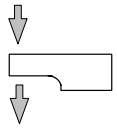
Z7...

Load cell



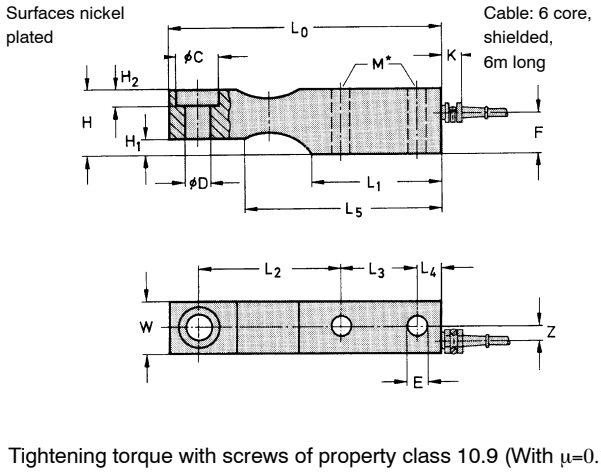
Max. capacities:
500kg...10t

Special features

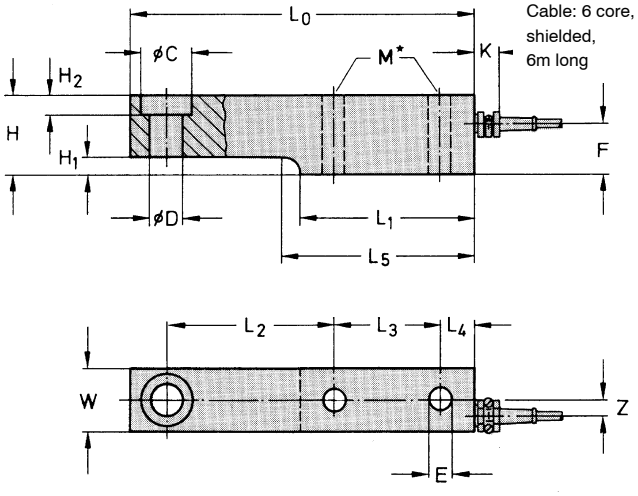
- **Complies with OIML R60 regulations up to 3 000d for scales class III**
- **Fulfills EMC requirements in accordance to EN 45 501**
- **Low transducer height**
- **Robust design**
- **6-wire circuit**
- **Protection to IP67**
- **Available Option: Explosion proof version EEx ib IIC T4**

Dimensions (in mm; 1mm = 0.03937 inches)

Z7 / 0.5t and 1t



Z7 / 2t...10t



[1] Tightening torque with screws of property class 10.9 (With μ=0.16)

Max. capacity in t	$C^{+0,2}$	D^{H1} 1	E	F	H	H_1	H_2	K_{max}	L_0	L_1	L_2	L_3	L_4	L_5	W	Z	M^1 in Nm
0,5 and 1	30.2	17.5	13.4	29	47.6	11.1	11.9	13	203.2	101	98.3	63.5	19.1	150	36.5	10.6	135
2	30.2	17.5	13.4	29	47.6	11.1	11.9	13	203.2	102	98.3	63.5	19.1	124	36.5	10.6	135
5	41.3	25.5	22.5	46	70	22.2	15.9	13	235	118	123.7	66.5	20.6	138	47.6	16	660
10	51	32	27	51	82.6	19.1	20.7	13	279.4	140	139.7	82.6	25.4	162	60.3	21	1150

Technical data

Type		Z7A		
Accuracy class according to OIML R 60 **Max. numbers of load cell verif. intervalls (n_{LC})**		**D1** **1000**	**C2** **2000**	**C3** **3000**
Max. capacity (E_{max})	t	0.5; 1; 2; 5; 10	2; 5; 10	
Min. load cell verification interval (v_{min})	% of rated capacity	0.0357	0.0100	
Sensitivity (C_N)	mV/V	2		
Tolerance on sensitivity	%	< ±0.1000	< ± 0.0500	
Temperature effect on sensitivity (TK_C) 1)	%/10K	< ± 0.0350	< ± 0.0117	
Temperature effect on zero balance (TK_0)	%/10K	< ± 0.0500	< ± 0.0140	
Hysteresis error (d_{hy})1)	%	< ± 0.0500	< ± 0.0250	< ± 0.0170
Non-linearity (d_{lin})1)	%	< ± 0.1000	< ± 0.0500	< ± 0.0333
Creep (d_{Dr}) in 30 min.	%	< ± 0.0735	< ± 0.0245	< ± 0.0167
Input resistance (R_{LC})	Ω	350 ± 2		
Output resistance (R_0)	Ω	356 ± 0.2	356 ± 0.12	
Reference excitation voltage (U_{ref})	V	5		
Nominal range of excitation voltage (Bu)	V	0,5...12		
Insulation resistance (R_{is})	GΩ	>5		
Nominal temperature range (B_T)	°C[°F]	-10...+40 [+15...+105]		
Service temperature range (B_{tu})	°C[°F]	-30...+70[-20...+160]		
Storage temperature range (B_{tl})	°C[°F]	-50...+85[-60...+185]		
Service load	% of rated capacity	130		
Save load limit (E_L)	% of rated capacity	150		
Breaking load (E_d)	% of rated capacity	300		

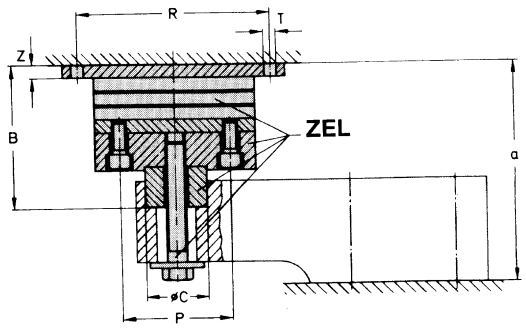
Max. capacity	t	0.5	1	2	5	10
Relative static lateral force limit2)	% of rated capacity	100	50	25 (100)	15 (100)	18 (100)
Permissible dynamic loading (F_{srel}) (vibration amplitude according to DIN 50100)	% of rated capacity	70				
Rated deflection (s_{nom}), approx.	mm	0.25	0.30	0.35	0.45	0.70
Weight (G), approx.	kg	2,3			5	8
Protection class (IP) accord. EN 60529 (IEC529)		IP 67				
Material Measuring body Cable gland Cable		Steel, galvanized Nickel plated brass, Sealing: Silicone Silicone				
Option		Explosion proof version (EEx ib IIC T4)				

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.

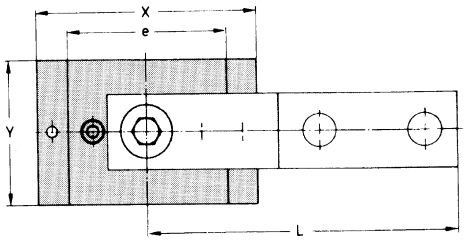
2) The values given in parentheses refer to installation with stops preventing the transducer base from moving.

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

Elastomer bearing ZEL



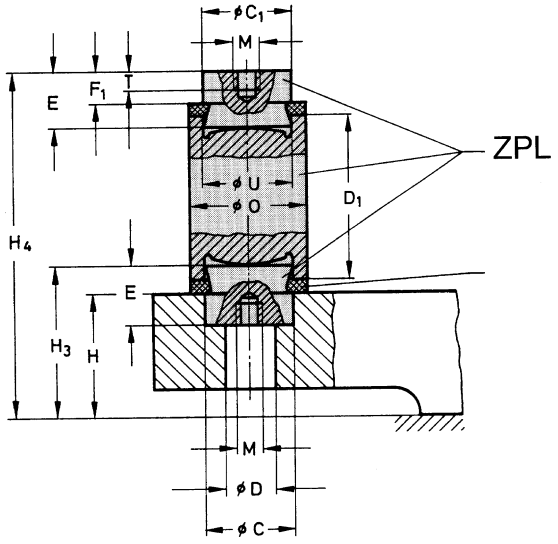
View from above



Max. capac.	Elastomer-bearing ZEL	B	C_1 -0,	L	P	R	T	X	Y	Z	a	e	F_R* [N]	s_{max} ** [mm]
0,5...2	Z17/2t/ZEL	76.3	30	180.9	70	100	9	120	60	10	$112^{+1.5}_{-1.7}$	80	400	4,5
5	Z17/5t/ZEL	93	41.1	210.8	70	125	11	150	100	10	$147^{+1.2}_{-2.0}$	100	620	8
10	Z17/10t/ZEL	114.1	50.9	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 rated capacity

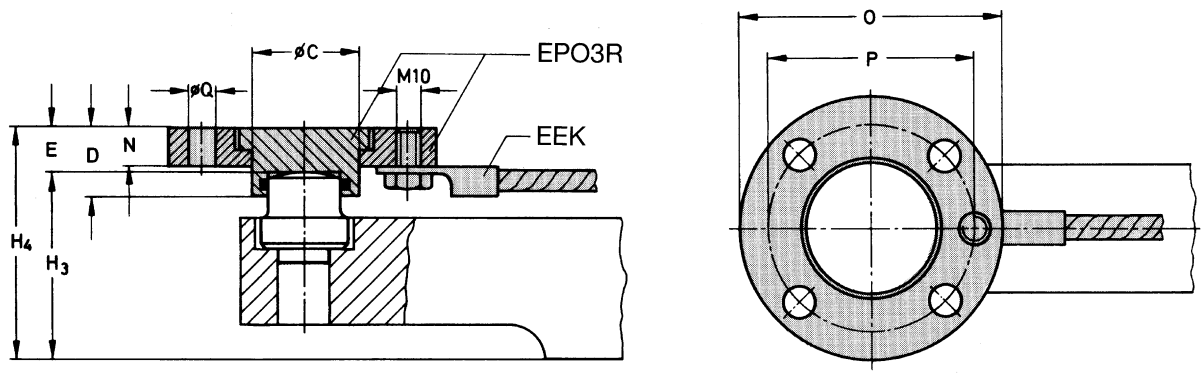
Pendle bearing ZPL



Max. capac. in t	Pendel bearing ZPL	$C^{+0.2}$	C_1 -0. 1	D^{H11}	D_1	E	F_1	H_3	H_4	M	O	T	U D10 h9	F_R* [% of load]	s_{max} ** [mm]
0,5...2	Z17/2t/ZPL	30.2	30	17.5	60	22	14	58.5	130 ± 0.5	M10	42	8	30	2	7.5
5	Z17/5t/ZPL	41.3	41.1	25.5	73	26	16	80	169 ± 0.5	M10	48	8	30	1.5	6.9
10	Z17/10t/ZPL	51	50.8	32	82	32	21	94	196 ± 0.5	M12	58	10	40	1.8	9.3

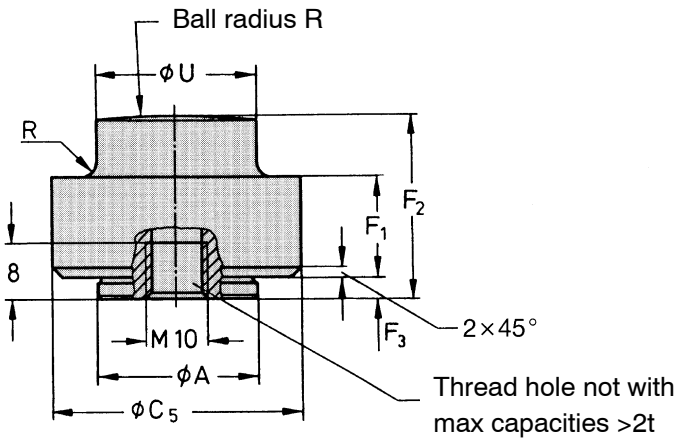
* F_R = restoring force for s=1mm; **S_{max} = max. lateral displacement of load introduction with rated capacity

Pendle bearing support (upper part) EPO3R

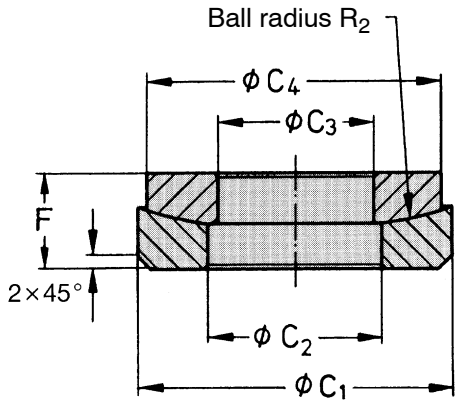


Max. capac. in t	Pendle bearing support (upper part) EPO3R	$C^{+0.1}$	D	E	H_3	H_4	N	O	P	Q
0.5...2	EPO3R/5t	37.8	21	16	58.7	74.7	12	89	70	9
5	EPO3R/5t	37.8	21	16	81.1	97.1	12	89	70	9
10	EPO3R/20t	47.8	28	20	95.9	115.9	14	114	90	13

Load button ZL



Spherical cap ZK



Max. capac. load in t	Load button ZL	Spherical cap ZK	A	C_1 -0.1	C_2	C_3	C_4	C_5	F	F_1	F_2	F_3	R	R_1	R_2	U
0.5...2	Z17/2t/ZL	Z17/2t/ZK	17.5	30	15	13	28	29	10	12	27.5	4.5	3	60	38	$25^{-0.05}_{-0.1}$
5	Z17/5t/ZL	Z17/5t/ZK	25.5	41.1	23	21	39	40	12.3	16	31.5	4.5	3	60	57	$25^{-0.05}_{-0.1}$
10	Z17/10t/ZL	Z17/10t/ZK	32	50.8	28	25	47	50	15	21	39.5	5.5	3	160	70	$32^{-0.05}_{-0.1}$

Scope of supply: Z7... Load cell, mounting instructions

Accessories (not included in scope of supply)**:** Elastomer bearing ZEL, Pendle bearing ZPL, Pendle support (Upper part) EPO3R, Load button ZL and Spherical cap ZK.

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