

C2A/...

Load cells

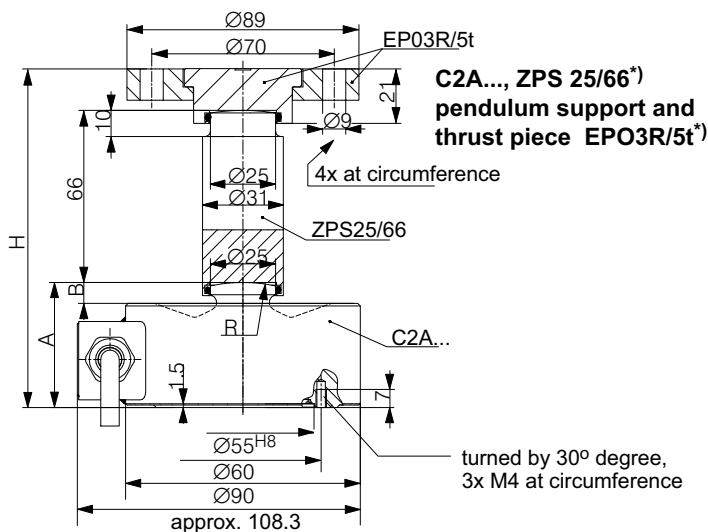
Special features

- Load cells and mounting aids made from stainless steel
- Max. capacities: 1 t ... 10 t
- Low profile
- Complies with OIML R60 regulations for up to 4000 verification intervals
- Meets EMC standards according to EN 45 501
- Ex-protection design as per ATEX, IECEx, FM and EAEU

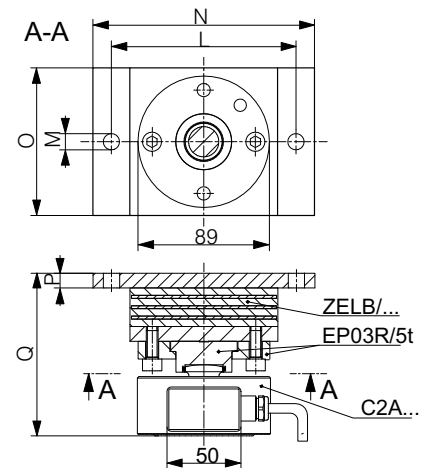
Data sheet



Dimensions (in mm; 1 mm = 0.03937 inches)



C2A... with ZELB/...*) rubber-metal bearing and EP03R/5t*) thrust piece

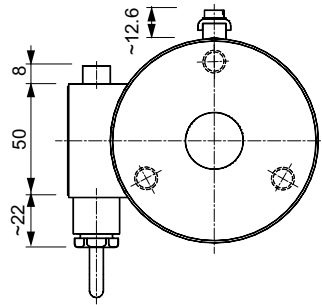
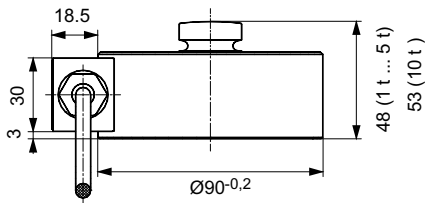


Max. cap.	A	B	R	H	S _{max} (mm)	F _R (% of load)	L	M	N	O	P	Q	S _{max} (mm)	F _R (N)
1t; 2t	48	10	30; 50	130	±5	1; 1.5	100	9	120	60	10	103	±4.5	400
5t	48	8	60	130	±5	1.7	125	11	150	100	10	110	±8	620
10t	53	8	80	135	±5	2.2	175	13	200	100	12	124	±9.5	810

S_{max}: Max. sideways displacement at max. capacity F_R: Restoring force for 1 mm sideways displacement

Dimensions C2A/... (Continuation)

The dimensions of the cable terminal box and the housing connection of the load cells with **flameproof enclosure "d"** are not identical with those of the standard load cells.



Please note, when mounting; the fixed connection lead must have a mechanical securing.

Specifications

Type		C2A/...			
Max. capacity (E_{max})		1t / 2t / 5t / 10t			
Accuracy class to OIML R60		D1	C3	C4	
Max. number of load cell intervals (n_{LC})		1000	3000	4000	
Min. load cell verification interval (v_{min})	% of E_{max}	0.0286	0.0100	0.0100	
Sensitivity (C_n)	mV/V	2			
Tolerance on sensitivity	%	<±0.1000	<±0.0500	<±0.0500	
Temperature effect on sensitivity (TK_C) ¹⁾	% of C_n / 10K	<±0.0420	<±0.0080	<±0.0070	
Temperature effect on zero signal (TK_0)	% of C_n / 10K	<±0.0400	<±0.0140	<±0.0140	
Hysteresis ¹⁾	%	<±0.0500	<±0.0180	<±0.0140	
Non-linearity (d_{lin}) ¹⁾	%	<±0.0500	<±0.0170	<±0.0120	
Creep (d_{DR}) in 30 min	%	<±0.0500	<±0.0167	<±0.0125	
Input resistance (R_{LC})	Ω		400 ... 430		
Output resistance (R_0)	Ω	356 ±1.5	356 ±0.12	356 ±0.12	
Reference excitation volt. (U_{ref})	V		5		
Nominal range of excitation voltage (B_U)	V		0.5 ... 12		
Isolation Resistance (R_{is})	GΩ		>5		
Nominal temperature range (B_T) ²⁾	°C [°F]		-10 ... +40 [+14 ... +104]		
Service temperature range (B_{tu})	°C [°F]		-30 ... +70 [-22 ... +158]		
Storage temperature range (B_{tl})	°C [°F]		-50 ... +85 [-58 ... 185]		
Safe load limit (E_L)	% of E_{max}		150		
Breaking load (E_d)	% of E_{max}		300		
Side load limit (E_{lq})	% fo E_{max}		50		
Permissible dynamic load (F_{srel}) ³⁾ (Vibration amplitude to DIN 50100)	% of E_{max}		100		
Deflection at max. capacity, (s_{nom}) (± 15%)	mm		0.15 / 0.15 / 0.17 / 0.2		
Weight (G), approx.	kg		1.7 / 1.8 / 1.8 / 1.8		
Protection class (IP) to EN 60529 (IEC529)			IP67		
Material, Measuring body Cable gland Cable sheath			stainless steel nickel plated brass, silicone thermoplast. elastomer		

¹⁾ The data for Non-linearity (d_{lin}), Hysteresis error (d_{hy}) and Temperature effect on sensitivity (TK_C) are typical values.

The sum of these data meets the requirements according to OIML R60.

²⁾ For the destination in flameproof enclosure areas the ambient temperature range $-30^{\circ}\text{C} \leq T_a \leq +65^{\circ}\text{C}$ described on the load cell has to be ensured.

³⁾ 70% with C2A../10t

Optional

Ex protection versions as per IECEx, ATEX and FM

AI1/21 IECEx+ATEX zone 1/21 + FM, intrinsically safe, II2G Ex ia IIC T6/T4 Gb / II2D Ex ia IIIC T125°C Db*

AI2/21** IECEx+ATEX zone 2/21, non-intrinsically safe, II3G Ex nA IIC T6/T4 Gc / II2D Ex tb IIIC T125°C Db*

* with EU type examination certificate (BVS13ATEX E 108 X) and IECEx Certificate of Conformity (IECEx BVS 13.0109 X)

** IECEx zone 2/21 includes the ATEX2/22 option and offers the added customer benefit of usage with conductive dust as well.

Ex protection versions per EAC (Eurasian economic union with the member states: Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan)

R1/21 EAEU zone 1/21 TR ZU 012/2011 Ex certificate, 1 Ex ia IIC T6/T4 Gb X / Ex ia IIIC T125°C Db X***

R2/21 EAEU zone 2/21 TR ZU 012/2011 Ex certificate, 2 Ex ia IIC T6/T4 Gc X / Ex tb IIIC T125°C Db X***

*** with СЕРТИФИКАТ СООТВЕТСТВИЯ № ТС RU C-DE.ГБ08.В.01138


C2A Load cells configuration

Order No.	
K-C2A	

Code	Option 1: Design
S	Standard

Code	Option 2: Accuracy
D1	D1 (OIML)
C3	C3 (OIML)
C4	C4 (OIML)

Code	Option 3: Capacity
1	1 t
2	2 t
5	5 t
10	10 t

Code	Option 4: Ex protection
N	Non ATEX
AI1/21	IECEX-ATEX zone 1/21 and FM 
AI2/21	IECEX-ATEX zone 2/21
R1/21	EAEU zone 1/21
R2/21	EAEU zone 2/21

Code	Option 5: Cable length
S6	6 m (Standard) [only with Option 3 = 1 / 2 / 5]
S12	12 m (Standard) [only with Option 3 = 10]
12	12 m [only with Option 3 = 1 / 2 / 5]
20	20 m

Code	Option 6: Miscellaneous
N	Without

K-C2A - S - - - - -

Not all codes can be combined with each other. Please take heed of the terms in the square brackets!

Subject to modifications.
All product descriptions are for general information
only. They are not to be understood as a guarantee
of quality or durability.

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