

DATA SHEET

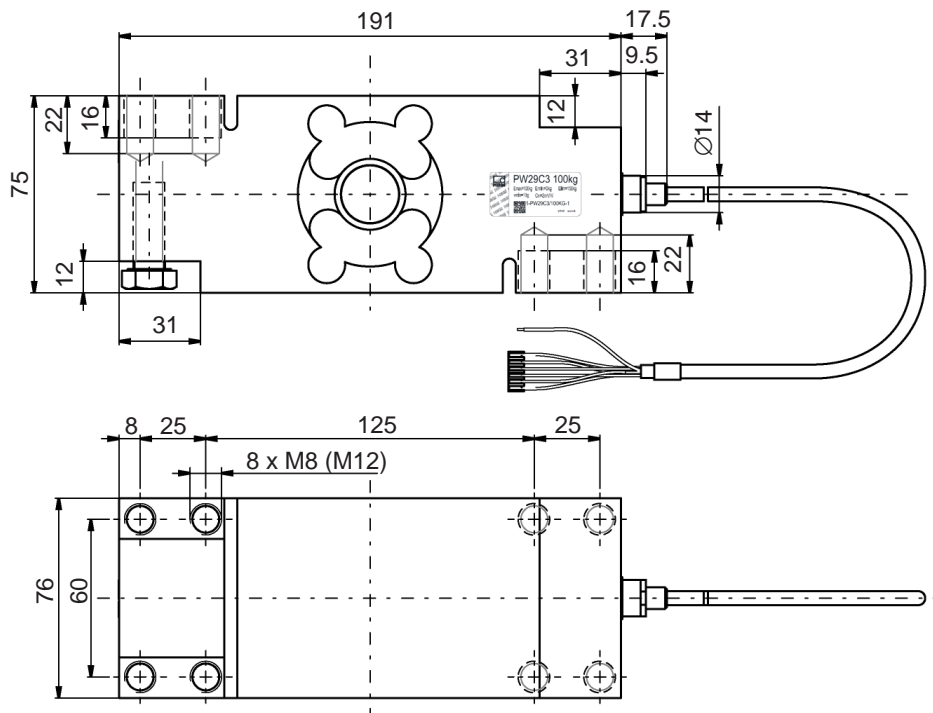
PW29... Single point load cell

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



DIMENSIONS



Dimensions in mm (1 mm = 0.03937 inches)

SPECIFICATIONS

Type			PW29...				
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 to +40 °C -10 to +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	380 \pm 15				
Output resistance	R_0		300 ... 500				
Reference excitation voltage	U_{ref}	V	5				
Nominal (rated) range of the excitation voltage	B_U		1 to 12				
Maximum excitation voltage			15				
Insulation resistance at 100 V _{DC}	R_{is}	G Ω	> 2				
Nominal (rated) temperature range	B_T	°C	-10 to +40				
Operating temperature range	B_{tu}		-10 to +50				
Storage temperature range	B_{tl}		-25 to +70				
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	6.3				
Degree of protection ⁷⁾			IP68 (test conditions 1 m water column / 100 h); IP69K (water at high pressure, steam cleaner) ⁵⁾				
Cable length (standard)		m	3				
Material:	Measuring body, cable entry		Steel 1.4545 ⁶⁾				
	Cable sheath		PVC				
	Cover		Steel 1.6908				

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 according to 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

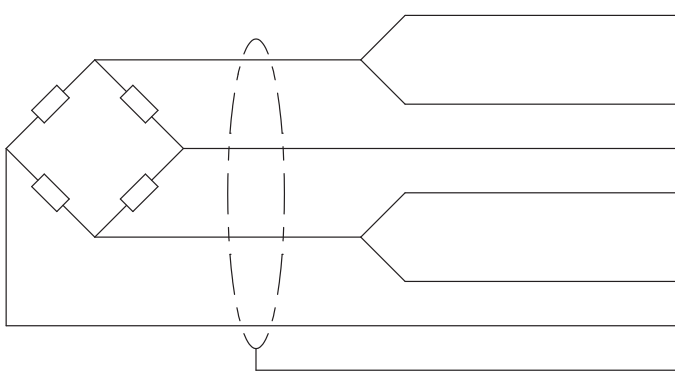
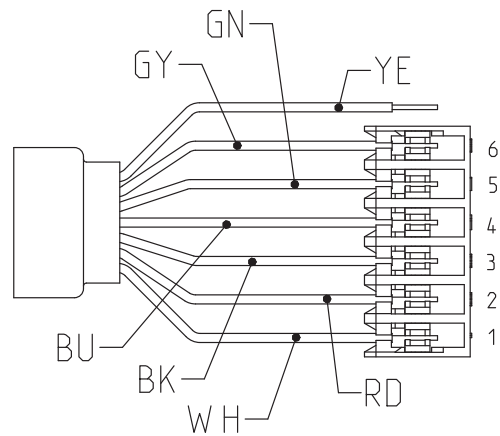
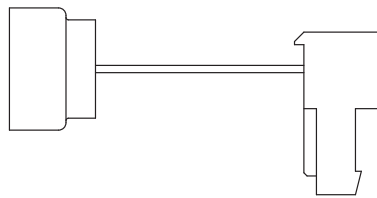
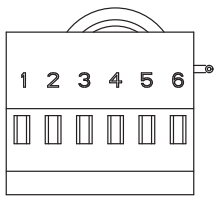
⁶⁾ As per EN 10088-1

⁷⁾ As per EN 60529 (IEC 529)

CABLE ASSIGNMENT

Connection with 6-wire cable

Schematic diagram of a TE connector (TE 3-640442-6), 6-pin



Plug-in contact 4 (blue [BU]) = excitation voltage (+)

Plug-in contact 5 (green [GN]) = sense line (+)

Plug-in contact 1 (white [WH]) = measurement signal (+)

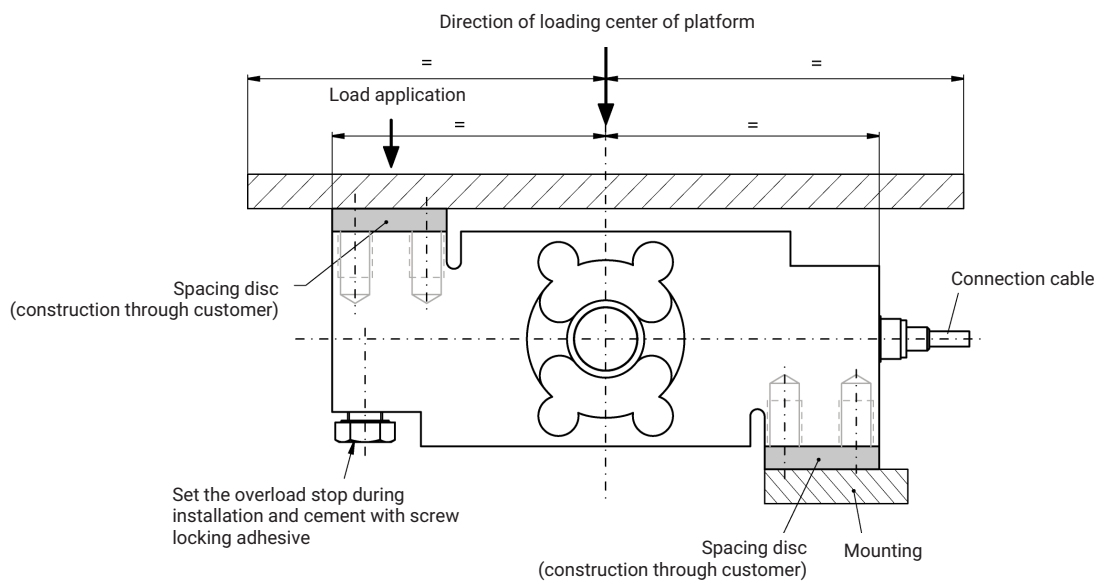
Plug-in contact 3 (black [BK]) = excitation voltage (-)

Plug-in contact 6 (gray [GY]) = sense line (-)

Plug-in contact 2 (red [RD]) = measurement signal (-)

Shield (yellow [YN]) = Cable shield

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)

PW29... (stainless steel, hermetically sealed)

Type	PW29...
Accuracy class	C3-MR (OIML)c
Comments	Cable length 3 m (six-wire configuration)
Maximum capacity	Order number
100 kg	1-PW29C3/100KG-1
250 kg	1-PW29C3/250KG-1
500 kg	1-PW29C3/500KG-1
1000 kg	1-PW29C3/1T-1

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