

Z7A

Load cells

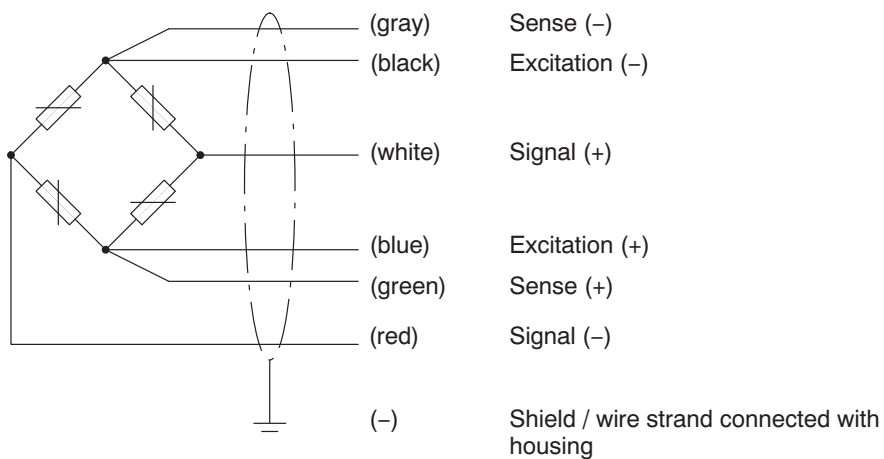
Special features

- Complies with OIML R60 regulations up to 1000 d
- Max. capacities: 500 kg ... 10 t
- Fulfills EMC requirements in accordance to EN 45 501
- Low transducer height
- Robust design

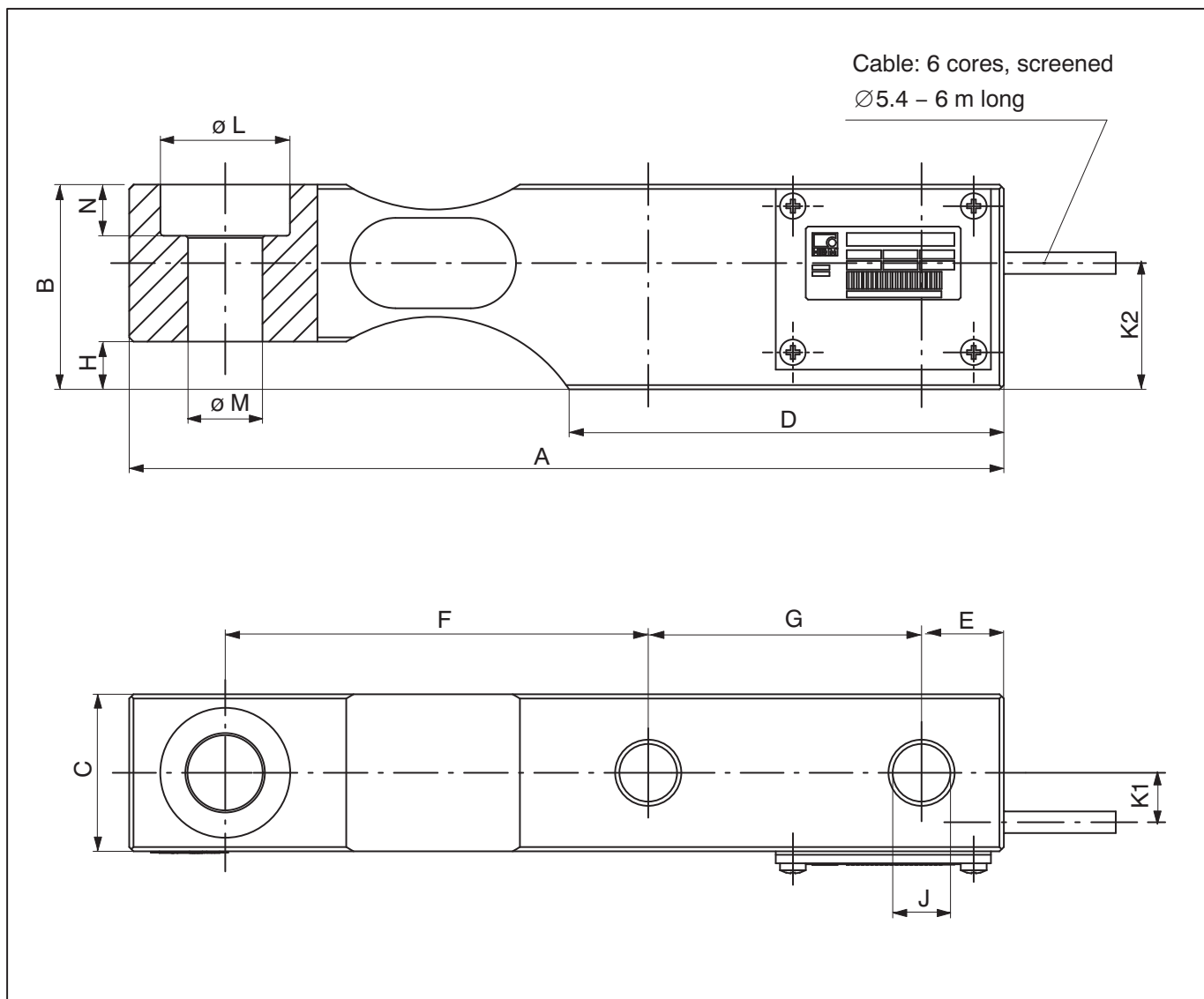


Wiring code

6-wire circuit



Dimensions Z7A (in mm, 1mm = 0.03937inches)



Nominal load in t	L+0.2	M ^{H11}	J	B	H	N	A	D	F	G	E	C	K1	K2	M* in N·m
0.5 and 1	30.2	17.5	13.4	47.6	11.1	11.9	203.2	101	98.3	63.5	19.1	36.5	10.6	29	135
2	30.2	17.5	13.4	47.6	11.1	11.9	203.2	102	98.3	63.5	19.1	36.5	10.6	29	135
5	41.3	25.5	22.5	70	22.2	15.9	235	118	123.7	66.5	20.6	47.6	16	46	660
10	51	32	27	82.6	19.1	20.7	279.4	140	139.7	82.6	25.4	60.3	21	51	1150

* Tightening torque with screws of property class 10.9 (with $\mu=0.16$).

Accessories, to be ordered separately:

- rubber-metal bearing ZEL
- Pendulum bearing ZPL

Specifications

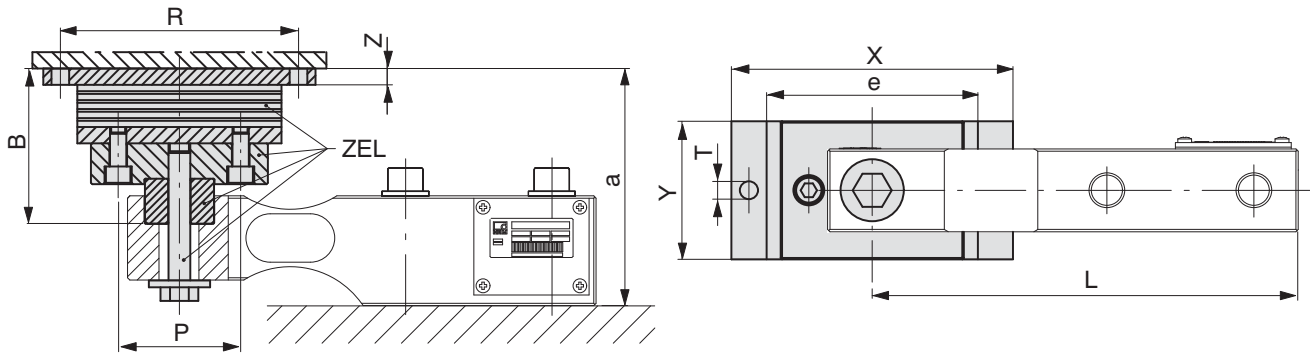
Type		Z7A				
Accuracy class according to OIML R 60		D1		C3		
Max. number of load cell verification intervals (n_{LC})		1 000		3 000		
Max. capacity (E_{max})	t	0.5; 1; 2; 5; 10		2; 5; 10		
Min. load cell verification interval (v_{min})	% of E_{max}	0.0357		0.0100		
Sensitivity (C_n)	mV/V	2				
Sensitivity tolerance	%	< ±0.1000		< ±0.0500		
Temperature effect on sensitivity (TK_C) ¹⁾	% of $C_n/10$ K	< ±0.0350		< ±0.0117		
Temperature effect on zero signal (TK_0)	% of $C_n/10$ K	< ±0.0500		< ±0.0140		
Hysteresis error (d_{hy}) ¹⁾	% of C_n	< ±0.0500		< ±0.0170		
Non-linearity (d_{lin}) ¹⁾	% of C_n	< ±0.1000		< ±0.0333		
Creep (d_{cr}) in 30 min.	% of C_n	< ±0.0735		< ±0.0167		
Input resistance (R_{LC}) at reference temperature	Ω	> 350				
Output resistance (R_O) at reference temperature	Ω	356 ± 0.2		356 ± 0.12		
Nominal rang of excitation voltage (U_{ref})	V	0.5...12				
Maximum excitation voltage (B_U)	V	18				
Reference temperature	°C [°F]	+23 [+73.4]				
Nominal temperature range (B_T)	°C [°F]	-10...+40 [+14...+104]				
Operating temperature range (B_{tu})	°C [°F]	-30...+70 [-22...+158]				
Storage temperature range (B_{tl})	°C [°F]	-50...+85 [-58...+185]				
Save load limit (E_L)	% of E_{max}	150				
Breaking load (E_d)	% of E_{max}	300				
Max. capacity (E_{max})	t	0.5	1	2	5	10
Relative static lateral force limit (E_{lq}) ²⁾	% of E_{max}	100	50	25 (100) ²⁾	15 (100) ²⁾	18 (100) ²⁾
Permissible dynamic load (F_{srel}) (vibration amplitude according to DIN 50100)	% of E_{max}	70				
Nominal displacement (s_{nom}), approx.	mm	0.25	0.30	0.35	0.45	0.70
Weight (G), approx.	kg	2.3	2.3	2.3	5	8
Degree of protection according to EN60529 (IEC529)		IP 67				
Material		Steel, galvanized Stainless steel / Viton® PVC				

¹⁾ The values stated for the non-linearity, the hysteresis and the temperature coefficient of sensitivity are standard values. The sum of these values is within the accumulated error limit according to OIML R60.

²⁾ The values given in parentheses refer to installation with stops preventing the transducer base from moving. In this case, major error effects have to be anticipated.

Mounting aids (Dimensions in mm; 1mm = 0.03937 inches)

Rubber-metal bearing ZEL

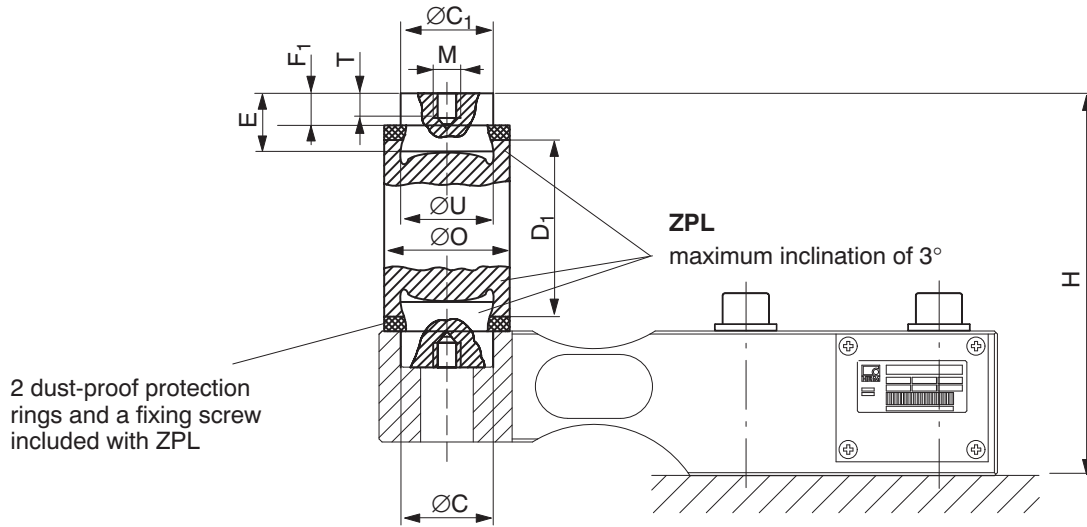


Max. capacity in t	Rubber-metal bearing ZEL	B	L	P	R	T	X	Y	Z	a	e	F _R * (N)	s _{max} ** (mm)
0.5...2	Z17/2t/ZEL	76.3	180.9	70	100	9	120	60	10	112 ^{+1,5} _{-1,7}	80	400	4.5
5	Z17/5t/ZEL	93	210.8	70	125	11	150	100	10	147 ^{+1,2} _{-2,0}	100	620	8
10	HLCB/10t/ZEL	114.1	247.7	90	175	13	200	100	12	176 ^{+1,8} _{-2,0}	130	810	9.5

* F_R =restoring force for s=1mm.

** s_{max} =max. lateral displacement of load introduction with max. capacity.

Pendulum bearing ZPL



Max. capacity in t	Pendulum bearing ZPL	C ^{+0.2}	C ₁ ^{-0.1}	D ₁	E	F ₁	H	M	O	T	U ^{D10 h9}	F _R * (% of load)	s _{max} ** (mm)
0.5...2	Z17/2t/ZPL	30.2	30	60	22	14	130±0.5	M10	42	8	30	2	7.5
5	Z17/5t/ZPL	41.3	41.1	73	26	16	169±0.5	M10	48	8	30	1.5	6.9
10	Z17/10t/ZPL	51	50.8	82	32	21	196±0.5	M12	58	10	40	1.8	9.3

* F_R =restoring force for s=1mm.

** s_{max} =max. lateral displacement of load introduction with nominal load.

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