

PW2C...

Single point load cells

with  **IO-Link**
option

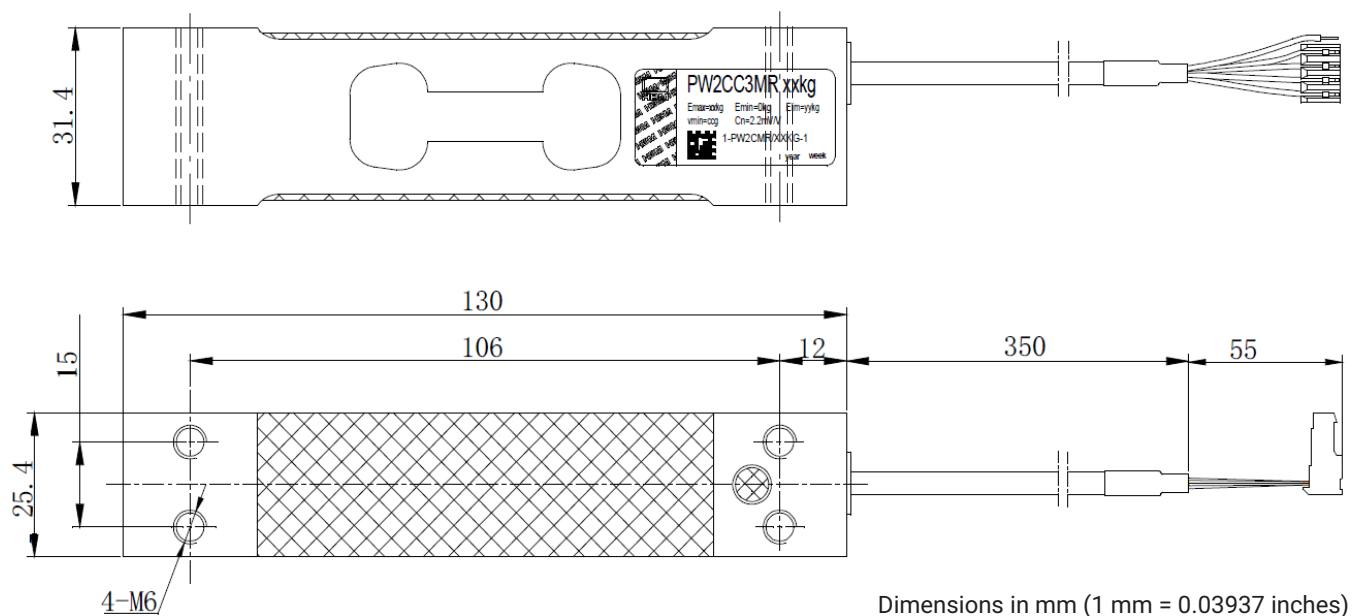
SPECIAL FEATURES

- Max. capacities: 7.2 kg ... 72 kg
- Aluminum
- High ratio of minimum verification interval Y
- Off-center load compensation
- Shielded connection cable
- Different cable length 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)

precix  6



DIMENSIONS



SPECIFICATIONS

Type			PW2C...				
Accuracy class acc. to OIML R60 ¹⁾			C3 Multi Range (MR)				
Maximum number of load cell intervals	n_{LC}		3,000				
Maximum capacity ²⁾	E_{max}	kg	7.2	12	18	36	72
Minimum LC verification interval	v_{min}	g	0.5	1	2	5	10
Temperature effect on zero balance	TK_0	% of $C_n/10$ K	±0.0097	±0.0116	±0.0155	±0.0194	±0.0194
Ratio of minimum verification interval	Y		14,400	12,000	9,000	7,200	
Accuracy class acc. to NTEP			III S				
Maximum number of load cell intervals	n_{LC}		3,000				
Maximum capacity	E_{max}	kg	-	-	18	36	-
Minimum LC verification interval	v_{min}	g	-	-	2	5	-
Ratio of minimum verification interval	Y		-	-	9,000	7,200	-
General specifications							
Maximum platform size		mm	380 x 380				
Sensitivity	C_n	mV/V	2.2 ±0.2				
Zero signal		mV/V	0 ±0.12				
Temperature effect on sensitivity ³⁾ 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 ³⁾	d_{hy}	% of C_n	±0.0166				
Linearity deviation ³⁾	d_{lin}		±0.0166				
Minimum dead load output return	MDLOR		±0.0166				
Off-center load error ⁴⁾			±0.0233				
Input resistance	R_{LC}	Ω	300...500				
Output resistance	R_0		300...500				
Reference excitation voltage	U_{ref}	V	5				
Nominal range of excitation voltage	B_U		1 ... 12				
Maximum excitation voltage		V	15				
Isolation resistance at 100 V _{DC}	R_{is}	GΩ	> 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. 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 ⁵⁾			IP67				
Material Measuring body Application protection Cable sheath			Aluminum Silicone rubber PVC				

1) With $P_{LC} = 0.7$

2) Max. eccentric loading according to OIML R76

3) 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 according to OIML R60.

4) According to OIML R76.

5) According to EN 60 529 (IEC 529)

SPECIFICATIONS (CONTINUATION)

Type			PW2C...				
Accuracy class acc. to OIML R60 ¹⁾			C6, C6 Multi Range (MR)				
Maximum number of load cell intervals	n_{LC}		6,000				
Maximum capacity ²⁾	E_{max}	kg	7.2	12	18	36	72
Minimum LC verification interval, (Accuracy class C6)	v_{min}	g	0.5	1	2	5	10
Temperature effect on zero balance (Accuracy class C6)	TK_0	% of $C_n/10$ K	±0.0097	±0.0116	±0.0155	±0.0194	
Ratio of minimum verification interval (Accuracy class C6)	Y		14,400	12,000	9,000	7,200	
Minimum LC verification interval (Accuracy class C6MR)	v_{min}	g	-	-	1	2	-
Temperature effect on zero balance (Accuracy class C6MR)	TK_0	% of $C_n/10$ K	-	-	±0.0077		-
Ratio of minimum verification interval (Accuracy class C6MR)	Y		-	-	18,000		
Accuracy class acc. to NTEP ³⁾			III S				
Maximum number of load cell intervals	n_{LC}		5,000				
Maximum capacity	E_{max}	kg	-	-	18	36	-
Minimum LC verification interval	v_{min}	g	-	-	1.08	2.16	-
Ratio of minimum verification interval	Y		-	-	16,667	16,667	-
General specifications							
Max. platform size		mm	380 x 380				
Sensitivity	C_n	mV/V	2.2 ±0.2				
Zero signal			0 ±0.11				
Temperature effect on sensitivity ⁴⁾ 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 ⁴⁾	d_{hy}	% of C_n	±0.0083				
Non-linearity ⁴⁾	d_{lin}		±0.0083				
Minimum dead load output return	MDLOR		±0.0083				
Off-center load error ⁵⁾			±0.0116				

1) With $P_{LC} = 0.7$

2) Max. eccentric loading according to OIML R76

3) NTEP III S 5000 only in conjunction with accuracy class OIML C6MR

4) 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.

5) According to OIML R76.

For further specifications, see Table PW2C..., Accuracy class C3 Multi Range (MR) (page 2)

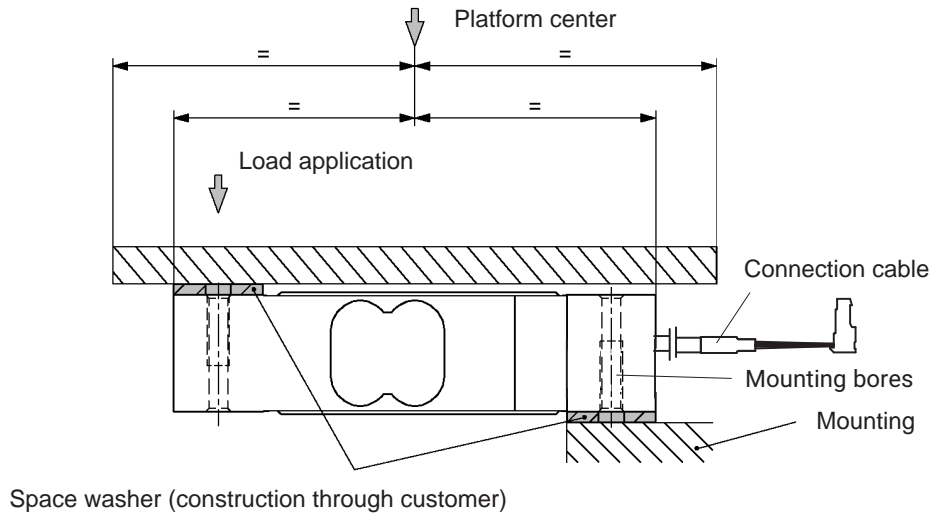
MOUNTING AND LOAD APPLICATION

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

Mac. capacity	Thread	Min. property class	Tightening torque ¹⁾
7.2...36 kg	M6	8.8	6 N·m
72 kg	M6	10.9	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.

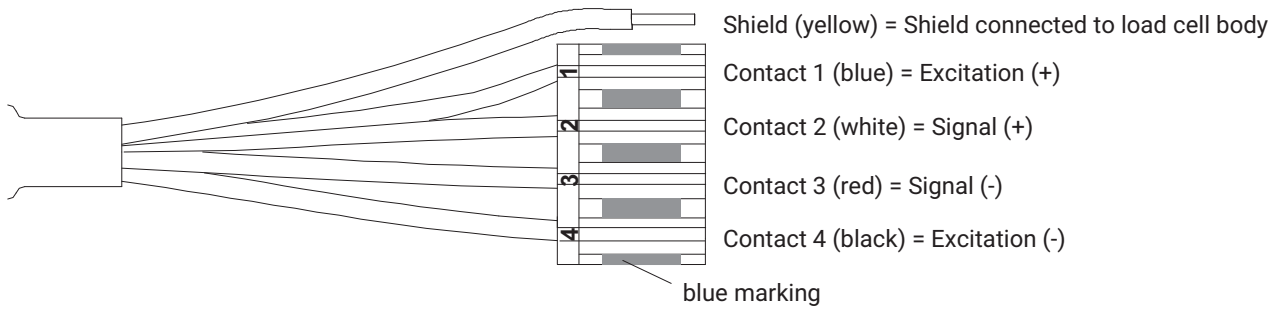
Load must not be applied to the side where the cable connection is located, as this would cause a force shunt.



WIRING CODE

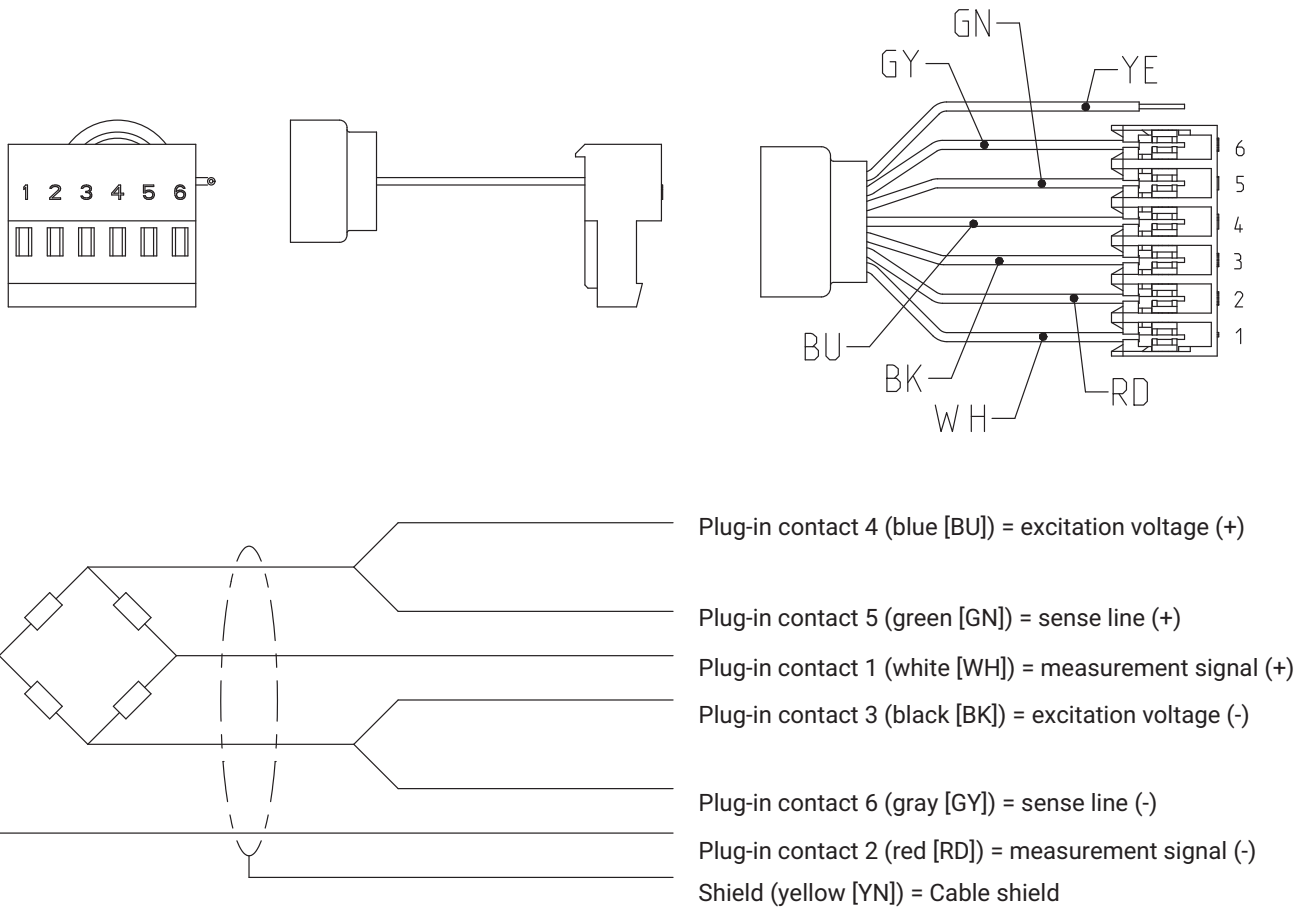
Connection with 4 wire cable, 4 x 0.14 mm²/AWG 26 (cable length: 0.35 m)

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



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



ORDERING CODES

PW2C... / K-PW2C-...

Optimized for static applications

PW2C... (Aluminum)

Type	PW2C			
Accuracy	OIML R60 C3MR	OIML R60 C3MR + NTEP III S 3000	OIML R60 C6	OIML R60 C6MR + NTEP III S 5000
Note	Cable length 0.35 m (4 wire)		Cable length 3 m (6 wire)	
Capacity	Order no.			
7.2 kg	1-PW2CMR/7.2KG-1	-	-	-
12 kg	1-PW2CMR/12KG-1	-	1-PW2CC6/12KG-1	-
18 kg	-	1-PW2CMR/18KG-1	-	1-PW2CC6MR/18KG-1
36 kg	-	1-PW2CMR/36KG-1	-	1-PW2CC6MR/36KG-1
72 kg	1-PW2CMR/72KG-1	-	-	-

K-PW2C... (Aluminum), optional versions

K-PW2C		
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
	7.2	7.2 kg
	12	12 kg
	18	18 kg
	36	36 kg
	72	72 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 Ohm ±0.2 Ohm (aligned output, suitable for connection in parallel)

K-PW2C -

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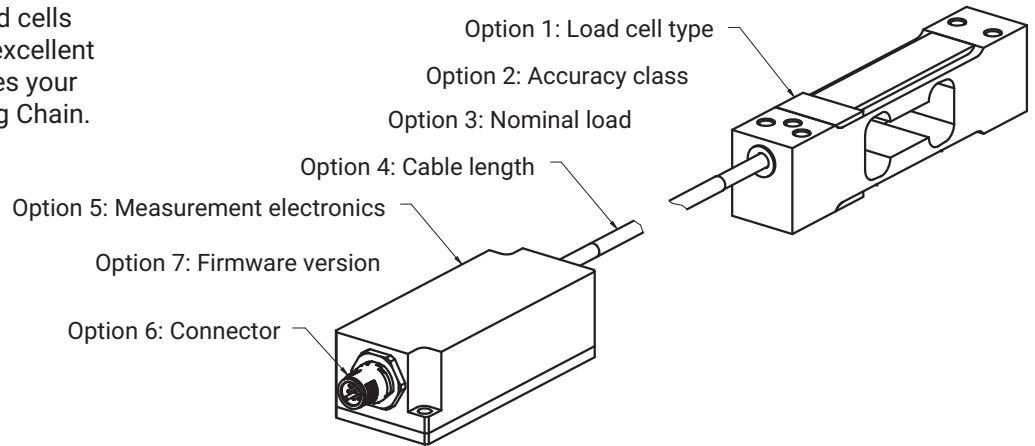
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LCMC - LOAD CELL MEASURING CHAIN

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



K-LCMC-PW2C ordering options

K-LCMC		
1	Code	Option 1: Load cell type
	PW2C	PW2C
2	Code	Option 2: Accuracy class
	MR	C3 MR (OIML)
3	Code	Option 3: Nominal load
	7K20	7.2 kg
	12K0	12 kg
	18K0	18 kg
	36K0	36 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]

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