

Ring Torsion Load Cell

FEATURES

- Capacity range: 250 kg to 60 t
- Low profile, stainless steel construction
- Hermetically sealed, IP66 and IP68; for 250 kg, 5 t and 10 t IP69K is available
- Meets OIML R-60 and NTEP 6000d
- Outputs are matched to ensure easy and accurate parallel connection of multiple load cells
- **Optional**
 - ATEX certified versions are available for use in potentially explosive atmospheres
 - Multi-interval and multiple-range versions are available



APPLICATIONS

- Platform scales
- Belt scales
- Silo hopper 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.

DESCRIPTION

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

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

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

OUTLINE DIMENSIONS in millimeters								
CAPACITY (t)	0.25, 0.5, 1	2, 3.5, 5	10	Cable specifications		CAPACITY (t)	28	60
A	1.0	6.0	-	Cable specifications Cable length: 3 m for 0.25–1 t, 5 m for 3–10 t, 10m for 28 t, 15 m for 60 t Excitation + Pink Excitation – Grey Output + Brown Output – White Cable screen is connected to load cell body. For capacities 28 and 60 ton cable screen is not connected to body.		A	21	28
B	15.0	20.0	14.8			B	46	62
C	25.0	30.0	35.0			C	35.9	47.9
D	9.5	8.5	10.0			D	120	140
E	M10	15 H7	Ø24.9			R	400	600
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					

Ring Torsion Load Cell

SPECIFICATIONS					
PARAMETER	VALUE				UNIT
Standard capacities (E_{max})	0.25, 0.5, 1, 2, 3.5, 5, 10, 28, 60				t
Accuracy class according to OIML	NTEP IIIIL	D3	C3 ⁽³⁾	C6 ⁽²⁾	
Maximum no. of verification intervals (n _{lc})	10000		3000	6000	
Minimum verification interval			$E_{max}/10000$	$E_{max}/15000$	
Minimum verification interval type MR			$E_{max}/20000^{(1)}$	$E_{max}/28000$	
Rated output (=S)	2 (1.75 for 0.25 t, 2.05 for 10 t)				mV/V
Output accuracy for multiple LC systems	0.01				±% mV/V
Zero balance	1.0				±% FSO
Combined error	0.0200	0.0300	0.0230	0.0115	±% FSO
Creep error (30 minutes)			0.0245	0.0123	±% FSO
Temperature effect on zero	(0.0010)	(0.0010)	0.0070	0.0045	±% FSO/5°C (°F)
Temperature effect on sensitivity (output)	(0.0008)	(0.0008)	0.0050	0.0025	±% FSO/5°C (°F)
Minimum dead load	0				% E_{max}
Maximum safe overload	150				% E_{max}
Ultimate overload	300				% E_{max}
Maximum safe side load	100% up to 10 t 50% for 28 & 60 t				% E_{max}
Deflection at E_{max}	0.12–0.20				mm
Excitation voltage	5 to 15				V
Maximum excitation voltage	30				V
Input resistance	1110±50 (1100±50 for 0.25 t and 10 t) 1075±100 for 28 t 1350±100 for 60 t				Ω
Output resistance	1025±25 (1025±50 for 0.25 t and 10 t) 930±0.5 for 28 t 1175±0.5 for 60 t				Ω
Insulation resistance	≥5000 (20 for 28 and 60 t)				MΩ
Compensated temperature range	-10 to +40				°C
Operating temperature range	-30 to +70				°C
Storage temperature range	-50 to +80				°C
Element material (DIN)	Stainless steel 1.4542				
Sealing (DIN 40.050 / EN60.529)	IP66 and IP68; IP69K available for 250 kg, 5 t and 10 t				
Recommended torque on fixation bolts	12 to 14				N*m
ATEX opt. for potent. explosive atmospheres	II2G EEx ib IIC T4/T6, II2D, IIID T70 II3G nA II T4/T6				

⁽¹⁾ Capacities of 28 and 60 ton $E_{max}/15,000$ approved to OIML C3 only

⁽²⁾ 250 kg and 10 t capacities are approved to OIML C3 only. Maximum application range for 0.5 t is $0.75 \cdot E_{max}$.

⁽³⁾ The following accuracy classes are available (from 0.5 t to 10 t): C3MI6 and C3MI7.5. Minimum dead load output return is $\frac{1}{2} E_{max}/6000$ and $\frac{1}{2} E_{max}/7500$ respectively

FSO—Full Scale Output

All specifications subject to change without notice.

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