0245	≤ ± 0.0184	≤ ± 0.0147	≤ ± 0.0123
Creep Error (20-30 Minutes) ¹	%S	≤ ± 0.0053	≤ ± 0.0053	≤ ± 0.0039	≤ ± 0.0032	≤ ± 0.0026
Temp. Effect on Min. Dead Load Output	%S/5°C	≤ ± 0.0095	≤ ± 0.0070	≤ ± 0.0070	≤ ± 0.0045	≤ ± 0.0045
T. Effect on Min. Dead Load Output MR	%S/5°C	≤ ± 0.0045	≤ ± 0.0035	≤ ± 0.0035	≤ ± 0.0028	≤ ± 0.0025
Temperature Effect on Sensitivity	%S/5°C	≤ ± 0.0050	≤ ± 0.0050	≤ ± 0.0040	≤ ± 0.0030	≤ ± 0.0025
Minimum Dead Load	%E _{max}	0				
Maximum Safe Overload	%E _{max}	150				
Maximum Safe Sideload	%E _{max}	100				
Deflection at E _{max}	mm	0.10 ± 0.02				
Excitation Voltage	V	5...15				
Maximum Excitation Voltage	V	30				
Rated Output (=S)	mV/V	2 ± 0.1 (1.75 ± 0.1 for 0.25t, 2.05 ± 0.1 for 10t)				
Output Accuracy for multiple LC systems	%	± 0.02				
Zero Balance	%S	≤ ± 1.0 (1.5 for 0.25 and 10t)				
Input Resistance	Ω	1110 ± 50 (1100 ± 50 for 0.25 and 10t)				
Output Resistance	Ω	1025 ± 25 (1025 ± 50 for 0.25 and 10t)				
Insulation Resistance	MΩ	≥ 5000				
Compensated Temperature Range	°C	-10...+40				
Operating Temperature Range	°C	-30...+70				
Storage Temperature Range	°C	-50...+80				
Element Material (DIN)		Stainless Steel 1.4542				
Sealing (DIN 40.050 / EN 60.529)		IP66 and IP68				
Recommended Torque on Fixation Bolts	Nm	12...14				
ATEX opt. for potent. explosive atmospheres		II2G EEx ib IIC T4/T6 or II1D T70°C or II3G EEx nA II T4/T6 or II3D T70°C				

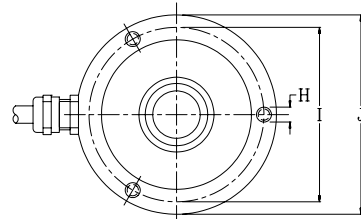
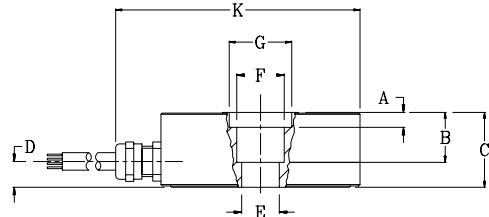
- 1 Applies for the temperature range -10 to +40 °C
2 Maximum application range for 0,5t is 0,75*E_{max}
3 Applies for the temperature range -20 to +40 °C

Accuracy classes C2, C3, C4, C5 and C6 are in agreement with the OIML recommendation R-60.

The following multi-interval versions are available:

	0.5, 1, 2, 3.5, 5, 10	
	C3MI6	C3MI7.5
Minimum Deadload Output Return (DR)	$\frac{1}{2} E_{\max}/6000$	$\frac{1}{2} E_{\max}/7500$

The correct mounting of the load cells is essential to ensure optimum performance. Performance may be affected if load cell cables are shortened. Further information is available on request.



Cable specifications:

Cable length 5m (3m for 0.25, 0.5 and 1t versions).

Excitation + Pink
Excitation - Grey
Output + Brown
Output - White

Cable screen is connected to load cell body.

All specifications subject to change without notice

Capacity(t)	0.25, 0.5, 1	2, 3.5, 5	10
A	1.0	6.0	-
B	15.0	20.0	14.8
C	25.0	30.0	35.0
D	9.5	8.5	10.0
E	M10	15 H7	Ø24.9
F	Ø19	Ø19	Ø29.1
G	Ø25	Ø25	-
H	M6 (3x120°) 8 Deep		
I	Ø70	Ø70	Ø83
J	Ø80	Ø80	Ø95
K	97.5	97.5	112.5

Attention:

Dimensions: mm.

All dimension tolerances according to ISO 2768m, unless otherwise specified.

RLC: Ring Torsion Load Cell

28t → 60t



DESCRIPTION:

The RLC is a low profile, high performance stainless steel ring torsion type load cell.

The product is suitable for high capacity platforms as well as process weighing applications.

The fully welded construction and glass-to-metal cable-entry ensure that this product can be used successfully in harsh environments found in the food, chemical and allied process industries.

This product meets the stringent Weights and Measures requirements throughout Europe.

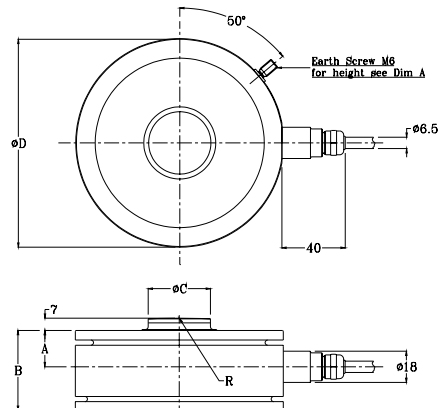
FEATURES:

- Low profile, stainless steel construction
- Hermetically sealed, IP66/68
- Meets OIML R-60, 3000d
- High bridge impedance
- ATEX certified versions are available for use in potentially explosive atmospheres
- Outputs are matched to ensure easy and accurate parallel connection of multiple load cells
- Multi-interval and multiple-range versions are available
- Capacities: 28t → 60t

Standard Capacities (=E _{max})	t	28, 60		
Accuracy Class According to OIML R-60			C2	C3
Max. Number of Verification Intervals (n _{ic})			2000	3000
Minimum Verification Interval	V _{min}		E _{max} /7500	E _{max} /10000
Minimum Verification Interval, Version MR	V _{min}		E _{max} /15000	E _{max} /15000
Accuracy According to Type Designation		CC	C2	C3
Combined Error	%S	≤ ± 0.0500	≤ ± 0.0230	≤ ± 0.0200
Non-repeatability	%S	≤ ± 0.0200	≤ ± 0.0100	≤ ± 0.0100
Hysteresis	%S		≤ ± 0.0250	≤ ± 0.0167
Minimum Dead Load Output Return ¹	%S	≤ ± 0.0500	≤ ± 0.0250	≤ ± 0.0167
Creep Error (30 Minutes) ¹	%S	≤ ± 0.0600	≤ ± 0.0245	≤ ± 0.0245
Creep Error (20-30 Minutes) ¹	%S	≤ ± 0.0200	≤ ± 0.0053	≤ ± 0.0053
Temp. Effect on Min. Dead Load Output	%S/5°C	≤ ± 0.0250	≤ ± 0.0035	≤ ± 0.0035
Temperature Effect on Sensitivity	%S/5°C	≤ ± 0.0250	≤ ± 0.0060	≤ ± 0.0040
Minimum Deadload	%E _{max}	0		
Maximum Safe Overload	%E _{max}	150		
Ultimate Overload	%E _{max}	300		
Maximum Safe Sideload	%E _{max}	50		
Deflection at E _{max}	mm	0.17...0.20		
Excitation Voltage	V	...30		
Recommended Excitation Voltage	V	15		
Rated Output (=S)	mV/V	2		
Output Accuracy for multiple LC systems	%	± 0.1		
Zero Balance	%S	≤ ± 1.0		
Input Resistance	Ω	1075 ± 100 for 28t and 1350 ± 100 for 60t		
Output Resistance	Ω	930 ± 0.5 for 28t and 1175 ± 0.5 for 60t		
Insulation Resistance	MΩ	≥ 20		
Compensated Temperature Range	°C	-10...+40		
Operating Temperature Range	°C	-30...+70		
Storage Temperature Range	°C	-50...+80		
Element Material (DIN)		Stainless Steel 1.4542		
Sealing (DIN 40.050 / EN 60.529)		IP66 and IP68		
ATEX opt. for potent. explosive atmospheres ²		II2G EEx ib IIC T4/T6 or II1D T70°C or II3G EEx nA II T4/T6 or II3D T70°C		

1 Applies for the temperature range -10 to +40 °C
2 Applies for the temperature range -20 to +40 °C

Accuracy classes C2 and C3 are in agreement with the OIML recommendation R-60.
The correct mounting of the load cells is essential to ensure optimum performance. Further information is available on request.



Cable specifications:

Cable length 10m for 28t version and 15m for 60t version.

Excitation + Pink
Excitation - Grey
Output + Brown
Output - White
Shield Transparent

Cable screen is not connected to load cell body. Performance may be affected if load cell cables are shortened.

Capacity (t)	28	60
A	21	28
B	46	62
C	35.9	47.9
D	120	140
R	400	600

Attention:

Dimensions: mm.

All dimension tolerances according to ISO 2768m, unless otherwise specified.

All specifications subject to change without notice