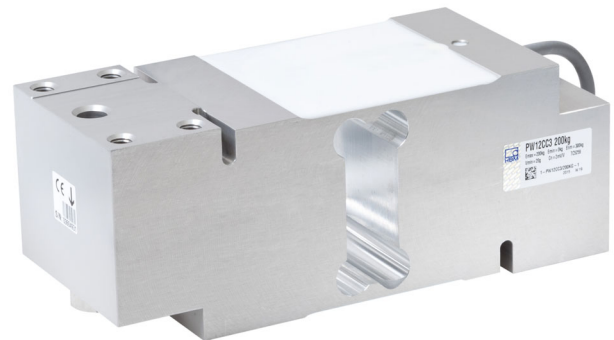


# PW12C... Single point load cells

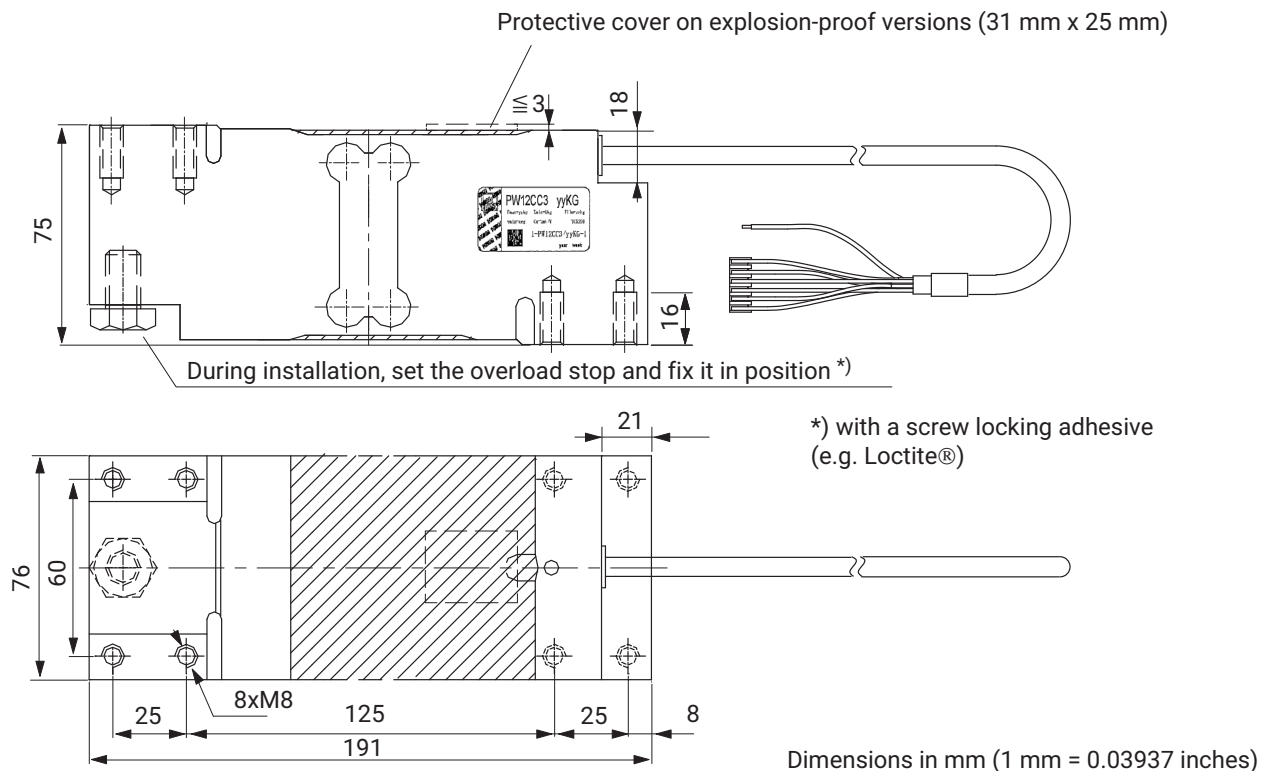
with  **IO-Link**  
option

## SPECIAL FEATURES

- Maximum capacities: 50 kg ... 750 kg
- Aluminum
- High ratio of minimum verification interval Y
- Off-center load compensation
- Complies with EMC directives
- Six-wire circuit
- Explosion protection and other options also available
- 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)



## DIMENSIONS



## SPECIFICATIONS

Type			PW12C...									
Accuracy class <sup>1)</sup>			C3 Multi Range (MR)									
Number of load cell verification intervals	$n_{LC}$		3000									
Maximum capacity <sup>2)</sup>	$E_{max}$	kg	50	75	100	150	200	250	300	500	635	750
Minimum load cell verification interval, accuracy class C3MR	$V_{min}$	g	5	5	10	10	20	20	20	50	50	50
Temperature coefficient of zero signal, accuracy class C3MR	$TC_0$	% of $C_n$ / 10 K	$\pm 0.0140$	$\pm 0.0093$	$\pm 0.0140$	$\pm 0.0093$	$\pm 0.0140$	$\pm 0.0112$	$\pm 0.0093$	$\pm 0.0140$	$\pm 0.0110$	$\pm 0.0093$
Ratio of minimum verification interval		Y	10,000	15,000	10,000	15,000	10,000	12,500	15,000	10,000	12,700	15,000
Maximum platform size		mm	800 x 800									
Nominal sensitivity	$C_n$	mV/V	2.0 $\pm$ 0.2 (Option 6: A = 2mV/V $\pm$ 0.1%)									
Zero signal			0 $\pm$ 0.1									
Temperature coefficient of sensitivity <sup>3)</sup> Temperature range: +20 ... +40 °C -10 ... +20 °C	$TC_c$	% of $C_n$ / 10K	$\pm 0.0175$ $\pm 0.0117$									
Relative reversibility error <sup>3)</sup>	$d_{hy}$	% of $C_n$	$\pm 0.0166$									
Non-linearity <sup>3)</sup>	$d_{lin}$		$\pm 0.0166$									
Minimum dead load output return	DR		$\pm 0.0166$									
Off-center load error <sup>4)</sup>			$\pm 0.0233$									
Input resistance	$R_{LC}$	$\Omega$	300 ... 500									
Output resistance	$R_0$		300 ... 500 (Option 6: A = 410 $\Omega$ $\pm$ 0.2 $\Omega$ )									
Reference excitation voltage	$U_{ref}$	V	5									
Nominal (rated) range of the excitation voltage	$B_U$		1 ... 12									
Maximum excitation voltage	$B_U$		15									
Insulation resistance at 100 V <sub>DC</sub>	$R_{is}$	G $\Omega$	> 2									
Nominal (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. 100 mm eccentricity	$E_L$	% of $E_{max}$	150									
Limit lateral loading, static	$E_{lq}$		300									
Service load at max. 100 mm eccentricity	$E_u$		150									
Breaking load at max. 20 mm eccentricity	$E_d$		300									
Relative permissible oscillation stress at max. 20 mm eccentricity	$F_{srel}$		70									
Rated displacement at $E_{max}$ , approx.	$s_{nom}$	mm	< 0.5									
Weight, approx.	m	kg	2.4									

Type	PW12C...		
Degree of protection <sup>5)</sup>			IP67
Material			Aluminum Silicone rubber PVC
Measuring body			
Covering agent			
Cable sheath			

1) As per OIMLR60, with  $P_{LC} = 0.7$

2) Maximum eccentric loading as per OIML R76

3) If the values for non-linearity ( $d_{lin}$ ), relative reversibility error ( $d_{hy}$ ) and temperature coefficient of sensitivity ( $TC_C$ ) are added together, they are within the cumulated error limit specified in OIML R60.

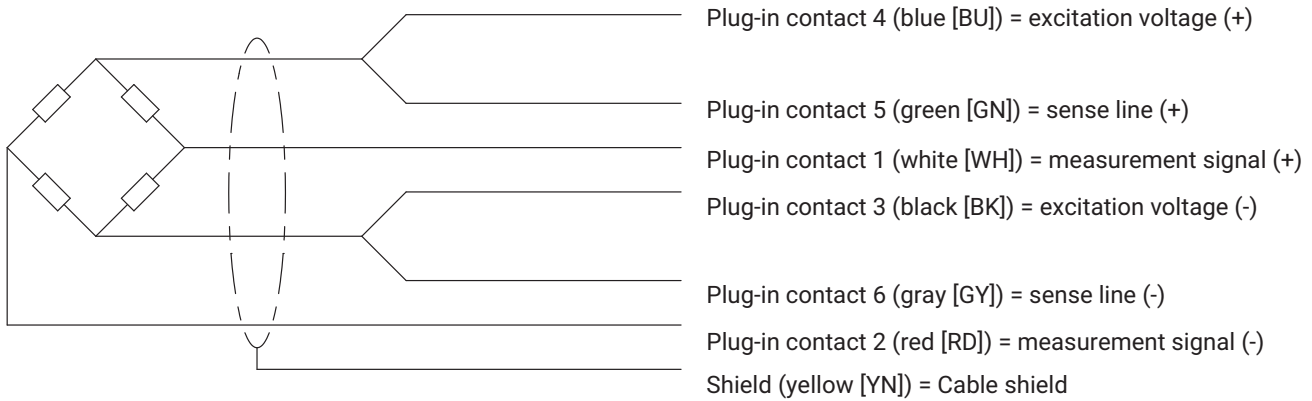
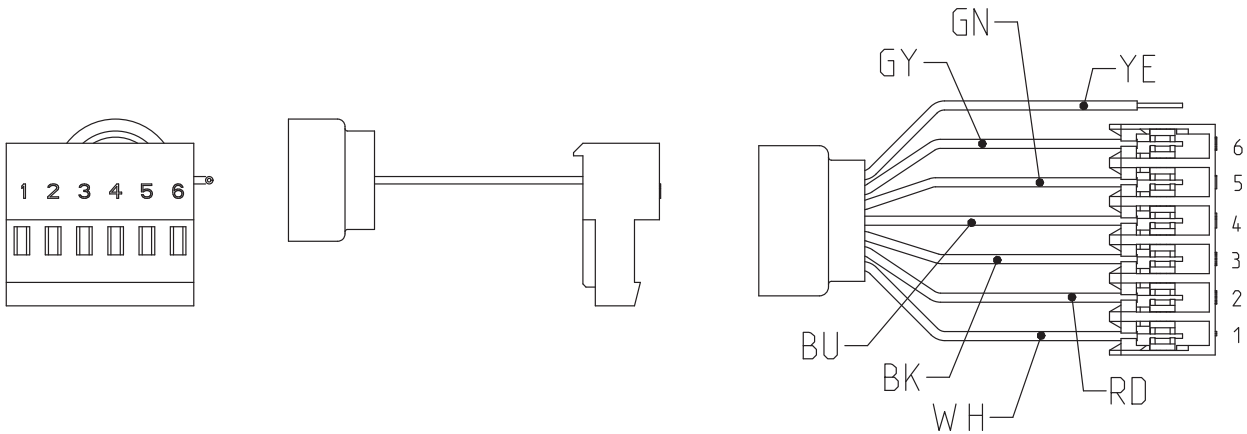
4) Off-center load deviation per OIML R76

5) As per EN 60 529 (IEC 529)

## CABLE ASSIGNMENT

### 6-wire cable connection, 6 x 0.14 mm<sup>2</sup>/AWG 26 (available cable lengths: 1.5 m; 3 m; 6 m; 12 m)

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



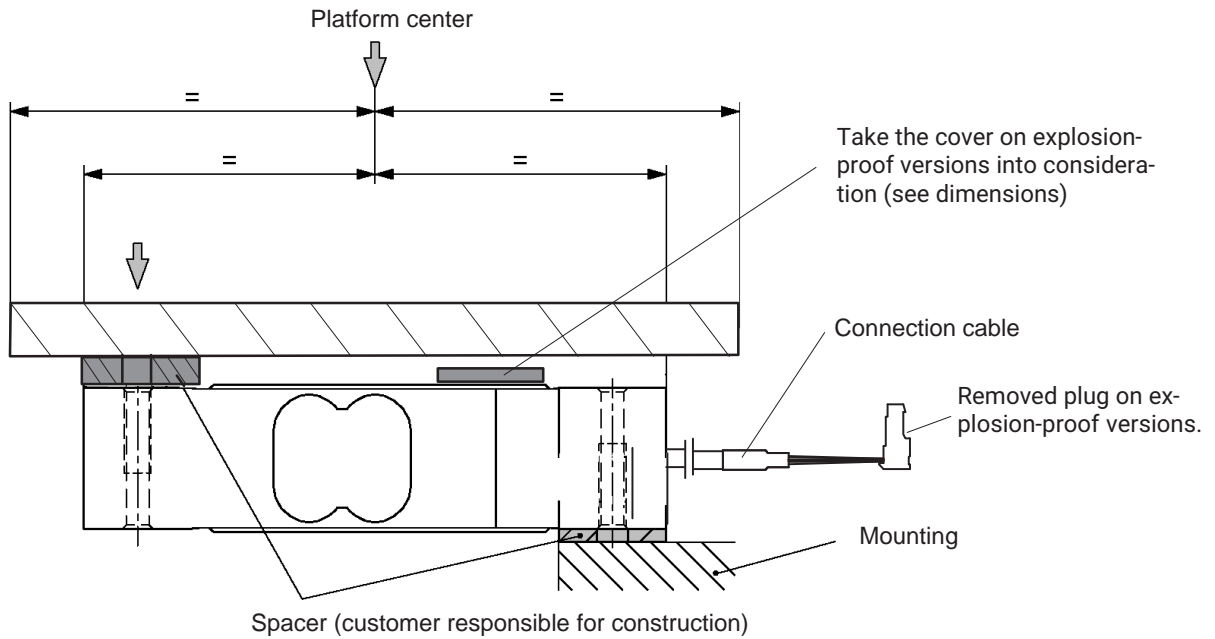
## MOUNTING AND LOAD APPLICATION

The load cells are attached at the mounting holes, the load is applied at the other end. The recommended screws and tightening torques can be found in the table below:

Maximum capacities	Thread	Min. property class	Tightening torque <sup>1)</sup>
50...500 kg	M8	10.9	35 N·m
635 kg, 750 kg	M8	12.9	42 N·m

<sup>1)</sup> Recommended value for the specified property class. Please comply with the screw manufacturer's instructions with regard to screw dimensions

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



## PRODUCT NUMBERS

### PW12C... (aluminum)

<b>Type</b>	PW12C
<b>Accuracy class</b>	C3-MR (OIML) (Multi Range)
<b>Comments</b>	Cable length 3 m (6-wire)

Maximum capacity [kg]	Ordering number
50	1-PW12CC3/50KG-1
75	1-PW12CC3/75KG-1
100	1-PW12CC3/100KG-1
150	1-PW12CC3/150KG-1
200	1-PW12CC3/200KG-1
250	1-PW12CC3/250KG-1
300	1-PW12CC3/300KG-1
500	1-PW12CC3/500KG-1
635	1-PW12CC3/635KG-1
750	1-PW12CC3/750KG-1

**K-PW12C-... (aluminum), optional versions**

K-PW12C		
1	Code	Option 1: Mechanical design
	N	-
2	Code	Option 2: Accuracy class
	MR	C3-MR (OIML) (Multi Range)
3	Code	Option 3: Nominal load
	50	50 kg
	75	75 kg
	100	100 kg
	150	150 kg
	200	200 kg
	250	250 kg
	300	300 kg
	500	500 kg
	635	635 kg
4	Code	Option 4: Explosion protection
	N	No explosion protection
	AI1/21	ATEX+IECEX+FM Zone 1/21, intrinsically safe; II 2G Ex ia IIC T6/T4 Gb + II 2D Ex ia IIIC T125°C Db*
	AI2/22	ATEX+IECEX Zone 2/22, not intrinsically safe; II 3G Ex ec IIC T6/T4 Gc + II 3D Ex tc IIIC T125°C Dc*
5	Code	Option 5: Cable length
	1.5	1.5 m
	3	3 m (standard)
	6	6 m
	12	12 m
6	Code	Option 6: Other
	N	Without
	A	2 mV/V ±0.1% / 410 Ω ± 0.2 Ω (adjusted output, suitable for parallel connection)

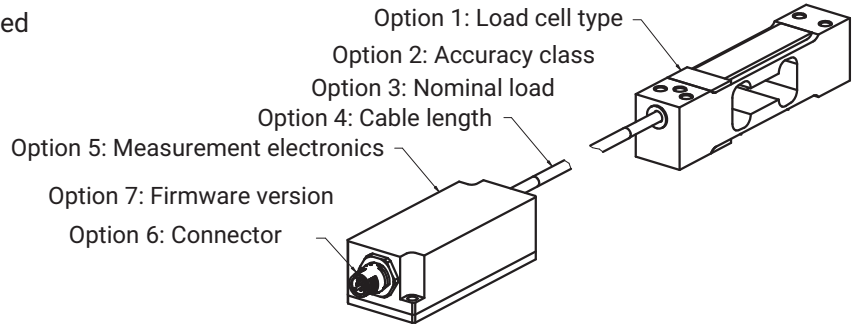
K-PW12C -  -  -  -  -  -

1                      2                      3                      4                      5                      6

\* Including EC-Type Examination Certificate/Certificate of Conformity BVS 13 ATEX X 108 X/IECEX BVS 13.0109 X

## 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-PW12C ordering options

K-LCMC		
1	<b>Code</b>	<b>Option 1: Load cell type</b>
	PW12C	PW12C
2	<b>Code</b>	<b>Option 2: Accuracy class</b>
	MR	C3 MR (OIML)
3	<b>Code</b>	<b>Option 3: Nominal load</b>
	50K0	50 kg
	75K0	75 kg
	100K	100 kg
	150K	150 kg
	200K	200 kg
	250K	250 kg
	300K	300 kg
	500K	500 kg
	635K	635 kg
750K	750 kg	
4	<b>Code</b>	<b>Option 4: Cable length</b>
	0M3	0.3 m
	0M5	0.5 m
	1M0	1.0 m
	3M0	3.0 m
5	<b>Code</b>	<b>Option 5: Measurement electronics</b>
	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	<b>Code</b>	<b>Option 6: Connector</b>
	M12A8	M12 A-coded, male, 8-pin
	M12A4	M12 A-coded, male, 4-pin
7	<b>Code</b>	<b>Option 7: Firmware version</b>
	N	NA
	01	WTIO 1.03.00

K-LCMC - 

P	W	1	2	C
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M	R
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