

DATA SHEET

PW29P...

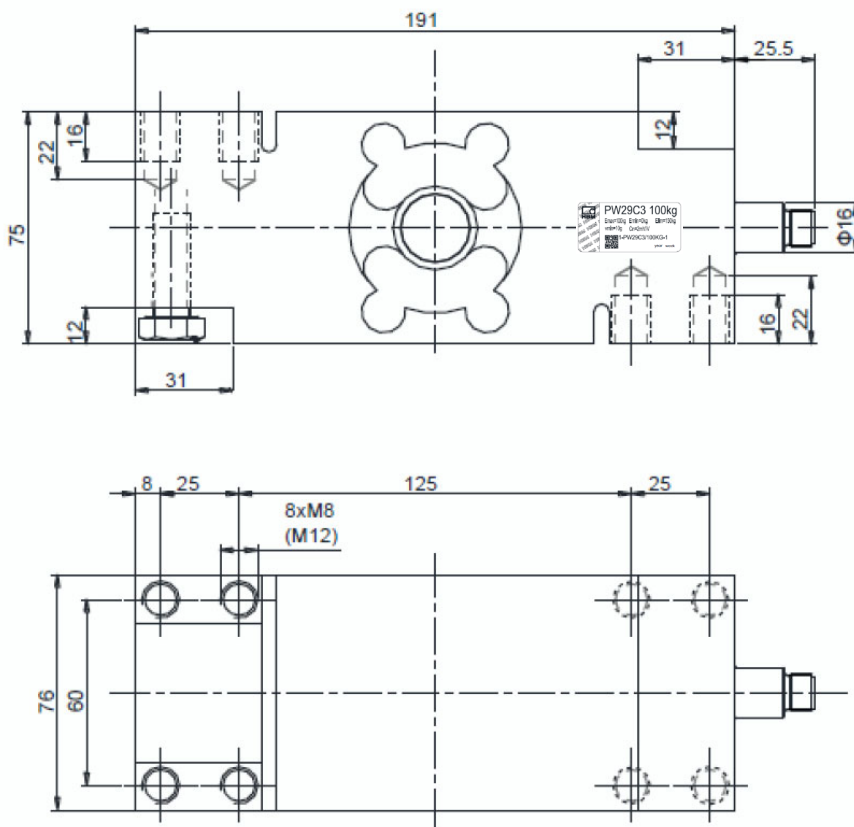
Single point load cell

SPECIAL FEATURES

- Nominal load 100 kg ... 1,000 kg
- Stainless steel
- Hermetically encapsulated (IP68; IP69K)
- Platform sizes 800 x 800 mm
- High ratio of minimum verification interval Y
- Different cable lengths and other accessories deliverable



DIMENSIONS



Dimensions in mm
(1 mm = 0.03937 inches)

SPECIFICATIONS

Type			PW29P...			
Accuracy class ¹⁾			C3 Multi Range (MR)			
Number of load cell verification intervals	n_{LC}		3000			
Maximum capacity	E_{max}	kg	100	250	500	1000
Minimum load cell verification interval	v_{min}	g	10	20	50	100
Ratio of minimum verification interval	Y		10,000	12,500	10,000	10,000
Temperature coefficient of the zero signal per 10 K	TK_0	% of C_n	0.0140	± 0.0112	± 0.0140	± 0.0140
Maximum platform size		mm	800 x 800			
Nominal (rated) sensitivity	C_n	mV/V	2.0 \pm 0.2			
Zero signal error			± 0.1			
Temperature coefficient of the sensitivity per 10 K ²⁾ in the temperature range +20 ... +40 °C -10 ... +20 °C	TK_C	% of C_n	± 0.0175			
			± 0.0117			
Non-linearity ²⁾	d_{lin}		± 0.0166			
Relative reversibility error ²⁾	d_{hy}		± 0.0166			
Minimum dead load output return	MDLOR		± 0.0166			
Off-center load error ³⁾		ppm	≤ 233			
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	> 2			
Nominal (rated) ambient temperature range	B_T	°C	-10 ... +40			
Operating temperature range	B_{tu}		-10 ... +50			
Storage temperature range	B_{tl}		-25 ... +85			
Cleaning temperature			max. +120 for max. 10 minutes			
Limit load at max. 100 mm eccentricity	E_L	% of E_{max}	150			
Limit lateral loading, static	E_{lq}		300			
Breaking load	E_d		300			
Nominal (rated) displacement ⁴⁾	s_{nom}	mm	< 0.2	< 0.2	< 0.25	< 0.3
Displacement at 1/3 · E_{max} and 283 mm eccentricity	s_{exz}		< 0.1	< 0.15	< 0.2	< 0.3
Weight, approx.	m	kg	6.1			
Degree of protection ⁷⁾			IP68 (test conditions 1 m water column / 100 h); IP69K (water at high pressure, steam cleaner) ⁵⁾			
Material:	Measuring body Cover		Steel 1.4545 ⁶⁾ Steel 1.6908 ⁶⁾			

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 (TK_C) are recommended values. The sum of these values is within the cumulated error limit laid down by OIML R60.

³⁾ As per OIML R76.

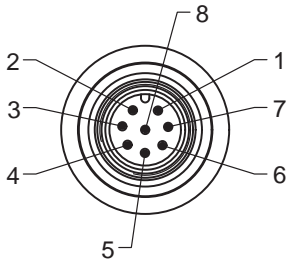
⁴⁾ Loading with E_{max} and center of gravity in center of load cell.

⁵⁾ Based on DIN 40050, Part 9 specifications, for road vehicles.

⁶⁾ As per EN 10088-1

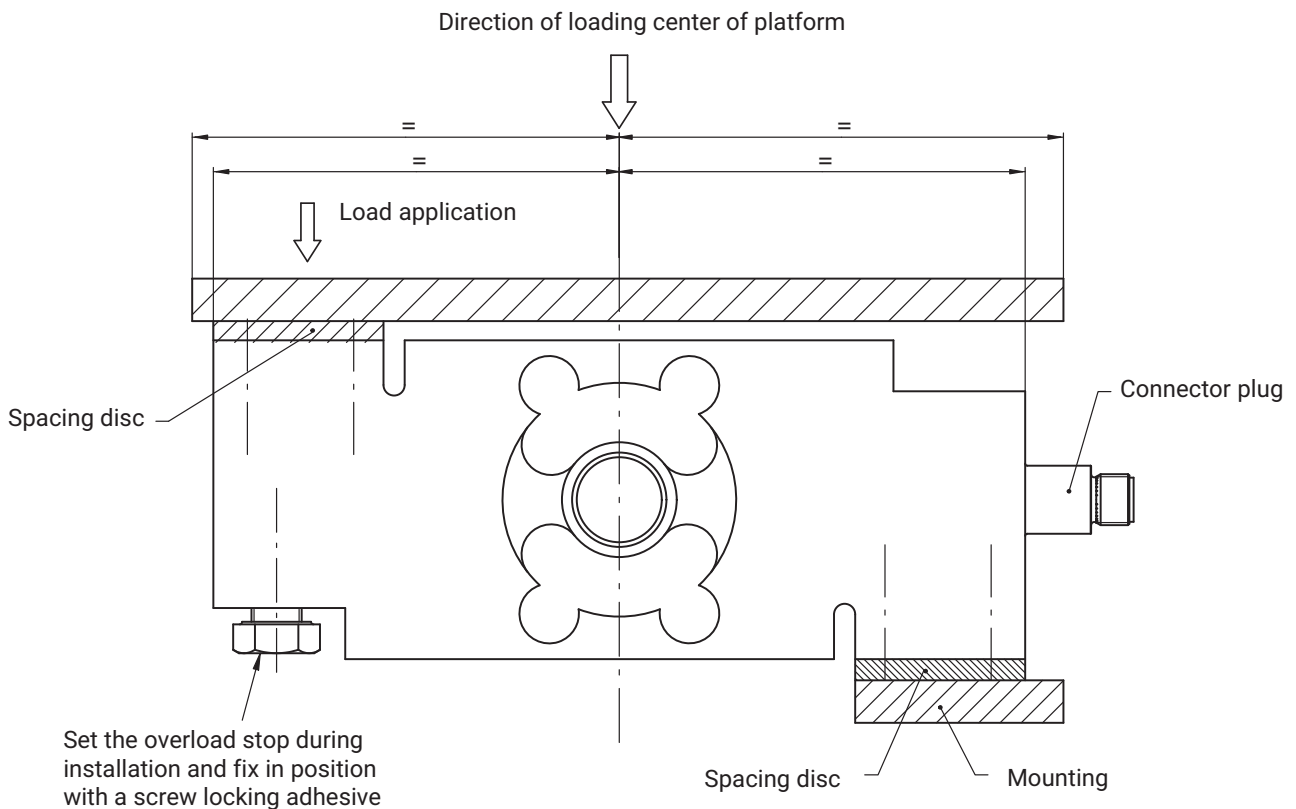
⁷⁾ As per EN 60529 (IEC 529)

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 (-)

MOUNTING INSTRUCTIONS



Maximum capacity	Socket head cap screw	Maximum tightening torque
100 kg ... 250 kg	M8 10.9	35 N·m
500 kg ... 1000 kg	M12 10.9	110 N·m

PRODUCT NUMBERS (OVERVIEW)

PW29P... (stainless steel, hermetically sealed)

Type	PW29P
Accuracy class	C3-MR (OIML) (Multi Range)
Maximum capacity	Ordering number
100 kg	1-PW29PC3/100KG-1
250 kg	1-PW29PC3/250KG-1
500 kg	1-PW29PC3/500KG-1
1000 kg	1-PW29PC3/1T-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-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

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 (-)

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