

PW6C

Single point load cells

with  **IO-Link**
option

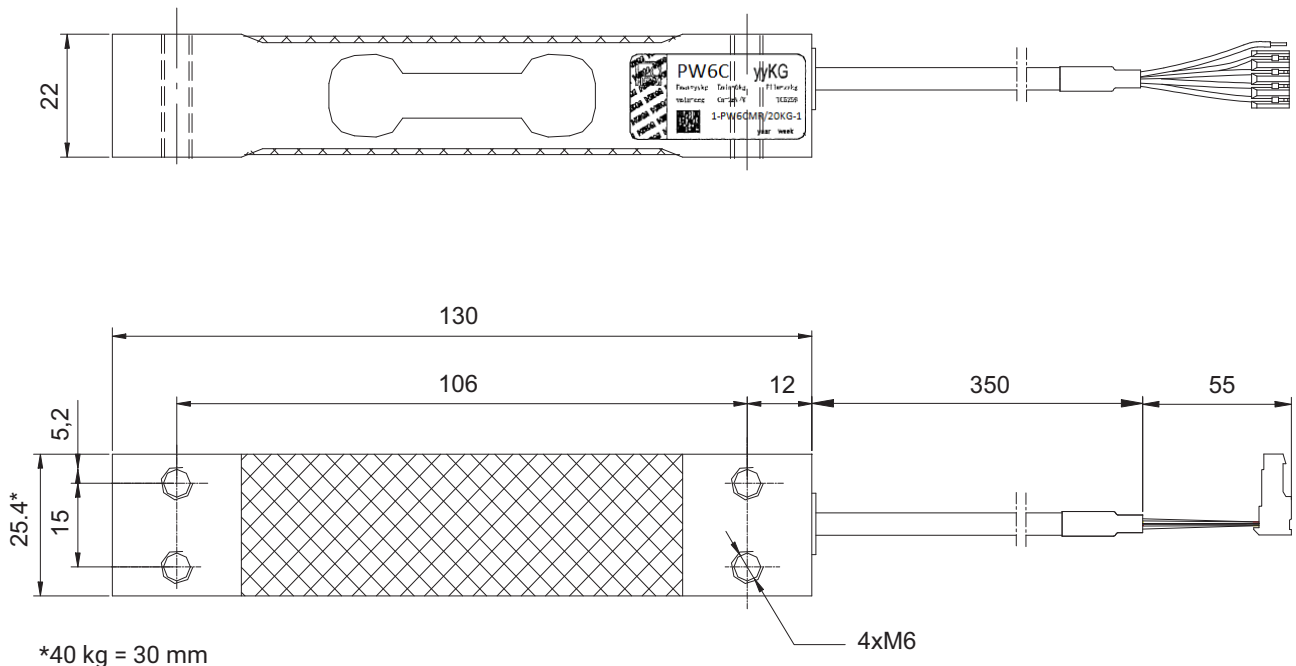
SPECIAL FEATURES

- Max. capacities: 1.5 kg ... 40 kg
- Aluminum
- Accuracy class C3MR & C6
- Off center load compensated
- Shielded connection cable
- Different cable lengths and other options deliverable
- Available as LCMC measurement chain with smart option (IO-Link), with digital option (CANopen or RS-485), with analog option (4 ... 20 mA or 0 ... 10 V)

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DIMENSIONS



Dimensions in mm (1 mm = 0.03937 inches)

SPECIFICATIONS

Type			PW6C...							
Accuracy class ¹⁾			C3 Multi Range (MR)							
Number of load cell verification intervals	n_{LC}		3000							
Maximum capacity	E_{max}	kg	1.5	3	5	10	15	20	30	40
Minimum load cell verification interval	v_{min}	g	0.1	0.2	0.5	1		2		5
Temperature coefficient of zero signal	TK_0	% of $C_n/10K$	± 0.0093		± 0.0140		± 0.0093	± 0.0140	± 0.0093	± 0.0175
Ratio of minimum verification interval	Y		15,000		10,000		15,000	10,000	15,000	8,000
Max. platform size		mm	300 x 300							
Sensitivity	C_n	mV/V	2.2 \pm 0.2							
Zero signal			0 \pm 0.12							
Temperature effect on sensitivity ²⁾ in the temperature range +20 ... +40 °C [+68 ... +104 °F] -10 ... +20 °C [+14 ... +68 °F]	TK_C	% of $C_n/10 K$	± 0.0175 ± 0.0117							
Relative reversibility error ²⁾	d_{hy}	% of C_n	± 0.0166							
Non-linearity ²⁾	d_{lin}		± 0.0166							
Ratio of minimum dead load output return	MDLOR		± 0.0166							
Off-center load error ³⁾			± 0.0233							
Input resistance	R_{LC}		Ω	300...500						
Output resistance	R_0	300...500								
Reference excitation voltage	U_{ref}	V	5							
Nom. range of excitation voltage	B_U		1 ... 12							
Max. excitation voltage		V	15							
Isolation resistance at 100 V_{DC}	R_{is}	G Ω	> 2							
Nominal (rated) range of ambient temperature	B_T	°C [°F]	-10 ... +40 [+14 ... +104]							
Operating temperature range	B_{tu}		-10 ... +50 [+14 ... +122]							
Storage temperature range	B_{tl}		-25 ... +70 [-13 ... +158]							
Limit load at max. 100 mm eccentricity	E_L	% of E_{max}	150							
Lateral load limit, static	E_{lq}		300							
Service load at max. 100 mm eccentricity	E_U		150							
Breaking load at max. 20 mm eccentricity	E_d		300							
Relative permissible oscillation stress at max. 20 mm eccentricity	F_{srel}		70							
Nominal (rated) displacement at E_{max} , approx.	s_{nom}		mm	< 0.5						
Weight, approx.	m	kg	0.25							
Degree of protection ⁴⁾			IP67							
Material			Aluminum Silicone rubber PVC							

¹⁾ According to OIMLR60 with $P_{LC} = 0.7$

²⁾ The values for linearity deviation (d_{lin}), relative reversibility error (d_{hy}) and temperature effect on sensitivity (TK_C) are recommended values. The sum of these values remain within the cumulated error limit acc. to OIML R60.

³⁾ According to OIML R76.

⁴⁾ According to EN60529 (IEC529)

SPECIFICATIONS (CONTINUATION)

Type			PW6C...						
Accuracy class ¹⁾			C6						
Maximum number of load cell intervals	n_{LC}		6000						
Maximum capacity	E_{max}	kg	3	5	10	15	20	30	40
Minimum LC verification interval	v_{min}	g	0.2	0.5	1	1	2	2	5
Temperature effect on zero balance	TK_0	% of C_n / 10 K	±0.0093	±0.0140	±0.0140	±0.0093	±0.0140	±0.0093	±0.0175
Max. platform size		mm	300 x 300						
Sensitivity	C_n	mV/V	2.2 ±0.2						
Zero signal			0 ±0.10						
Temperature effect on sensitivity ²⁾ in the temperature range +20 ... +40 °C [+68 ... +104 °F] -10 ... +20 °C [+14 ... +68 °F]	TK_C	% of C_n / 10 K	±0.0087 ±0.0058						
Relative reversibility error ²⁾	d_{hy}	% of C_n	±0.0083						
Non-linearity ²⁾	d_{lin}		±0.0083						
Ratio of minimum dead load output return	DR		±0.0083						
Off-center load error ³⁾			±0.0116						

1) According to OIMLR60 with $P_{LC} = 0.7$

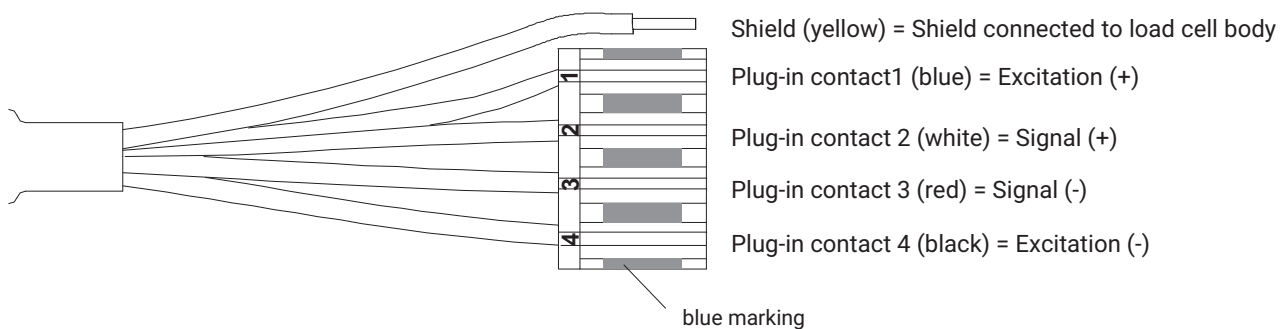
2) The values for linearity deviation (d_{lin}), relative reversibility error (d_{hy}) and temperature effect on sensitivity (TK_C) are recommended values. The sum of these values remain within the cumulated error limit acc. to OIML R60.

3) According to OIML R76.

WIRING CODE

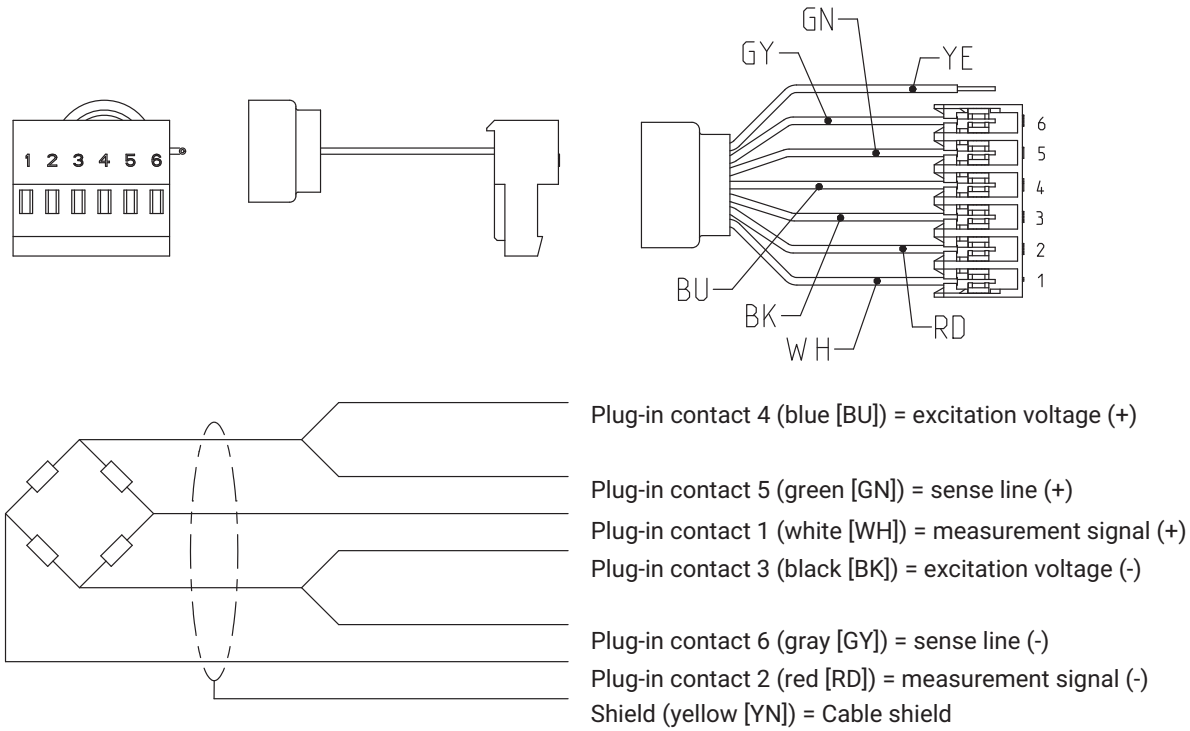
Connection with 4 wire cable (cable length: 0.35 m)

Detailed description of the Pancon plug (CE100F26-4), 4-pole



Connection with 6 wire cable, 6 x 0.14 mm²/AWG 26 (cable length, selectable: 0.35 m; 1.5 m; 3 m; 6 m)

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



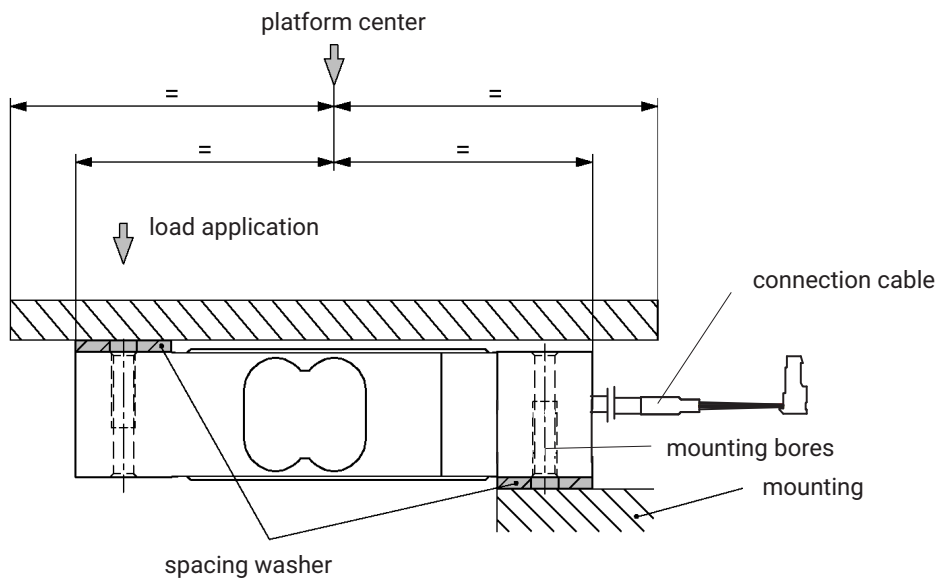
MOUNTING AND LOAD APPLICATION

The load cells are fixed at the mounting bores. For the recommended screws and tightening torques refer to the table below:

Max. capacity	Thread	Min. property class	Tightening torque ¹⁾
1.5...40 kg	M6	8.8	10 N·m

¹⁾ Recommended value for the stated property class. For screw dimensioning please refer to the appropriate information given by the screw manufacturers.

Load must not be applied to the side where the cable connection is located, as this would cause a force shunt.



ORDERING CODES

PW6C... (Aluminum)

Type	PW6C
Accuracy	C3-MR (OIML) (Multi Range)
Note	Cable length 0.35 m (4 wire)

Capacity [kg]	Order no.
1.5	1-PW6CMR/1.5KG-1
3	1-PW6CMR/3KG-1
5	1-PW6CMR/5KG-1
10	1-PW6CMR/10KG-1
15	1-PW6CMR/15KG-1
20	1-PW6CMR/20KG-1
30	1-PW6CMR/30KG-1
40	1-PW6CMR/40KG-1

K-PW6C-... (Aluminum), optional versions

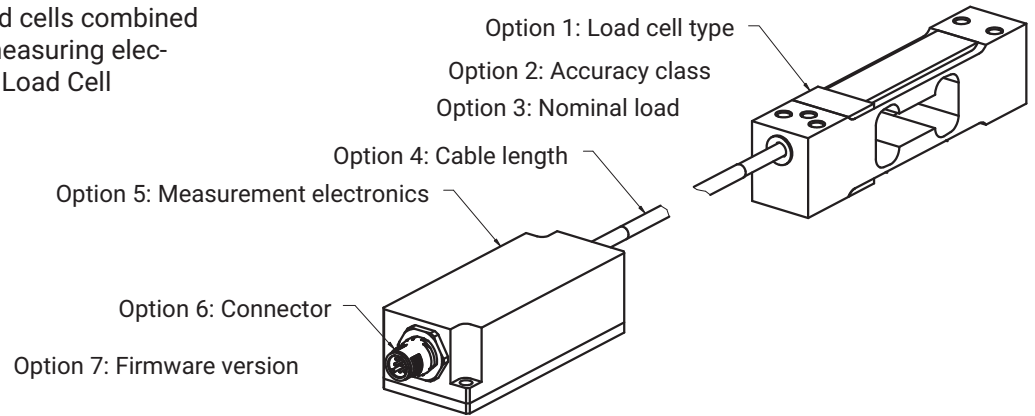
K-PW6C		
1	Code	Option 1: Mechanical version
	N	-
2	Code	Option 2: Accuracy
	MR	C3MR (OIML) (Multi Range)
	C6	C6 (OIML)
3	Code	Option 3: Capacity
	1.5	1.5 kg [only with Option 2: = MR]
	3	3 kg
	5	5 kg
	10	10 kg
	15	15 kg
	20	20 kg
	30	30 kg
4	Code	Option 4: NN
	N	-
5	Code	Option 5: Cable length
	4_0.35	0.35 m (4 wire) (Standard)
	6_0.35	0.35 m (6 wire)
	6_1.5	1.5 m (6 wire)
	6_3	3 m (6 wire)
	6_6	6 m (6 wirer)
6	Code	Option 6: Miscellaneous
	N	Without
	A	2mV/V ±0.1% / 410 Ω ±0.2 Ω (aligned output, suitable for connection in parallel)

K-PW6C - N - - - N - -

1 2 3 4 5 6

LCMC - LOAD CELL MEASURING CHAIN

A wide range of famous load cells combined with a choice of excellent measuring electronics makes your tailored Load Cell Measuring Chain.



K-LCMC-PW6C ordering options

K-LCMC		
1	Code	Option 1: Load cell type
	PW6C	PW6C
2	Code	Option 2: Accuracy class
	MR	C3 MR (OIML)
3	Code	Option 3: Nominal load
	1K50	1.5 kg
	3K00	3 kg
	5K00	5 kg
	10K0	10 kg
	15K0	15 kg
	20K0	20 kg
	30K0	30 kg
40K0	40 kg	
4	Code	Option 4: Cable length
	0M3	0.3 m
	0M5	0.5 m
	1M0	1.0 m
	3M0	3.0 m
5	Code	Option 5: Measurement electronics
	105C	CAN (200 S/s)
	105R	RS485 (200 S/s) 2-wire
	112C	CAN (1,200 S/s)
	112R	RS485 (1,200 S/s) 4-wire
	RM42	Analog 4 ... 20 mA
	RM43	Analog 0 .. 10 V
RMIO	IO-link	
6	Code	Option 6: Connector
	M12A8	M12 A-coded, male, 8-pin [only with option 5 = 105C, 105R, 112C, 112R, RM42, RM43]
	M12A4	M12 A-coded, male, 4-pin [only with option 5 = RMIO]
7	Code	Option 7: Firmware version
	N	NA [only with option 5 = 105C, 105R, 112C, 112R, RM42, RM43]
	01	WTIO 1.07 [only with option 5 = RMIO]

K-LCMC -

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