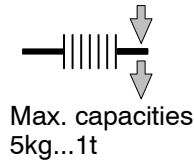


# Z6...

## Load cell

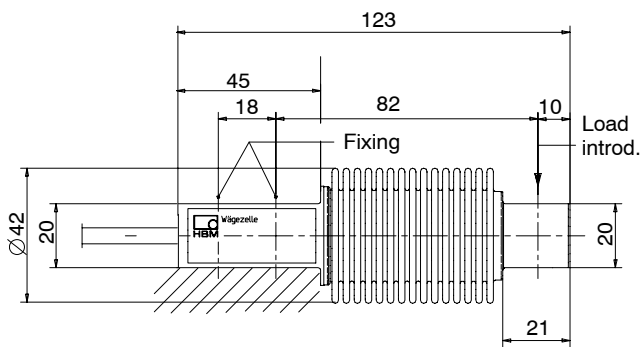


### Special features

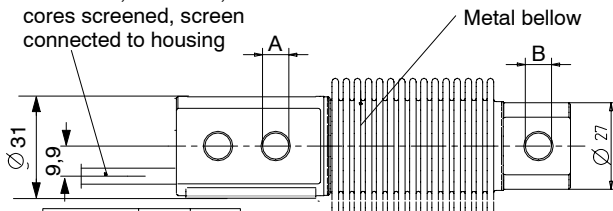
- Welded on metal bellow
- Load cells and mounting aids entirely made from stainless material
- Complies with OIML R60 regulations up to 6000d
- Six-wire circuit
- Optimized for parallel connection with corner-pre-adjustment
- Meets today EMC/ESD requirements according to EN 45501
- Available option: Explosion proof version EEx ib IIC T4

### Dimension (in mm; 1mm = 0,03937 inches)

Z6; Max. capacities 5kg...500kg

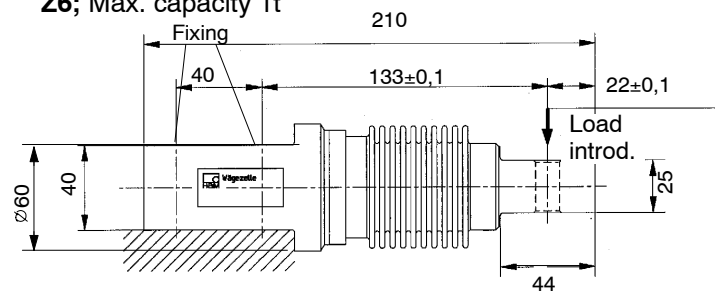


Cable: 3m,  $\varnothing$  5.4mm, 6 cores screened, screen connected to housing

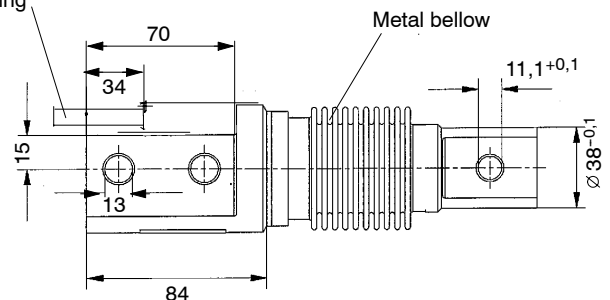


	A	B
5...200kg	8.2	8.2
500kg	10.5	11.1

Z6; Max. capacity 1t



Cable: 3m,  $\varnothing$  5.4mm, 6 cores, screened, screen connected to housing

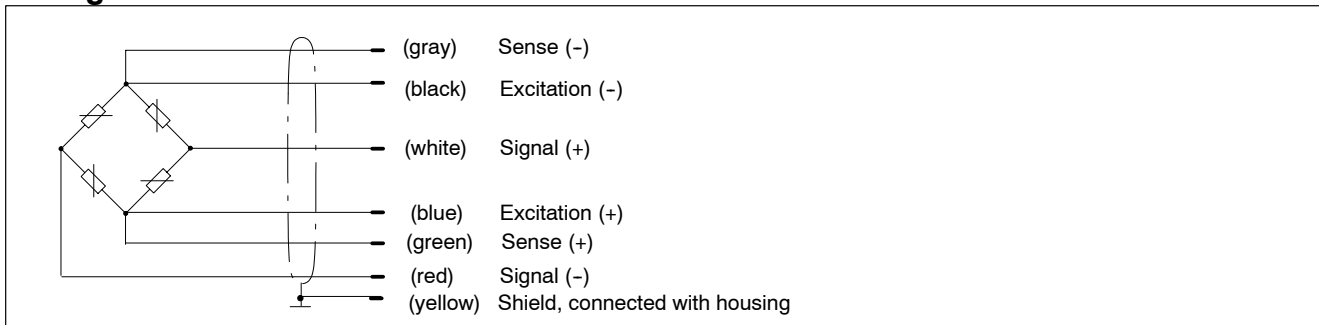


## Technical data

Type		Z6FD1	Z6FC3	Z6FC4	Z6FC6				
<b>Accuracy class according to OIML R 60</b>		<b>D1</b>	<b>C3</b>	<b>C4</b>	<b>C6</b>				
<b>Maximal numbers of load cell verif. intervals (n<sub>LC</sub>)</b>		<b>1000</b>	<b>3000</b>	<b>4000</b>	<b>6000</b>				
<b>Max. capacity (E<sub>max</sub>)</b>	kg	5; 10; 20; 50; 100; 200;	10; 20; 50; 100; 200;	20; 50; 100; 200;	50; 100; 200;				
	t	500 1	500 1	500					
<b>Minimum load cell verification interval (v<sub>min</sub>)</b>	% of C <sub>n</sub>	0.0360	0.0090	0.0066					
<b>Sensitivity (C<sub>n</sub>)</b>	mV/V	2							
<b>Tolerance on sensitivity</b>	%	< +1; - 0.1	< ± 0.05						
<b>Temperature effect on sensitivity (TK<sub>C</sub>)<sup>1)</sup></b>	% of C <sub>n</sub> /10K	< ± 0.0500	< ± 0.0080	< ± 0.0070	< ± 0.0040				
<b>Temperature effect on zero balance (TK<sub>0</sub>)</b>	% of C <sub>n</sub> /10K	< ± 0.0500	< ± 0.0125	< ± 0.0093	< ± 0.0093				
<b>Hysteresis error (d<sub>hy</sub>)<sup>1)</sup></b>	%	< ± 0.0500	< ± 0.0170	< ± 0.0130	< ± 0.0080				
<b>(d<sub>lin</sub>)<sup>1)</sup></b>	%	< ± 0.0500	< ± 0.0180	< ± 0.0150	< ± 0.0110				
<b>Creep (d<sub>DR</sub>) in 30 min.</b>	%	< ± 0.0490	< ± 0.0166	< ± 0.0125	< ± 0.0083				
<b>Input resistance (R<sub>LC</sub>) (black-blue)</b>	Ω	350 - 480							
<b>Output resistance (R<sub>0</sub>) (red-white)</b>	Ω	356 ± 0.2	356 ± 0.12						
<b>Reference excitation voltage (U<sub>ref</sub>)</b>	V	5							
<b>Nominal range of excitation voltage (B<sub>U</sub>)</b>	V	0.5...12							
<b>Insulation resistance (R<sub>is</sub>)</b>	GΩ	>5							
<b>Nominal temperature range (B<sub>T</sub>)</b>	°C [°F]	-10...+40 [15...+105]							
<b>Service temperature range (B<sub>tu</sub>)</b>	°C [°F]	-30...+70 [-20...+160]							
<b>Storage temperature range (B<sub>tl</sub>)</b>	°C [°F]	-50...+85 [-60...+185]							
<b>Safe load limit (E<sub>L</sub>)</b>	% of E <sub>max</sub>	150							
<b>Breaking load (E<sub>d</sub>)</b>	% of E <sub>max</sub>	300							
<b>Max. capacity</b>	kg	5	10	20	50	100	200	500	1000
<b>Permissible dynamic load (F<sub>sre</sub>)</b> (vibration amplitude according to DIN 50100)	% of E <sub>max</sub>	100	100	100	100	100	100	70	100
<b>Deflection at max. load, (s<sub>nom</sub>) approx. (±15%)</b>	mm	0.24	0.3	0.29	0.27	0.31	0.39	0.6	0.55
<b>Weight (G), approx.</b>	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.3
<b>Protection class (IP) acc. to EN60529 (IEC529)</b>		IP 67 (more rigorous test conditions: 100hat 1m Water column)							
<b>Material</b> Measuring body Metal below Cable entrance Cable sheath		stainless steel stainless steel stainless steel / Neoprene PVC							
<b>Optionally</b>		Explosion proof version (EEx ib IIC T4) PTB-no. EX-90.C.2094							

<sup>1)</sup> The data for deviation of linearity, hysteresis and temperature effect on sensitivity are typical values. The sum of these data meets the requirements according to OIML R60.

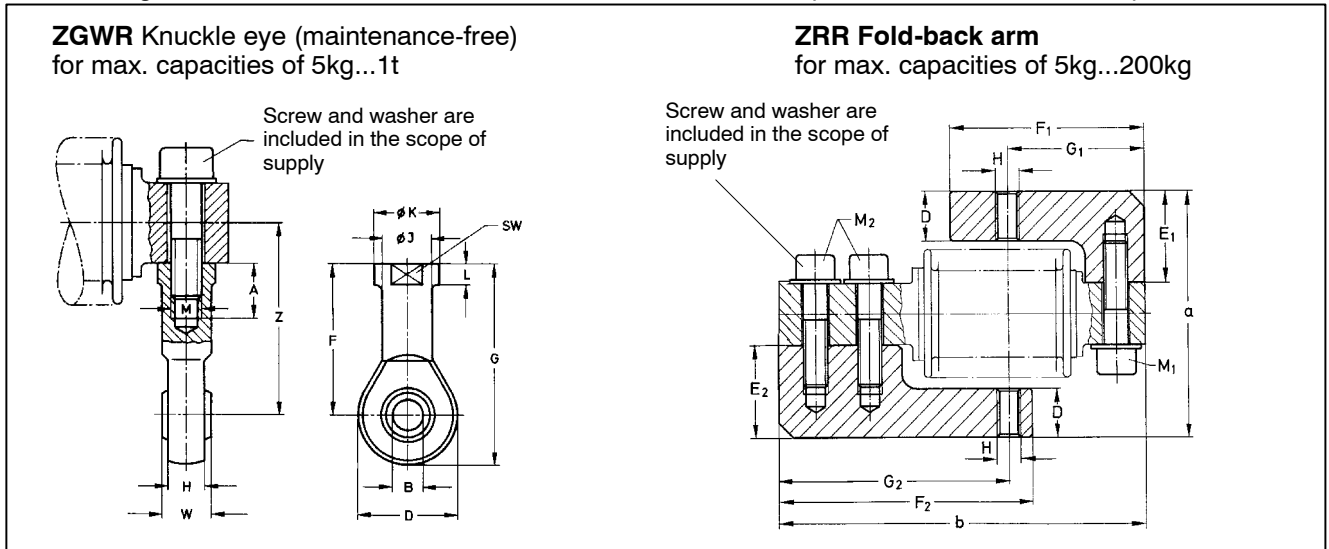
## Wiring code



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

### Note:

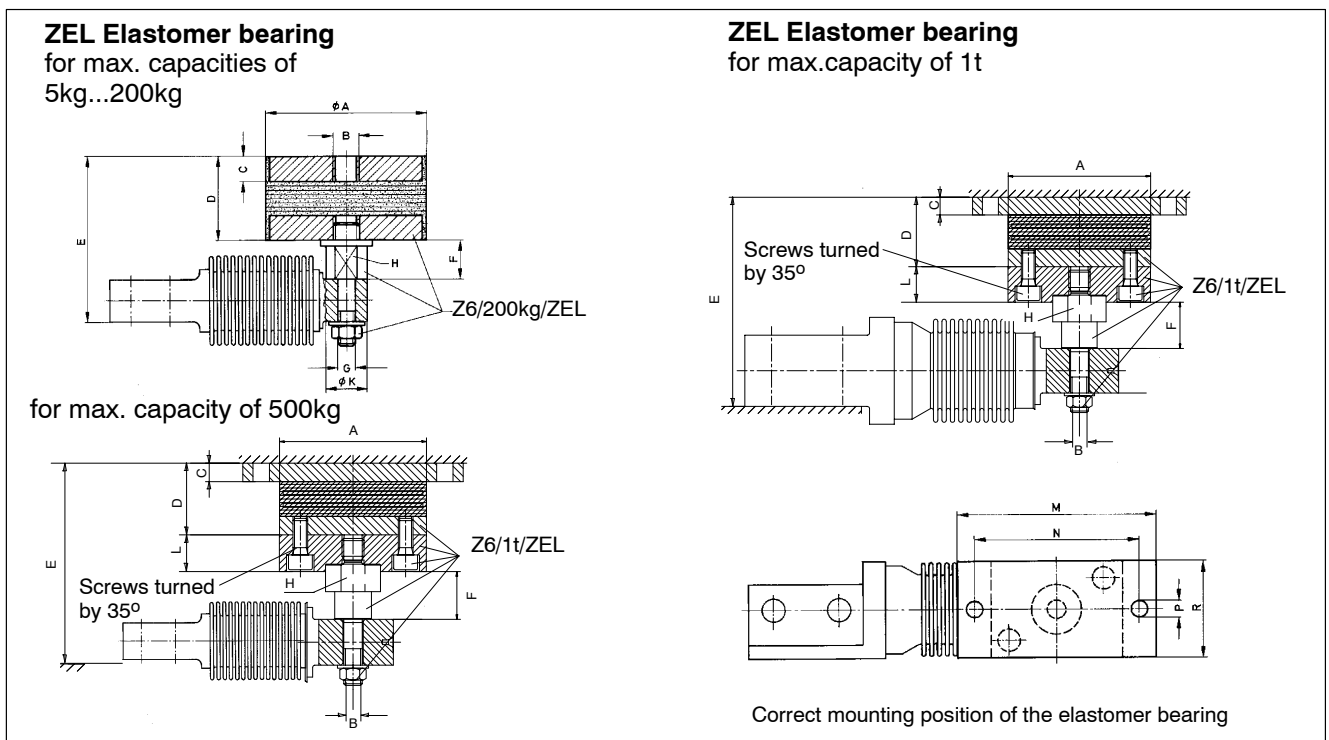
All mounting aids are made from stainless material. The ZEL rubber parts are made from chloroprene caoutchouc.



Max. capacity	ZGWR Knuckle eye	A	B	D	F	G	H	J	K	L	M	SW	W	Z
5kg...200kg	Z6/200kg/ZGWR	16	8 <sup>H7</sup>	24	36	48	9	12.5	16	5	M8	14	12	46
500kg/1t	Z6/1t/ZGWR	20	10 <sup>H7</sup>	28	43	57	10.5	15	19	6,5	M10	17	14	53/55,5

Max. capacity	ZRR Fold-back arm	D	E <sub>1</sub>	E <sub>2</sub>	F <sub>1</sub>	F <sub>2</sub>	G <sub>1</sub>	G <sub>2</sub>	H	M <sub>1</sub>	M <sub>2</sub>	a	b	Width
5kg...200kg	Z6/200kg/ZRR	16	30	30	65	85	46	77	M8	M8x30	M8x30	80±1.1	123	15



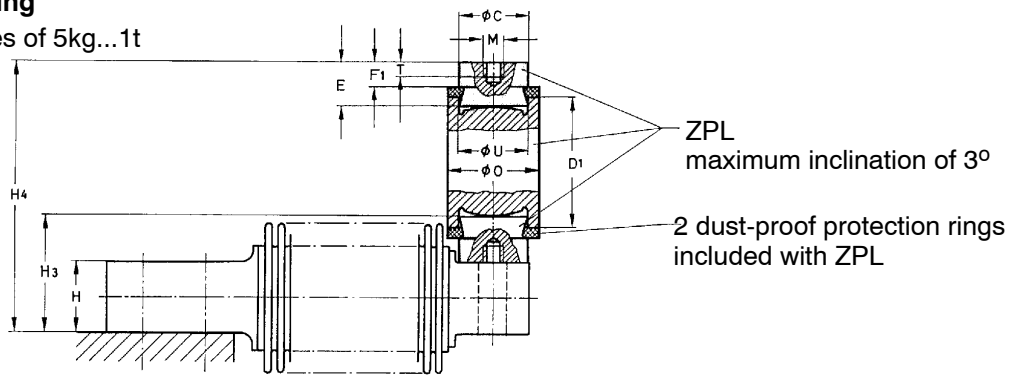
Max. capacity	ZEL Elastomer bearing	A	B	C	D	E	F	G	H	L	M	N	P	R	F <sub>R</sub> [N]	S <sub>max</sub> [mm]
5kg...200kg	Z6/200kg/ZEL	75	M12	12	40	79± 1.3	18.5	M8	SW17	-	-	-	-	-	163	3
500kg	Z6/1t/ZEL	80	M10	10	39	105 <sup>+2.1</sup> <sub>-2.2</sub>	26	-	SW27	20	120	100	9	60	400	4,5
1t	Z6/1t/ZEL	80	M10	10	39	117 <sup>+2.1</sup> <sub>-2.2</sub>	26	-	SW27	20	120	100	9	60	400	4.5

F<sub>R</sub> = restoring force in N for s = 1mm    S<sub>max</sub> = max. lateral displacement of load introduction loaded with rated capacity

## Mounting aids continued

### ZPL Pendle bearing

for max. capacities of 5kg...1t

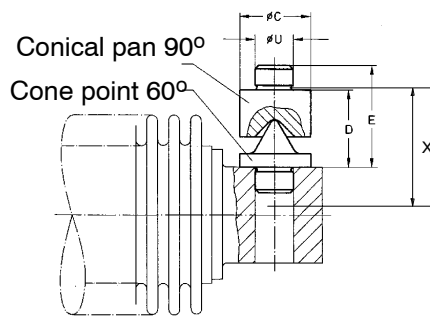


Max. capacity	ZPL Pendle bearing	C	D <sub>1</sub>	H <sub>4</sub>	M	O	T	E	F <sub>1</sub>	H	U	F <sub>R</sub> [% of applied load]	S <sub>max</sub> [mm]
5kg...200kg	Z6/200kg/ZPL	20 <sub>-0,2</sub>	45	89 <sup>+0.6</sup> <sub>-0.8</sub>	M8	30	6.5	17	9	20	20 <sup>D10</sup>	2.8	3.5
500kg	Z6/200kg/ZPL	20 <sub>-0,2</sub>	45	89 <sup>+0.6</sup> <sub>-0.8</sub>	M8	30	6.5	17	9	20	20 <sup>D10</sup>	2.8	3.5
1t	Z17/2t/ZPL	30 <sub>-0,1</sub>	60	126.5	M10	46	8	22	14	40	30 <sup>D10</sup>	2	7.5

F<sub>R</sub> = restoring force for s = 1mm

S<sub>max</sub> = max. lateral displacement of load introduction

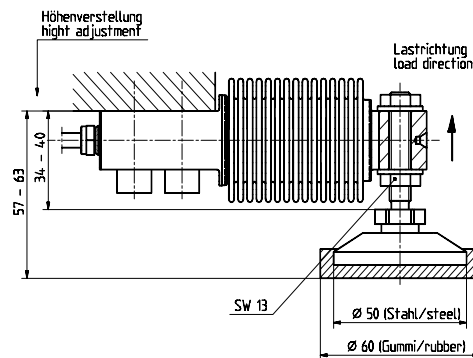
### ZK Cone and conical pan for max. capacities of 5kg...1t



Max. capacity	ZK Cone and conical pan	C	D	E	U	X
5kg...200kg	Z6/200kg/ZK	15	16	21	8.1 <sub>-0.05</sub>	26
500kg	Z6/1t/ZK	18	24	32	11 <sub>-0.05</sub>	34
1t	Z6/1t/ZK	18	24	32	11 <sub>-0.05</sub>	36.5

### Load foot ZFM 8

for max. capacities of ≤ 200kg



Hottinger Baldwin Messtechnik GmbH  
 Im Tiefen See 45, D-64293 Darmstadt, Germany  
 Tel.: +49 (0)6151 / 803 0; Fax: +49 (0)6151 / 803 9 100  
 www.hbm.com; e-mail: support@hbm.com

Modifications reserved.  
 All details describe our products in general form. They are not to be understood as express warranty and do not constitute any liability whatsoever.