

Z6R-P Load cell

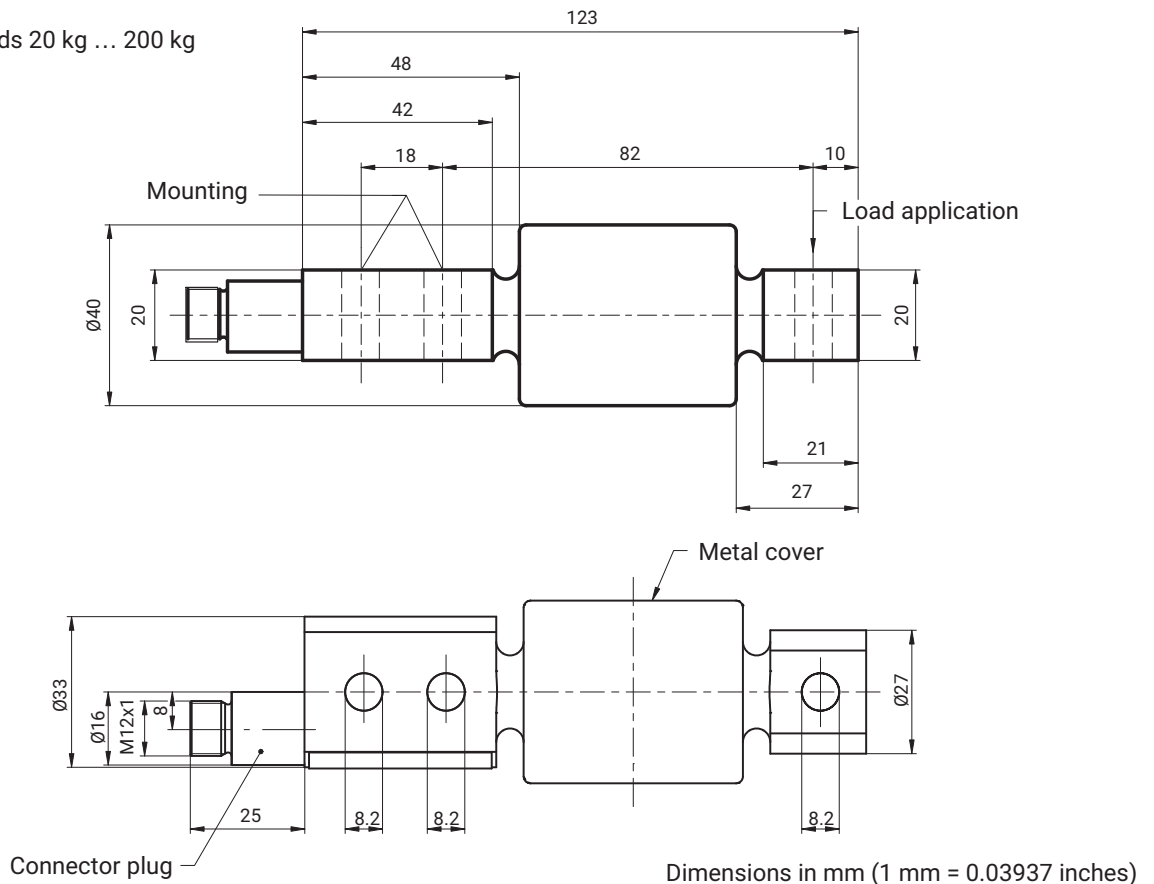
SPECIAL FEATURES

- Nominal (rated) loads: 20 kg ... 200 kg
- Welded-on robust cover
- Load cells made of rust-resistant Material
- Easy to clean
- Six-wire circuit
- Optimized for parallel connection
- Hermetically encapsulated (IP68/IP69K)



DIMENSIONS

Z6R-P: Nominal loads 20 kg ... 200 kg



SPECIFICATIONS

Type			Z6R-P			
Accuracy class per OIML R 60			C3			
Number of scale intervals	n_{LC}		3000			
Nominal (rated) load	E_{max}	kg	20; 50; 100; 200			
Minimum scale division	v_{min}	% of E_{max}	0.009			
Ratio of minimum verification interval	Y		11111			
General specifications						
Nominal (rated) sensitivity	C_n	mV/V	2			
Sensitivity tolerance with load appl. in spec. direction		%	±0.05			
Temperature coefficient of sensitivity ¹⁾	TC_S	% of $C_n/10\text{ K}$	±0.0080			
Temperature coefficient of zero signal	TC_0		±0.0125			
Relative reversibility error ¹⁾	d_{hy}	% of C_n	±0.0170			
Non linearity ¹⁾	d_{lin}		±0.0180			
Load creep in 30 min.	d_{DR}		±0.0166			
Input resistance	R_{LC}	Ω	350...480			
Output resistance with plug	R_0		355 ±0.12			
Reference voltage	U_{ref}	V	5			
Nominal supply voltage range	B_U		0.5...12			
Insulation resistance	R_{is}	GΩ	> 5			
Nominal ambient temperature range	B_T	°C	-10...+40			
Operating temperature range	B_{tu}		-30...+70			
Storage temperature range	B_{tl}		-50...+85			
Limit load	E_L	% of E_{max}	150			
Breaking load	E_d		≥300			
Nominal (rated) load	E_{max}	kg	20	50	100	200
Relative permissible oscillatory stress		% of E_{max}	70			
Nominal (rated) displacement, approx.	s_{nom}	mm	0.2			
Weight, approx.	G	kg	0.6			
Degree of protection (IP) as per EN 60529 (IEC529)			IP68 / IP69K			
Material: Measuring body			Stainless steel ²⁾			
Cover			Stainless steel ²⁾			

1) The values for linearity deviation, relative reversibility error and temperature effect on sensitivity are typical values. The sum of these values is within the cumulative error limits laid down by OIML R60.

2) As per EN 10088-1

ORDERING OPTIONS

Z6R-P load cells, optional versions

Ordering number		
K-Z6R-P Z6R with M12 device plug		
1	Code	Option 1: Design
	A	Standard
2	Code	Option 2: Accuracy class
	C3	C3 (OIML)
3	Code	Option 3: Maximum capacity
	20	20 kg
	50	50 kg
	100	100 kg
	200	200 kg
4	Code	Option 4: Explosion protection
	N	No explosion protection
5	Code	Option 5: Plug
	N	Plug
6	Code	Option 6: Other
	N	None

K-Z6R-P - A - C3 - - N - N - N

1 2 3 4 5 6

ACCESSORIES

To minimize error effects from load application, HBM offers different tried and tested load application elements for this type of load cell, according to the mounting conditions:

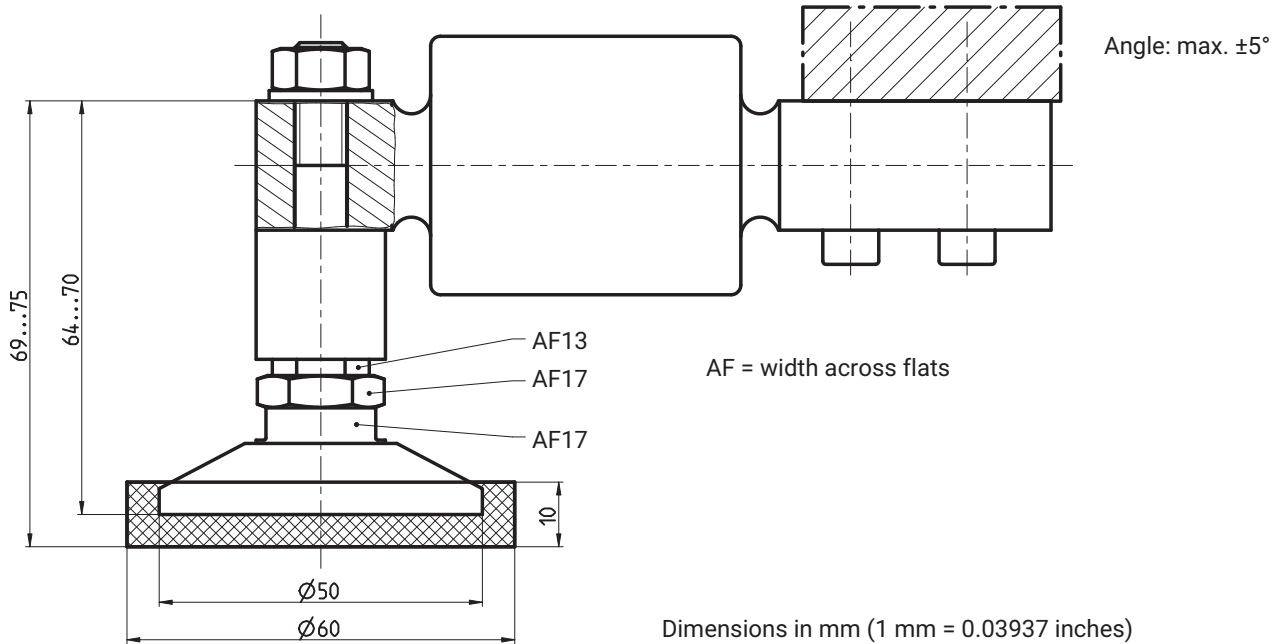
- **Z6/PCX/500kg** oscillating loading foot (height adjustable)
- **Z6/ZKP/200kg** oscillating loading foot (height adjustable)
- **Z6/ZPU/200kg** base plate/mounting set
- **Z6/200kg/ZGWR** knuckle eye
- **Z6/200kg/ZK** cone/conical pan
- **Z6/200kg/ZPL** pendulum bearing
- **Z6/200kg/ZEL** rubber-metal bearing

INSTALLATION AIDS, NOT INCLUDED IN SCOPE OF DELIVERY

All installation aids are made of non-rusting material. The rubber parts of the ZEL are made of chloroprene rubber.

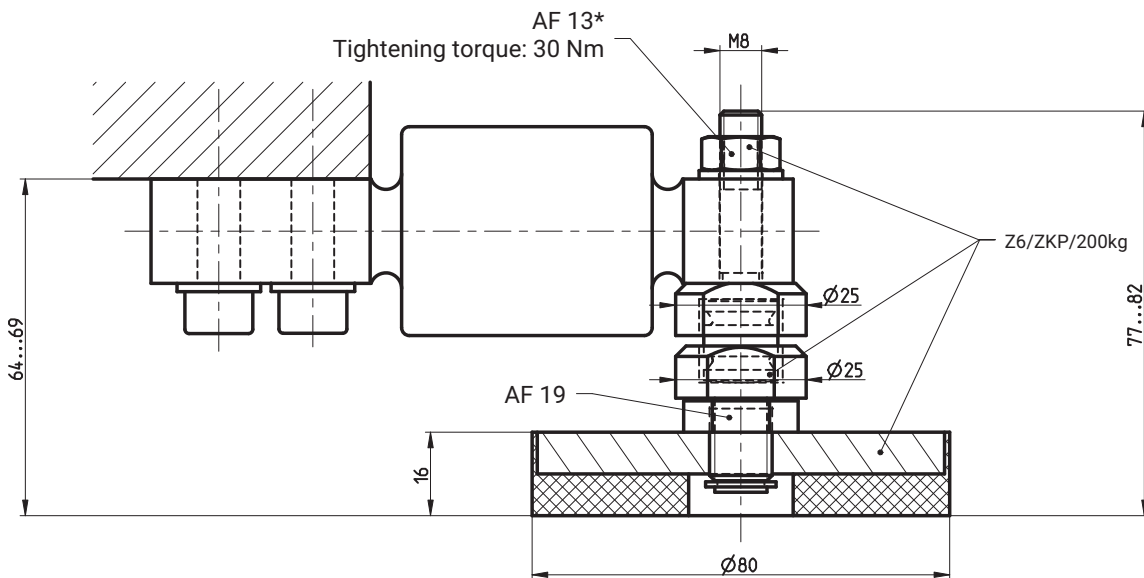
Oscillating loading foot PCX

for nominal rated loads 20 kg ... 200 kg (1-Z6/PCX/500kgSet); 1 Set consists of 4 pieces Z6/PCX/500 kg



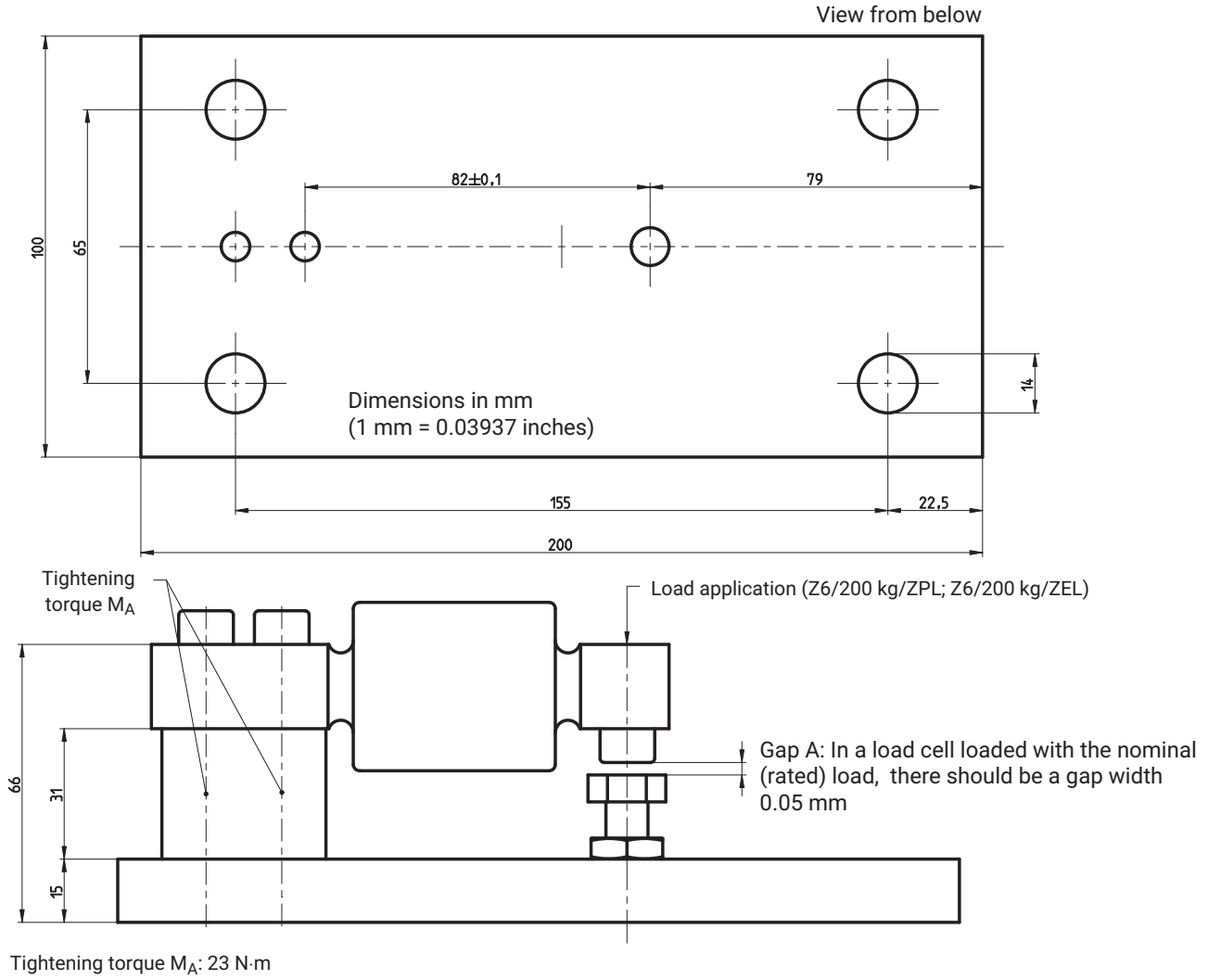
Oscillating loading foot ZKP

for nominal rated loads 20 kg ... 200 kg (1-Z6/ZKP/200kg)



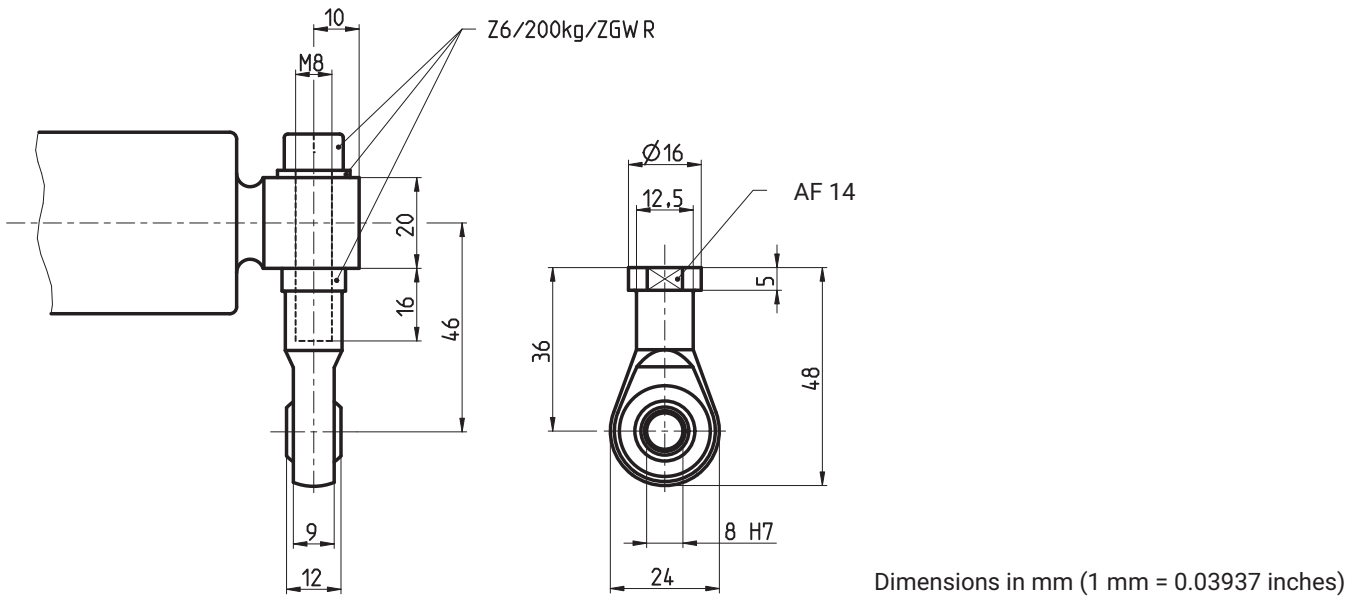
Base plate / Mounting set

for nominal (rated) loads 20 kg ... 200 kg (1-Z6/ZPU/200kg)



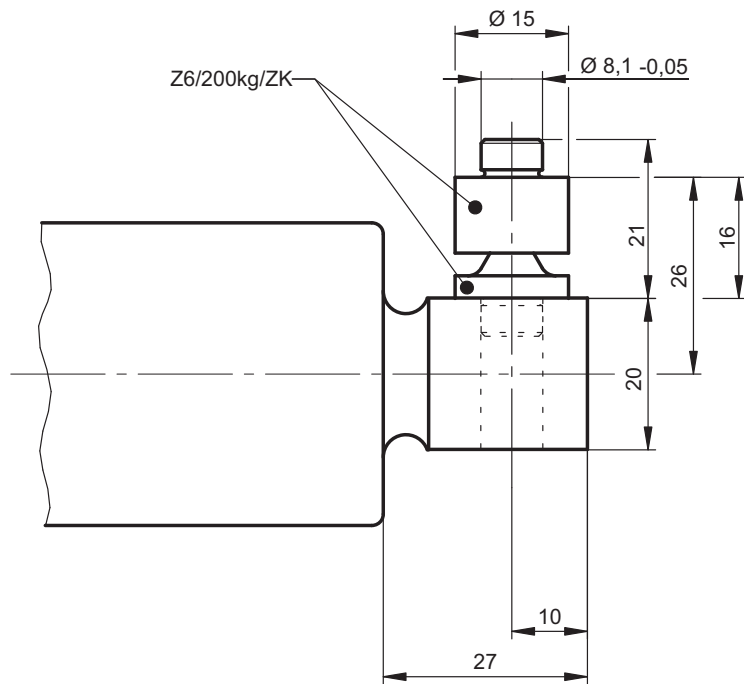
Knuckle eye ZGWR (maintenance free)

for nominal (rated) loads 20 kg ... 200 kg (1-Z6/200kg/ZGWR)



Cone, conical pan ZK

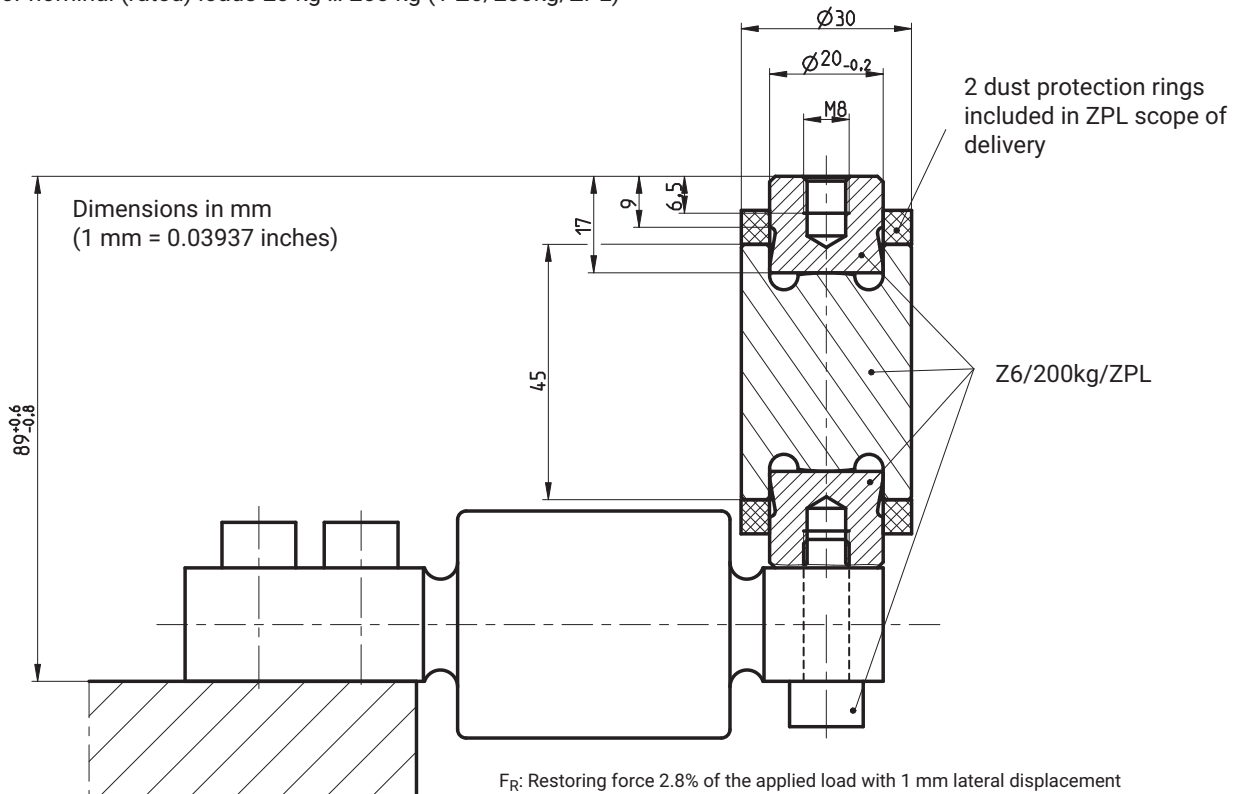
for nominal (rated) loads 20 kg ... 200 kg (1-Z6/200kg/ZK)



Dimensions in mm (1 mm = 0.03937 inches)

Pendulum bearing ZPL

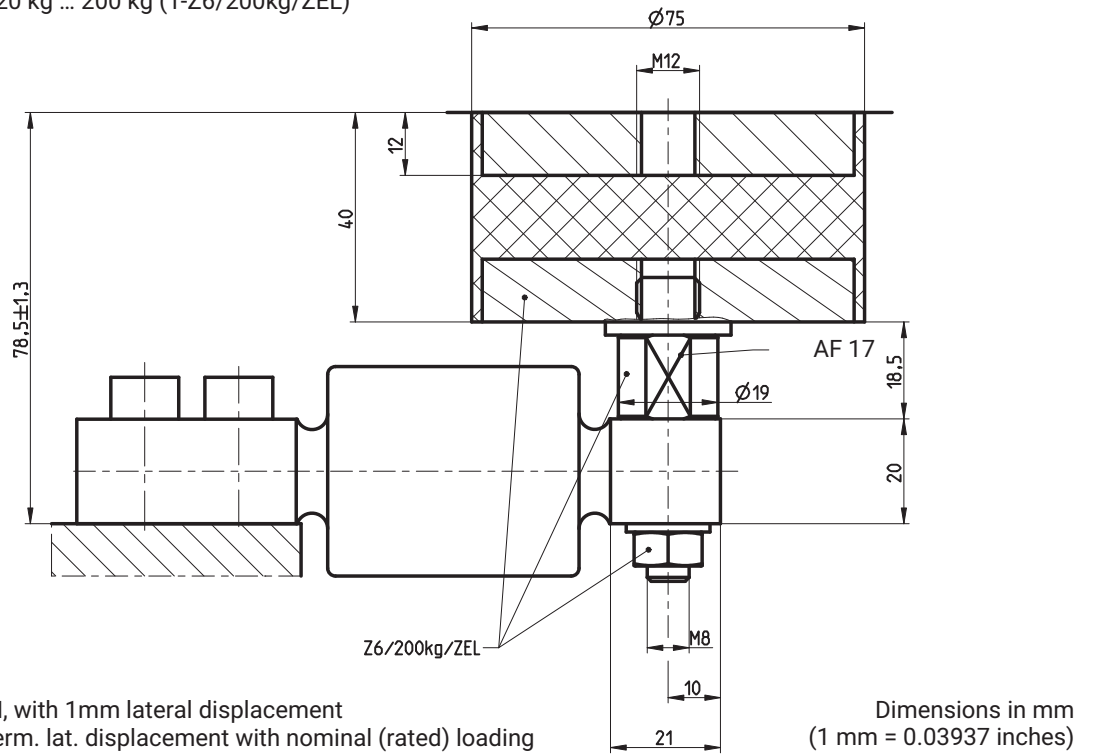
for nominal (rated) loads 20 kg ... 200 kg (1-Z6/200kg/ZPL)



F_R : Restoring force 2.8% of the applied load with 1 mm lateral displacement
 s_{max} : 3.5 mm maximum permissible lateral displacement at maximum capacity

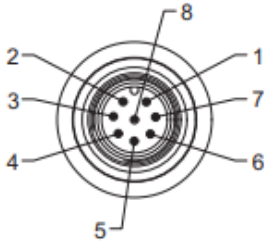
Rubber-metal bearing ZEL

for nominal (rated) loads 20 kg ... 200 kg (1-Z6/200kg/ZEL)



F_R : Force feedback 163 N, with 1mm lateral displacement
 s_{max} : 3 mm, Maximum perm. lat. displacement with nominal (rated) loading

CONNECTOR PIN ASSIGNMENT



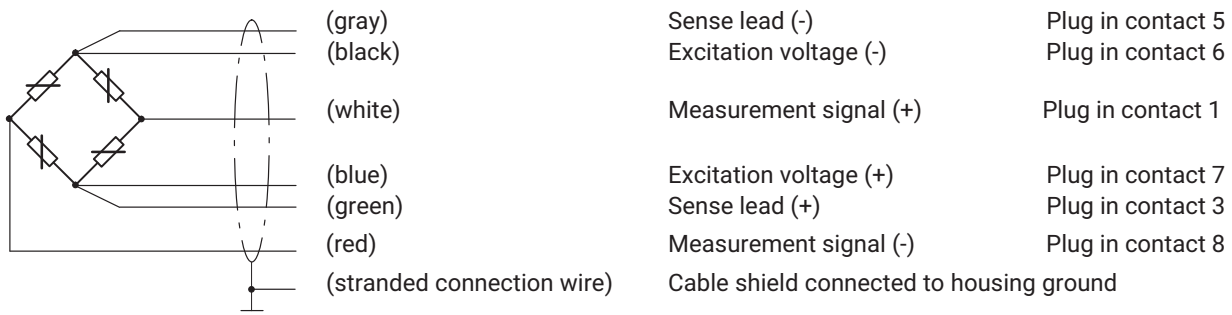
- Plug-in contact 1 = measurement signal (+)
- Plug-in contact 2 = not in use
- Plug-in contact 3 = sense lead (+)
- Plug-in contact 4 = not in use
- Plug-in contact 5 = sense lead (-)
- Plug-in contact 6 = excitation voltage (-)
- Plug-in contact 7 = excitation voltage (+)
- Plug-in contact 8 = measurement signal (-)

Pin assignment for 1-KAB168		Pin assignment for 1-KAB175		Plug in contact
Wire color	Connection	Wire color	Connection	
White	Measurement signal (+)	White	Measurement signal (+)	1
Red	Measurement signal (-)	Red	Measurement signal (-)	8
Blue	Excitation voltage (+)	Blue	Excitation voltage (+)	7
Pink	Excitation voltage (-)	Black	Excitation voltage (-)	6
Green	Sense lead (+)	Green	Sense lead (+)	3
Gray	Sense lead (-)	Gray	Sense lead (-)	5
Yellow	Not in use			-
Brown	Not in use			-

Connection cable for connection coupling

Connection cable with M12 F socket, 8-pin, TPU IP67, PUR cable sheath, 5 m long	1-KAB168-5
Connection cable with M12 F socket, 8-pin, TPU IP67, PUR cable sheath, 20 m long	1-KAB168-20
Connection cable with M12 F socket, 8-pin, stainless steel IP68/IP69, hygiene design, 3 m long	1-KAB175-3-1
Connection cable with M12 F socket, 8-pin, stainless steel IP68/IP69, hygiene design, 6 m long	1-KAB175-6-1
Connection cable with M12 F socket, 8-pin, stainless steel IP68/IP69, hygiene design, 12 m long	1-KAB175-12-1

CABLE ASSIGNMENT OF LOAD CELL CORRESPONDS TO STANDARD 6-WIRE CIRCUIT



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