

DATA SHEET

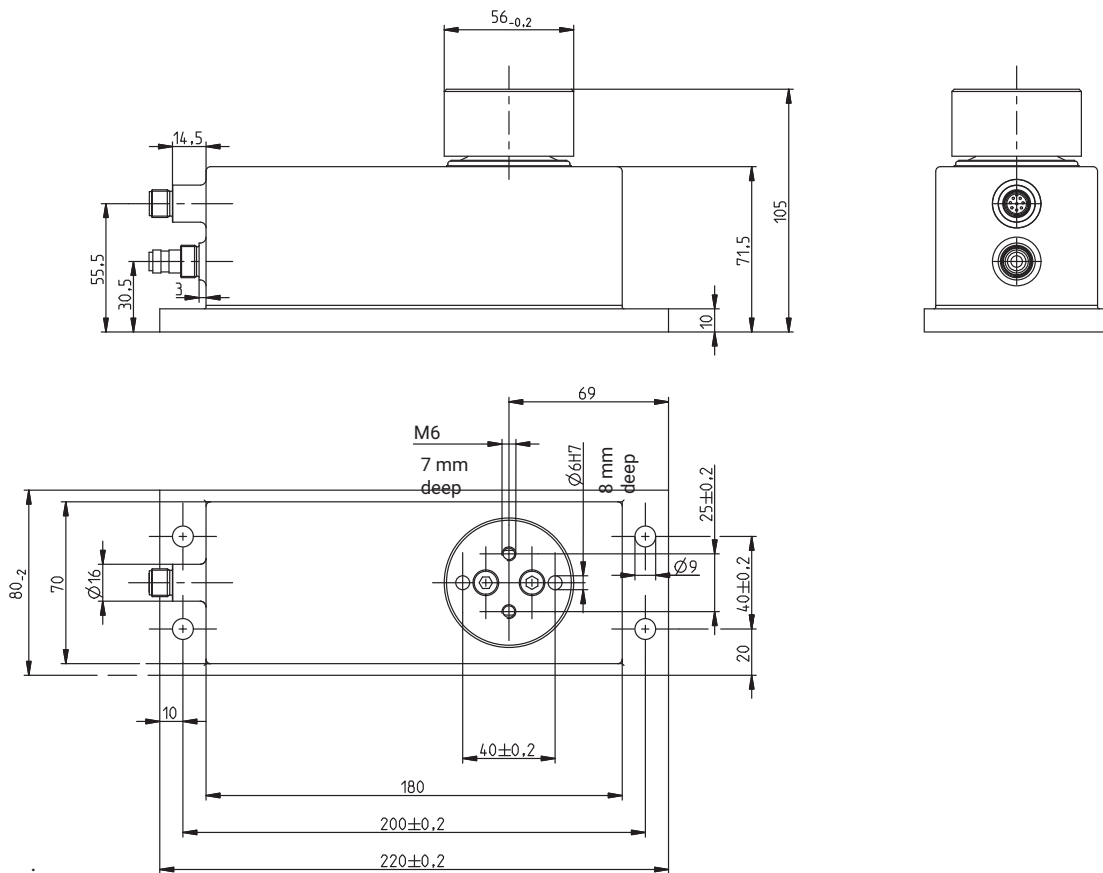
PW28... Single point load cell

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

SPECIFICATIONS PW28 C3

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	γ		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	γ		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 \pm 0.2	2.0 \pm 0.2				
Zero signal (without initial load)		mV/V	0 \pm 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}	G Ω	>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 (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

SPECIFICATIONS PW28 C4

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}		>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

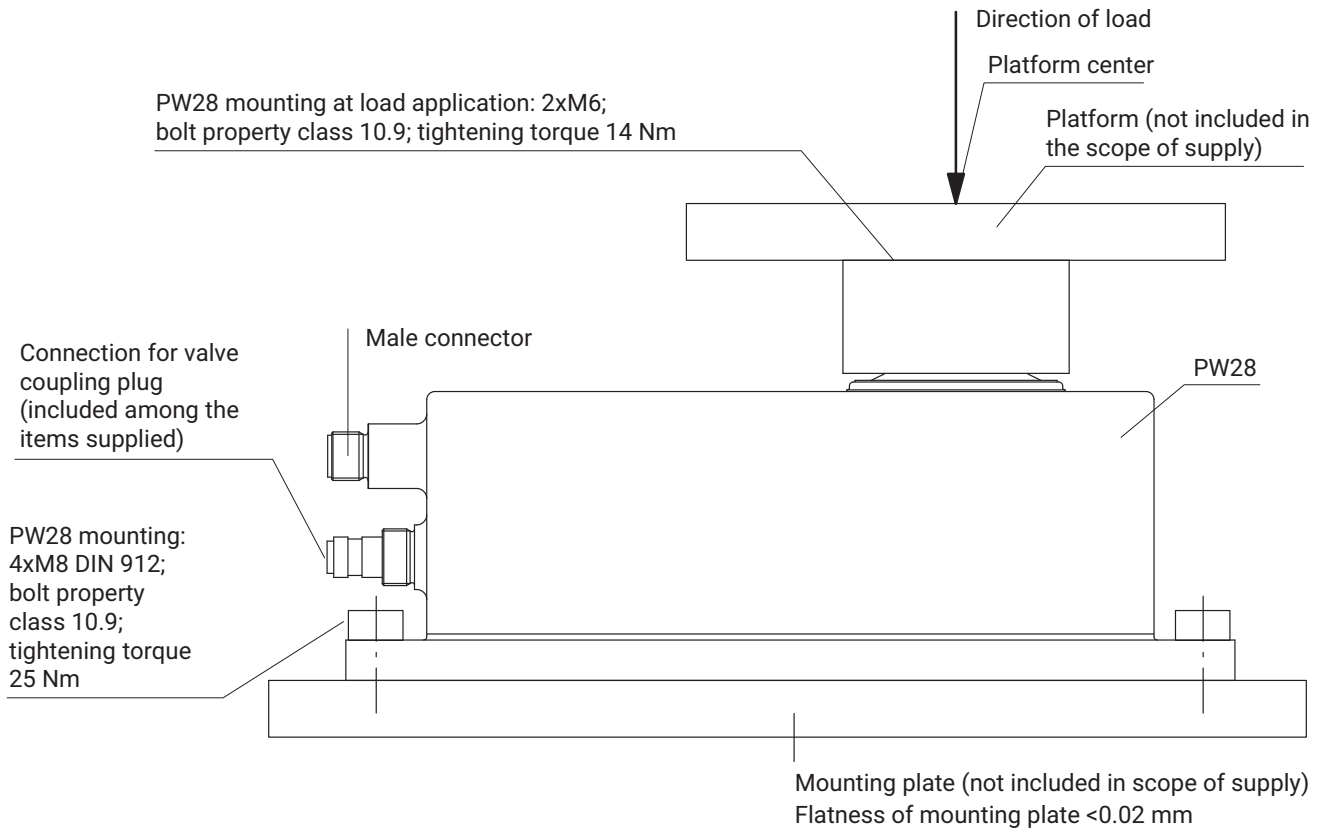
3) The values for deviation in linearity (d_{lin}), relative reversibility error (d_{hy}) and temperature coefficient of the sensitivity (TCS) are approximate values. The sum of these values is within the accumulated error limit specified by OIML R60.

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

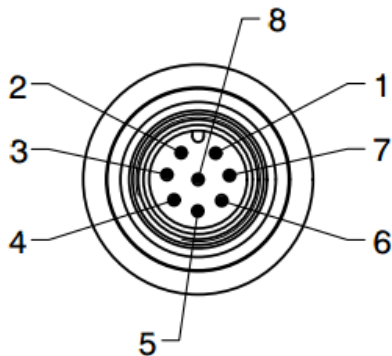
5) As per EN 60529 (IEC 529)

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.