

DATA SHEET

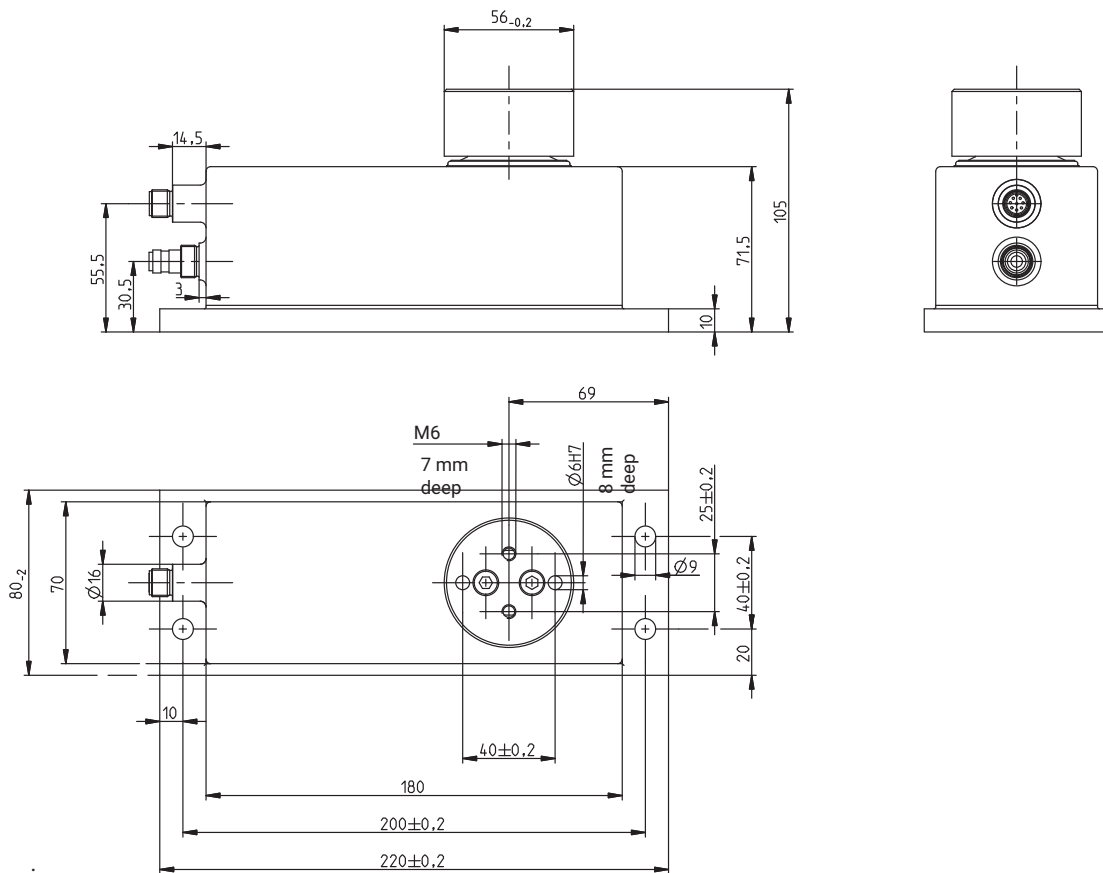
PW28... Single point load cell

SPECIAL FEATURES

- Maximum capacities loads 5 kg...75 kg
- Stainless steel (housing)
- Optimized for dynamic weighing tasks
- Integrated overload protection
- High ratio of minimum verification interval Y
- Compensated off-center load error
- Connector plug M12



DIMENSIONS



Dimensions in mm

Type			PW28...					
Accuracy class ¹⁾			C3 Multi Range (MR)					
Number of load cell verification intervals	n _{LC}		3,000					
Maximum capacity ²⁾	E _{max}	kg	5	10	20	30	50	75
Minimum load cell verification interval Standard and VA version	V _{min}	g	0.5	1	2	5	5	10
Maximum load cell verification interval Standard and VA version	Y		10,000			6,000	10,000	7,500
Temperature coefficient of zero signal per 10 K Standard and VA version	TC ₀	% of C _n	±0.0140			±0.0233	±0.0140	±0.0186
Minimum load cell verification interval VB version	V _{min}	g	0.5		1	2	5	5
Maximum load cell verification interval VB version	Y		10,000	20,000		15,000	10,000	15,000
Temperature coefficient of zero signal per 10 K VB version	TC ₀	% of C _n	±0.0070					
Maximum platform size		mm	400 x 400			600 x 500		
Nominal (rated) output	C _n	mV/V	1.7±0.2	2.0±0.2				
Zero signal (without initial load)		mV/V	0±0.2					
Temperature coefficient of sensitivity ³⁾ +20°C ... +40°C -10°C ... +20°C	TC _S	% of C _n /10K	±0.0175 ±0.0117					
Relative reversibility error ^{3),4)}	d _{hy}	% of C _n	±0.0166					
Non-linearity ^{3),4)}	d _{lin}		±0.0166					
Minimum dead load output return	MDLOR		±0.0166					
Off-center load error ³⁾	d _{cr}		±0.0233					
Input resistance	R _{LC}	Ω	300 ... 500					
Output resistance	R _O		300 ... 500					
Reference excitation voltage	U _{ref}	V	5					
Nominal (rated) range of the excitation voltage			1 ... 12					
Maximum excitation voltage	B _U		15					
Insulation resistance at 100 V _{DC}	R _{is}	GΩ	>2					
Nom. (rated) range of the ambient temperature	B _T	°C	-10 ... +40					
Operating temperature range	B _{tu}		-10 ... +50					
Storage temperature range	B _{tl}		-25 ... +70					
Limit load at max. 20 mm eccentricity	E _L	% of E _{max}	1000					
Limit lateral loading, static	E _{lq}		300					
Service load at max. 100 mm eccentricity	E _u		150					
Breaking load at max. 20 mm eccentricity	E _d		>1000					
Relative permissible oscillation stress at max. 20 mm eccentricity	F _{srel}		70					
Rated displacement at E _{max}		mm	<0.2					
Weight	m	kg	0.8					
Degree of protection ⁵⁾			IP66					
Material (measuring body)			Aluminum					
Material (housing)			Stainless steel 1.4545 ⁶⁾					

¹⁾ As per OIML R60, with PLC = 0.7

²⁾ Max. eccentric loading as per OIML R76

³⁾ The values for deviation in linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of the sensitivity (TC_S) are approximate values. The sum of these values is within the accumulated error limit specified by OIML R60.

⁴⁾ All relative error data refer to the output signal at max. capacity.

⁵⁾ As per EN 60529 (IEC 529)

⁶⁾ As per EN 10088-1

Type			PW28...					
Accuracy class ¹⁾			C4 Multi Range (MR)					
Number of load cell verification intervals	n _{LC}		4,000					
Maximum capacity ²⁾	E _{max}	kg	5	10	20	30	50	75
Minimum load cell verification interval Standard and VA version	V _{min}	g	0.5	1	2	5	5	10
Maximum load cell verification interval Standard and VA version	Y		10,000			6,000	10,000	7,500
Temperature coefficient of zero signal per 10 K Standard and VA version	TC ₀	% of C _n	±0.0140			±0.0233	±0.0140	±0.0186
Minimum load cell verification interval VB version	V _{min}	g	0.5	0.5	1	2	5	5
Maximum load cell verification interval VB version	Y		10,000	20,000		15,000	10,000	15,000
Temperature coefficient of zero signal per 10 K VB version	TC ₀	% of C _n	±0.0070					
Maximum platform size		mm	400 x 400			600 x 500		
Nominal (rated) output	C _n	mV/V	1.7±0.2	2.0±0.2				
Zero signal (without initial load)		mV/V	0±0.1					
Temperature coefficient of sensitivity ³⁾ +20°C ... +40°C -10°C ... +20°C	TC _S	% of C _n /10K	±0.0131 ±0.0087					
Relative reversibility error ^{3),4)}	d _{hy}	% of C _n	±0.0125					
Non-linearity ^{3),4)}	d _{lin}		±0.0125					
Minimum dead load output return	MDLOR		±0.0125					
Off-center load error ³⁾	d _{cr}		±0.0175					
Input resistance	R _{LC}	Ω	300 ... 500					
Output resistance	R _O		300 ... 500					
Reference excitation voltage	U _{ref}	V	5					
Nominal (rated) range of the excitation voltage			1 ... 12					
Maximum excitation voltage	B _U		15					
Insulation resistance at 100 V _{DC}	R _{is}	GΩ	>2					
Nom. (rated) range of the ambient temperature	B _T	°C	-10 ... +40					
Operating temperature range	B _{tu}		-10 ... +50					
Storage temperature range	B _{tl}		-25 ... +100					
Limit load at max. 20 mm eccentricity	E _L	% of E _{max}	1000					
Limit lateral loading, static	E _{lq}		300					
Service load at max. 100 mm eccentricity	E _u		150					
Breaking load at max. 20 mm eccentricity	E _d		>1000					
Relative permissible oscillation stress at max. 20 mm eccentricity	F _{srel}		70					
Rated displacement at E _{max}		mm	<0.2					
Weight	m	kg	0.8					
Degree of protection ⁵⁾			IP66					
Material (measuring body)			Aluminum					
Material (housing)			Stainless steel 1.4545 ⁶⁾					

¹⁾ As per OIML R60, with PLC = 0.7

²⁾ Max. eccentric loading as per OIML R76

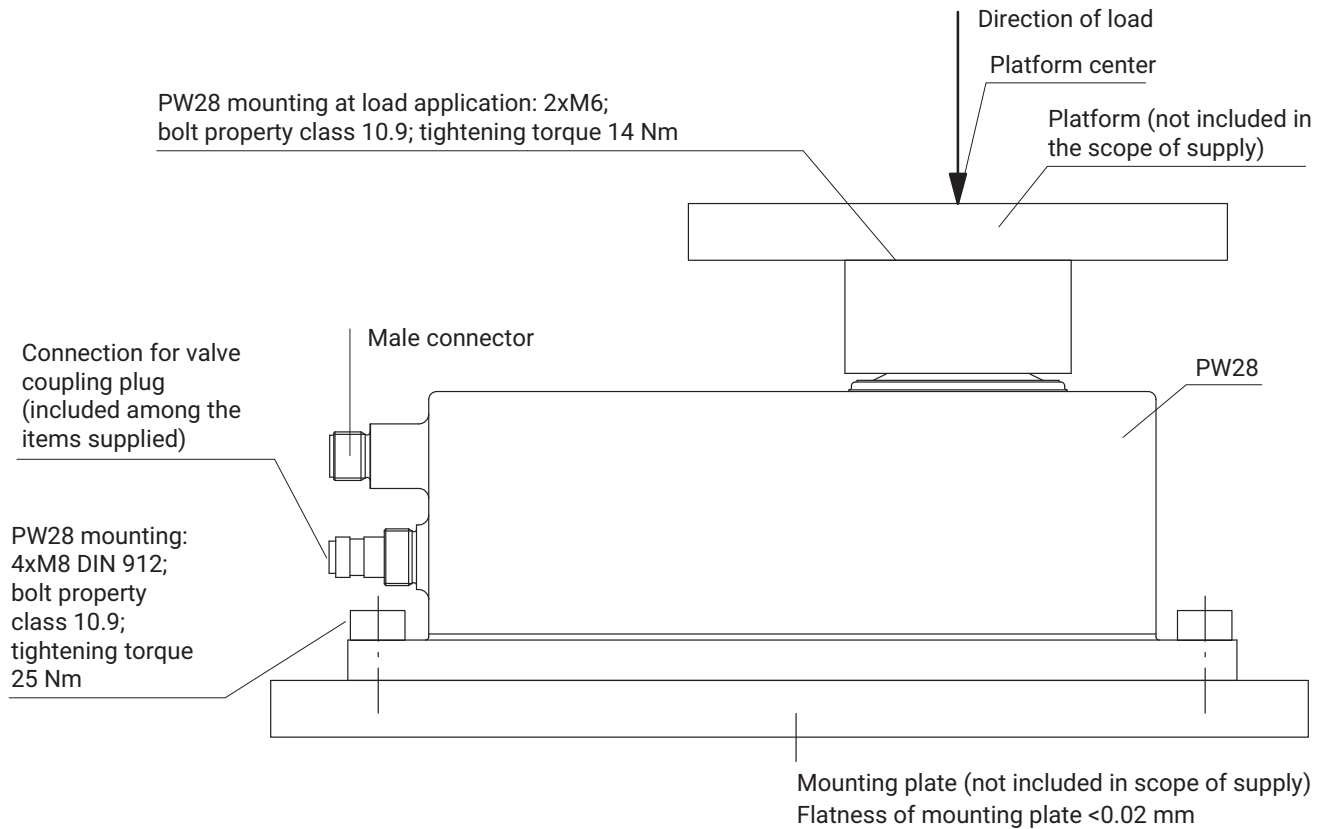
³⁾ The values for deviation in linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of the sensitivity (TCS) are approximate values. The sum of these values is within the accumulated error limit specified by OIML R60.

⁴⁾ All relative error data refer to the output signal at max. capacity.

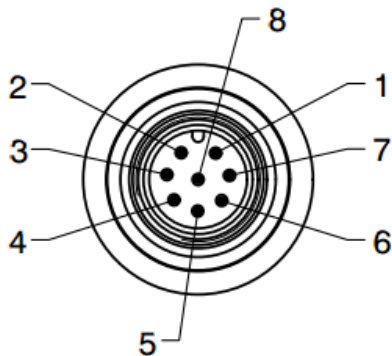
⁵⁾ As per EN 60529 (IEC 529)

⁶⁾ As per EN 10088-1

INSTALLATION ADVICE



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 (-)

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-KAB175-3-1
Connection cable with M12 F connector, 8-pin, stainless steel IP68/IP69K, hygiene design, 6 m long	1-KAB175-6-1
Connection cable with M12 F connector, 8-pin, stainless steel IP68/IP69K, hygiene design, 12 m long	1-KAB175-12-1

For connection cable specifications, see separate data sheet B03643.

Pin assignment 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 1-KAB175

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

PRODUCT NUMBER

Type	PW28PHC3...
Accuracy class	C3-MR (OIML)
Maximum capacity	Ordering number
5 kg	1-PW28PHC3/5KG
10 kg	1-PW28PHC3/10KG
20 kg	1-PW28PHC3/20KG
30 kg	1-PW28PHC3/30KG
50 kg	1-PW28PHC3/50KG
75 kg	1-PW28PHC3/75KG

K-PW28..., OPTIONAL VERSIONS

Ordering number	
K-PW28	

Code	Option 1: Mechanical design
N	-

Code	Option 2: Accuracy class
C3	C3-MR (OIML) (Multi Range)
C4	C4-MR (OIML) (Multi Range)

Code	Option 3: Maximum capacity
5	5 kg
10	10 kg
20	20 kg
30	30 kg
50	50 kg
75	75 kg

Code	Option 4: Explosion protection
N	No explosion protection

Code	Option 5: Male connector
N	Male connector

Code	Option 6: Other
VA	Y = 6,000...10,000 ¹⁾
VB	Y = 15,000, 20,000 ¹⁾ [for Option 3 only: Maximum capacity= 10, 20, 30, 75]

K-PW28 - N - - - - N - N - V -

1) You can find more detailed information in "Specifications" on page 2 and 3.