

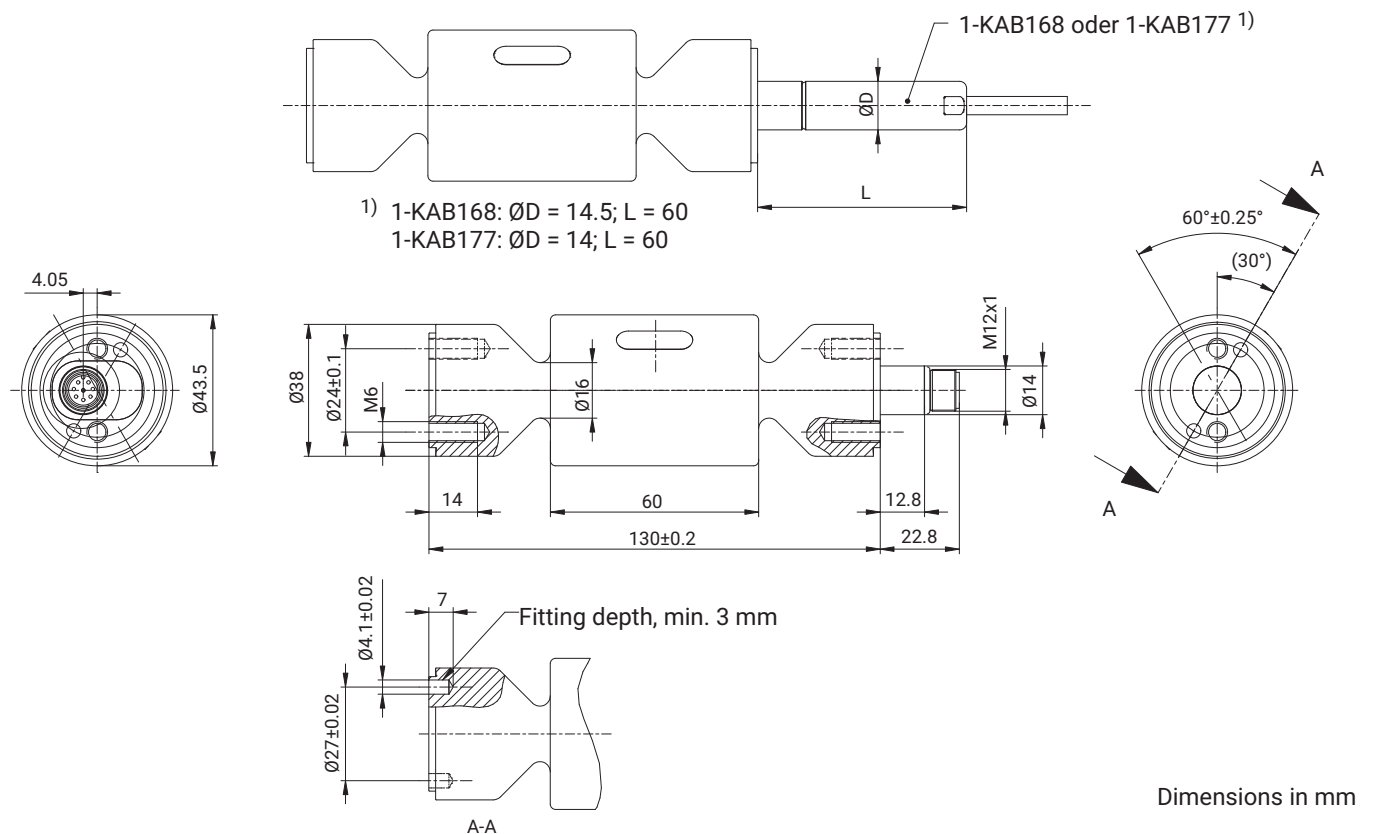
# PW27AP... Hygienic design single point load cell

## 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



## SPECIFICATIONS

Type			PW27AP...	
Accuracy class <sup>1)</sup>			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 $C_n$	$\pm 0.0140$	
Maximum platform size		mm	400 x 400	
Rated output (nominal)	$C_n$	mV/V	$2.0 \pm 0.2$	
Zero signal deviation			$0 \pm 0.1$	
Temperature coefficient of sensitivity per 10 K <sup>2)</sup> in the temperature range +20 ... +40°C -10 ... +20°C	$TC_S$	% of $C_n$	$\pm 0.0175$	
			$\pm 0.0117$	
Relative reversibility error <sup>2)</sup>	$d_{hy}$	% of $C_n$	$\pm 0.0166$	
Non-linearity <sup>2)</sup>	$d_{lin}$		$\pm 0.0166$	
Minimum dead load output return	MDLOR		$\pm 0.0166$	
Off-center load error <sup>3)</sup>			$\pm 0.0233$	
Input resistance	$R_{LC}$	$\Omega$	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 <sub>DC</sub>	$R_{is}$	G $\Omega$	>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 <sup>4)</sup>	$s_{nom}$	mm	0.19	0.18
Weight, approx.	m	kg	0.8	
Equipment protection level <sup>5)</sup>			IP68 (test conditions 1 m water column / 100 h); IP69K (water at high pressure, steam cleaner) <sup>6)</sup>	
Material				
Measuring body			Stainless steel 1.4545 <sup>7)</sup>	
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.

## 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 <sup>1)</sup>
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.

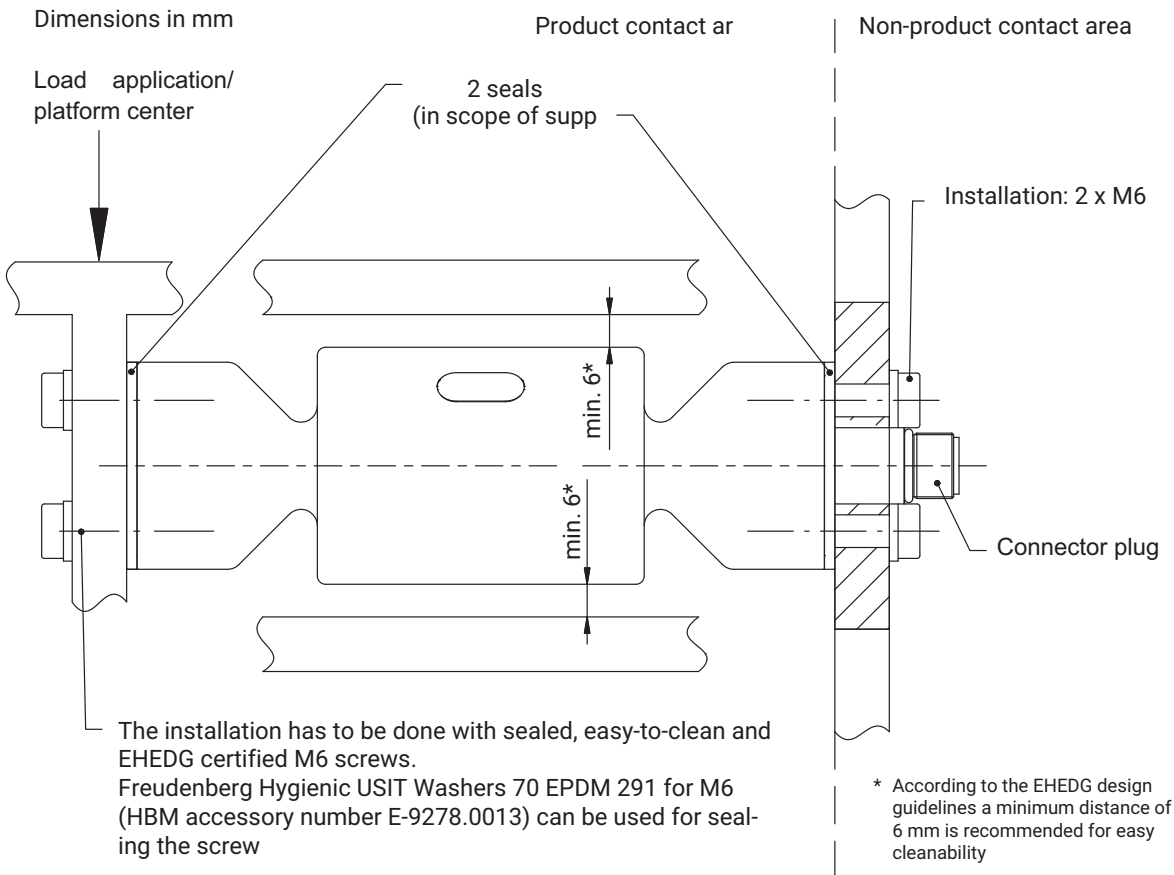
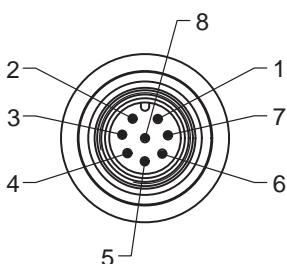


Fig. Load application and installation

## 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

Color code	Connection
White	Measurement signal (+)
Red	Measurement signal (-)
Blue	Excitation voltage (+)
Pink	Excitation voltage (-)
Green	Sense lead (+)
Gray	Sense lead (-)
Yellow	Not in use
Brown	Not in use

## Pin assignment for 1-KAB177

Color code	Connection
White	Measurement signal (+)
Red	Measurement signal (-)
Blue	Excitation voltage (+)
Black	Excitation voltage (-)
Green	Sense lead (+)
Gray	Sense lead (-)

## PRODUCT NUMBERS (OVERVIEW)

PW27AP... (stainless steel, hermetically sealed)

Type	PW27AP
Accuracy class	C3-MR (OIML) (Multi Range)
Maximum capacity	Ordering number
10 kg	1-PW27APC3/10KG-1
20 kg	1-PW27APC3/20KG-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

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