

DATA SHEET

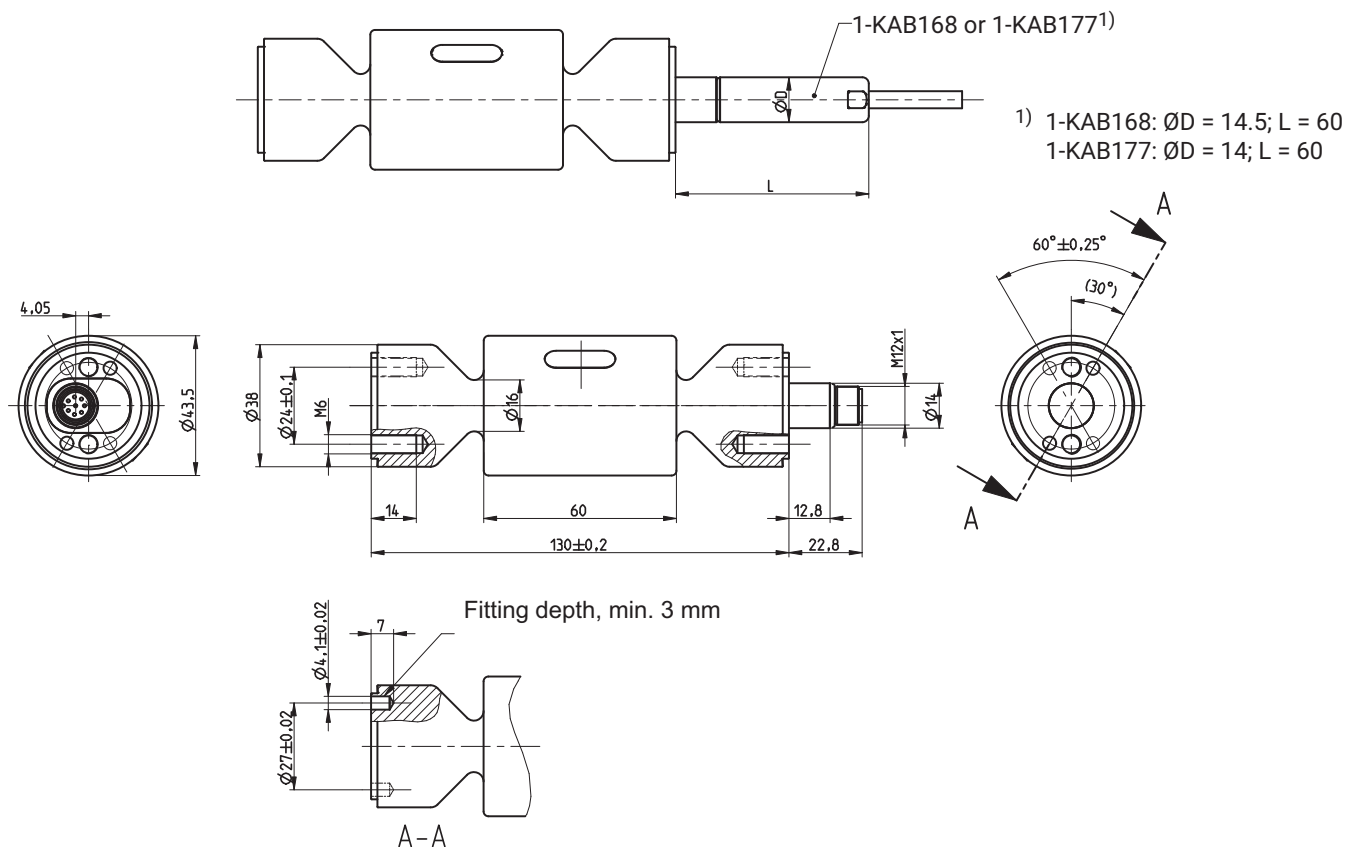
PW27BP... Hygienic design single point load cell

SPECIAL FEATURES

- Maximum capacities 10 kg, 20 kg
- Easy to clean
- Stainless steel
- EHEDG-certified
- Integrated encapsulated overload protection
- High ratio of minimum verification interval Y
- Connection cable and additional accessories available



DIMENSIONS



Dimensions in mm

SPECIFICATIONS

Type			PW27BP...	
Accuracy class ¹⁾			C3 Multi Range (MR)	
Number of load cell verification intervals	n_{LC}		3000	
Maximum capacity	E_{max}	kg	10	20
Minimum load cell verification interval	V_{min}	g	1	2
Ratio of minimum verification interval Y	Y		10,000	
Temperature coefficient of the zero signal per 10 K	TC_0	% of C_n	± 0.0140	
Maximum platform size		mm	400 x 400	
Rated output (nominal)	C_n	mV/V	2.0 ± 0.2	
Zero signal deviation			0 ± 0.1	
Temperature coefficient of sensitivity per 10 K ²⁾ in the temperature range +20 ... +40°C -10 ... +20°C	TC_S	% of C_n	± 0.0175	
			± 0.0117	
Relative reversibility error ²⁾	d_{hy}		± 0.0166	
Non-linearity ²⁾	d_{lin}		± 0.0166	
Minimum dead load output return	MDLOR		± 0.0166	
Off-center load error ³⁾			± 0.0233	
Input resistance	R_{LC}	Ω	300 ... 500	
Output resistance	R_0		300 ... 500	
Reference excitation voltage	U_{ref}	V	5	
Nominal (rated) range of the excitation voltage	B_U		1 ... 12	
Maximum excitation voltage			15	
Insulation resistance at 100 V _{DC}	R_{is}	G Ω	>1	
Nominal (rated) range of the ambient temperature	B_T	°C	-10 ... +40	
Operating temperature range	B_{tu}		-20 ... +70	
Storage temperature range	B_{tl}		-25 ... +90	
Cleaning temperature			max. +120 for max. 10 minutes	
Limit load at 20 mm eccentricity	E_L	% of E_{max}	1000	
Service load at max. 120 mm eccentricity			150	
Limit lateral loading, static	E_{lq}		200	
Breaking load at max. 20 mm eccentricity	E_d		>1000	
Permissible oscillation stress at max. 50 mm eccentricity	F_{rb}		70	
Resonance frequency, approx.	f_G	Hz	210	315
Nominal (rated) displacement ⁴⁾	s_{nom}	mm	0.19	0.18
Weight, approx.	m	kg	0.8	
Equipment protection level ⁵⁾			IP68 (test conditions 1 m water column / 100 h); IP69K (water at high pressure, steam cleaner) ⁶⁾	
Material				
Measuring body			Stainless steel 1.4545 ⁷⁾	
Seal			EPDM	

¹⁾ As per OIML R60, with $P_{LC} = 0.7$.

²⁾ The values for non-linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of sensitivity (TC_S) are recommended values. The sum of these values is within the accumulated error limit according to OIML R60.

³⁾ As per OIML R76.

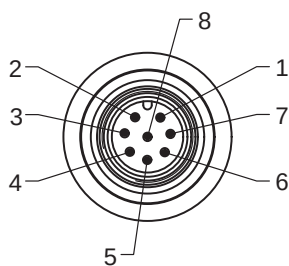
⁴⁾ Loading with E_{max} and center of gravity in center of platform.

⁵⁾ As per DIN EN 60529 (IEC 529)

⁶⁾ Based on DIN 40050, Part 9 specifications, for road vehicles.

⁷⁾ As per EN 10088-1, material list on request.

CONNECTOR PIN ASSIGNMENT



- Plug-in contact 1 = measurement signal (+)
- Plug-in contact 2 = vacant
- Plug-in contact 3 = sense lead (+)
- Plug-in contact 4 = vacant
- 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-KAB177	
Color code	Connection	Color code	Connection
White	Measurement signal (+)	White	Measurement signal (+)
Red	Measurement signal (-)	Red	Measurement signal (-)
Blue	Excitation voltage (+)	Blue	Excitation voltage (+)
Pink	Excitation voltage (-)	Black	Excitation voltage (-)
Green	Sense lead (+)	Green	Sense lead (+)
Gray	Sense lead (-)	Gray	Sense lead (-)
Yellow	Not in use		
Brown	Not in use		

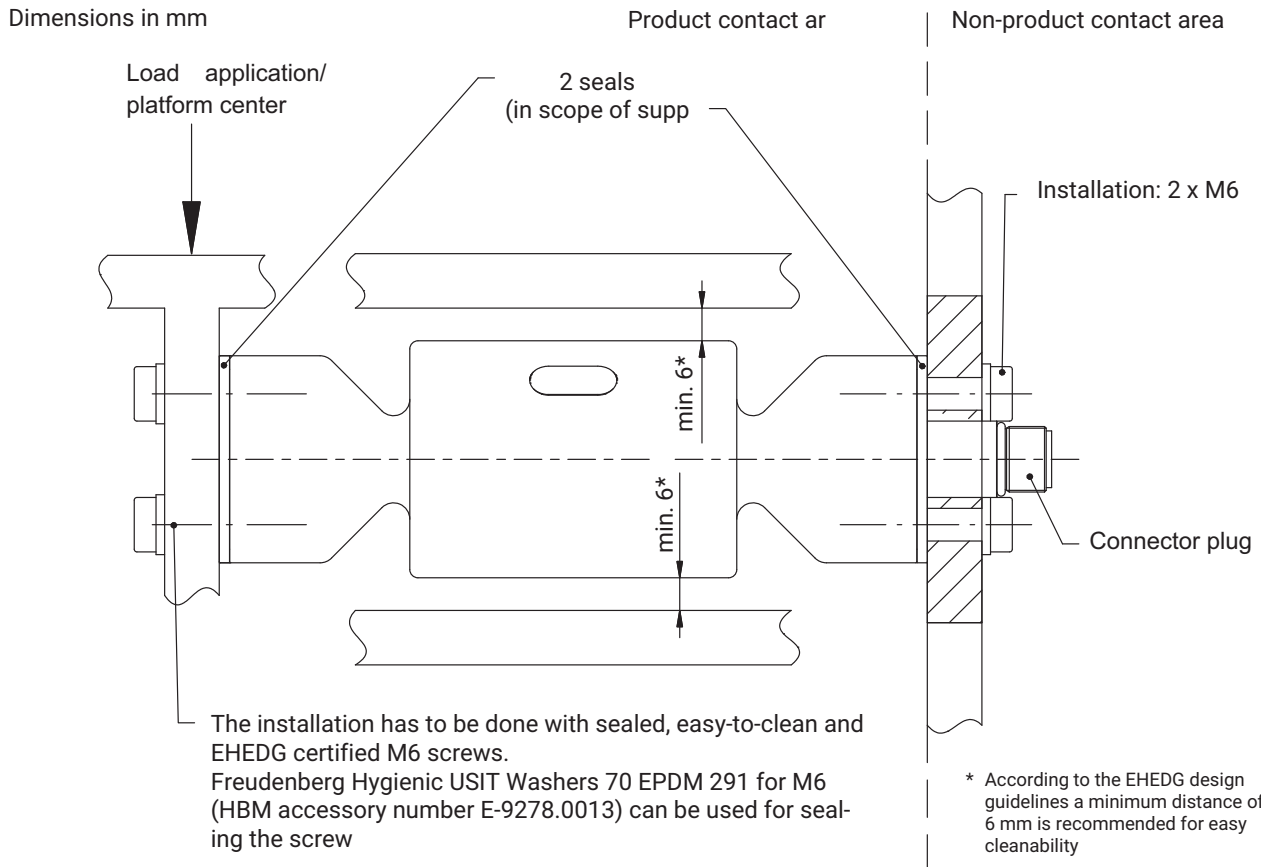
MOUNTING AND LOAD APPLICATION

The load cells are firmly clamped at the mounting holes, the load is applied at the other end. The scope of supply includes two seals for sealing the gap surfaces on the face against microbiological contamination. The recommended screws and tightening torques can be found in the table below:

Version	Thread	Max. thread reach	Min. property class	Tightening torque ¹⁾
Standard	M6	14 mm	8.8	10 N•m
Rustless	M6	14 mm	A2-70 or A4-70	10 N•m

1) Recommended value for the specified property class. Please comply with the screw manufacturer's instructions with regard to screw dimensions.

Load must not be applied to the side where the cable connection is located, as this would cause a force shunt.



PRODUCT NUMBERS (OVERVIEW)

PW27BP... (stainless steel, hermetically sealed)

Type	PW27BP
Accuracy class	C3-MR (OIML) (Multi Range)
Maximum capacity	Ordering number
10 kg	1-PW27BPC3/10KG-1
20 kg	1-PW27BPC3/20KG-1

Accessories

Connection cable	
Connection cable with M12 F connector, 8-pin, TPU IP67, PUR cable sheath, 5 m long	1-KAB168-5
Connection cable with M12 F connector, 8-pin, TPU IP67, PUR cable sheath, 20 m long	1-KAB168-20
Connection cable with M12 F connector, 8-pin, stainless steel IP68/IP69K, hygiene design, 3 m long	1-KAB177-3-1
Connection cable with M12 F connector, 8-pin, stainless steel IP68/IP69K, hygiene design, 6 m long	1-KAB177-6-1

SPARE PART

One set of replacement seals, consisting of two seals (EPDM), order no. E-9278.0015-1