

DATA SHEET



PW22... Single point load cells

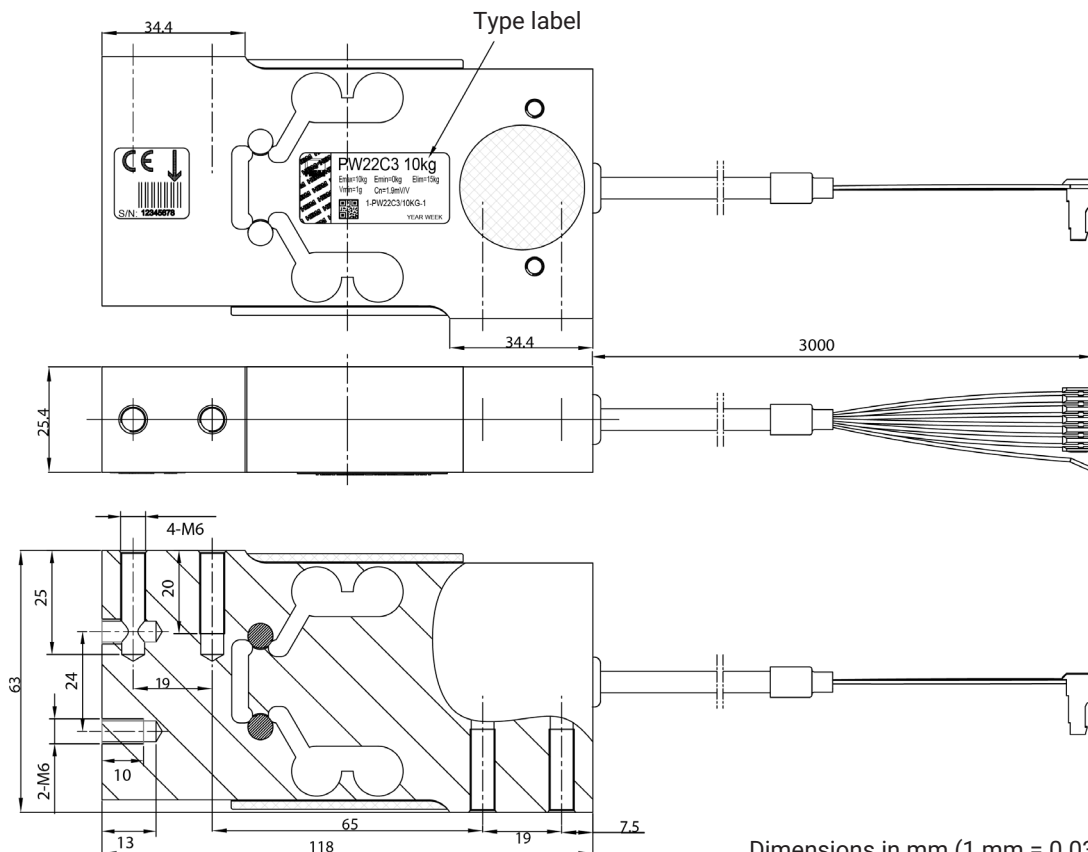
with
IO-Link
option

SPECIAL FEATURES

- Maximum capacities: 6 kg ... 90 kg
- Aluminum
- High ratio of minimum verification interval Y
- Integrated overload protection (Patent pending)
- Optimized for dynamic weighing applications
- Explosion protection, protection housing 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)



DIMENSIONS



Dimensions in mm (1 mm = 0.03937 inches)

SPECIFICATIONS

Type			PW22...					
Accuracy class ¹⁾			C3 Multi Range (MR)					
Maximum number of load cell intervals	n_{LC}		3000					
Maximum capacity	E_{max}	kg	6	10	20	30	50	90
Minimum LC verification interval	v_{min}	g	0.5	1	2	2	5	10
Max. platform size		mm	400 x 400					
Sensitivity	C_n	mV/V	1.9 ±0.1					
Zero signal (without pre load)			0 ±0.1					
Temperature effect on zero balance	TK_0	% of C_n / 10 K	±0.0117	±0.0140	±0.0140	±0.0093	±0.0140	±0.0155
Ratio of minimum verification interval	Y		12,000	10,000	10,000	15,000	10,000	9,000
Temperature effect on sensitivity ²⁾ in the temperature range +20 ... +40 °C -10 ... +20 °C	TK_c	% of C_n / 10 K	±0.0175 ±0.0117					
Relative reversibility error ²⁾	d_{hy}	% of C_n	±0.0166					
Linearity deviation ²⁾	d_{lin}		±0.0166					
Ratio of minimum dead load output return	DR		±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					
Nominal range of excitation voltage	B_U	V	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 120 mm eccentricity	E_L	% of E_{max}	150					
Lateral load limit, static	E_{lq}		> 300					
Service load at max. 120 mm eccentricity	E_U		150					
Breaking load at 20 mm eccentricity	E_d		1,000					
Relative permissible oscillation stress at max. 20 mm eccentricity	F_{srel}		70					
Nominal (rated) displacement at E_{max} , approx.	s_{nom}	mm	< 0.2					
Resonance frequency, without load, approx.		Hz	280	380	540	660	866	1015
Weight, approx.	G	kg	0.5					
Degree of protection ⁴⁾			IP67					
Material			Aluminum					
Measuring body			Silicone rubber					
Application protection			PVC					
Cable sheath								

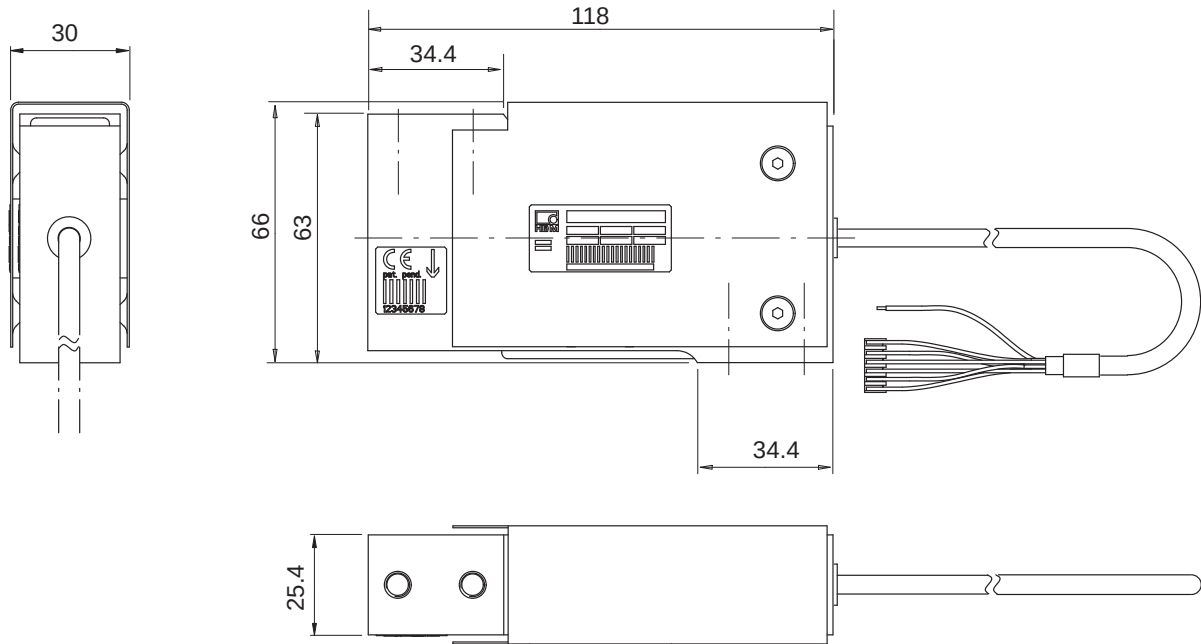
¹⁾ According to OIMLR60 with $P_{LC} = 0.7$

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

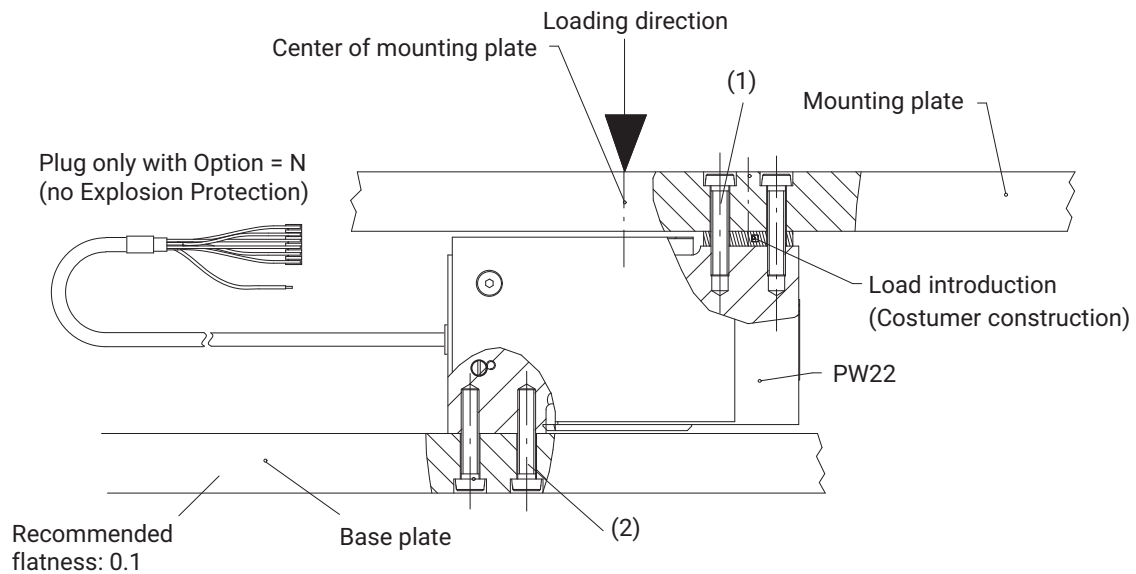
³⁾ Loaded with 30 % of the max. capacity at 142 mm eccentricity (acc. to OIML R76)

⁴⁾ According to EN 60 529 (IEC 529)

DIMENSIONS FOR VERSION WITH PROTECTION HOUSING



MOUNTING HINTS

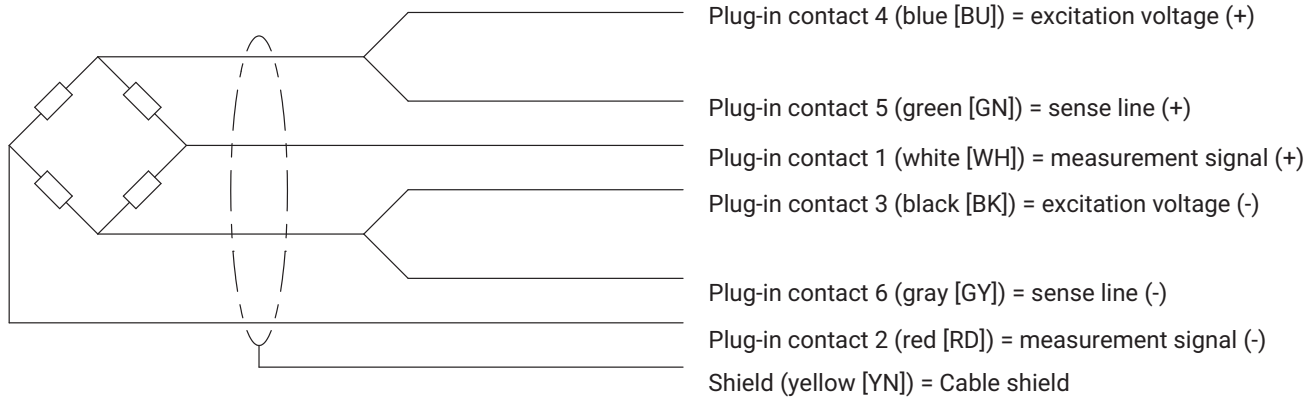
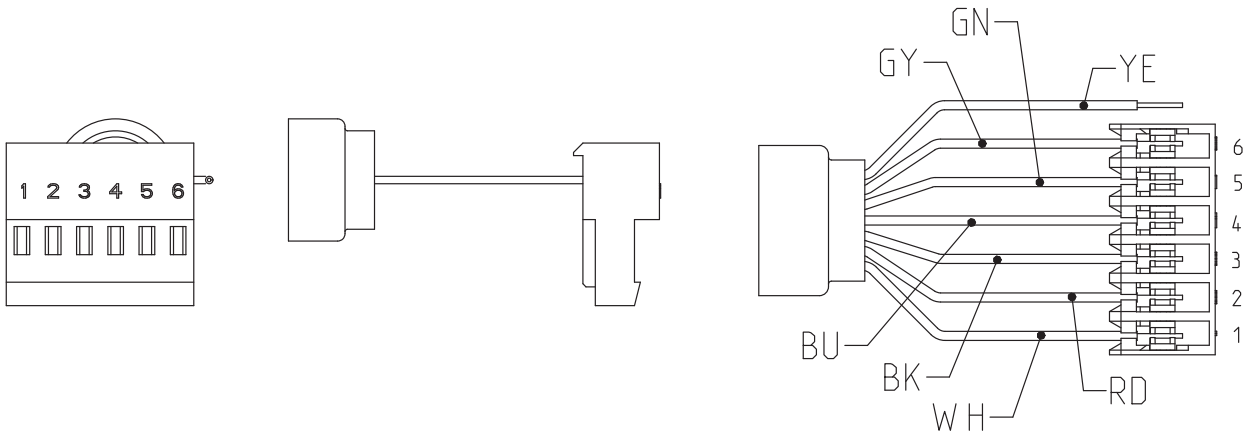


- 1: Attachment PW22 at load introduction: 2 x M6; property class 10.9 tightening torque 10 N·m; max. thread reach 20 mm.
Recommended flatness 0.1 mm on connection surface
- 2: Attachment PW22 with base plate: 2 x M6; property class 10.9: tightening torque 10 N·m; max. thread reach 20 mm

WIRING CODE

Connection with 6-wire cable, 6 x 0.14 mm²/AWG 26

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



ORDERING CODES

PW22... (aluminum)

Type	PW22
Accuracy class	C3-MR (OIML) (Multi Range)
Comments	Cable length 3 m (6-wire)

Maximum capacity [kg]	Ordering number
6	1-PW22C3/6KG-1
10	1-PW22C3/10KG-1
20	1-PW22C3/20KG-1
30	1-PW22C3/30KG-1
50	1-PW22C3/50KG-1
90	1-PW22C3/90KG-1

K-PW22-... (aluminum), optional versions

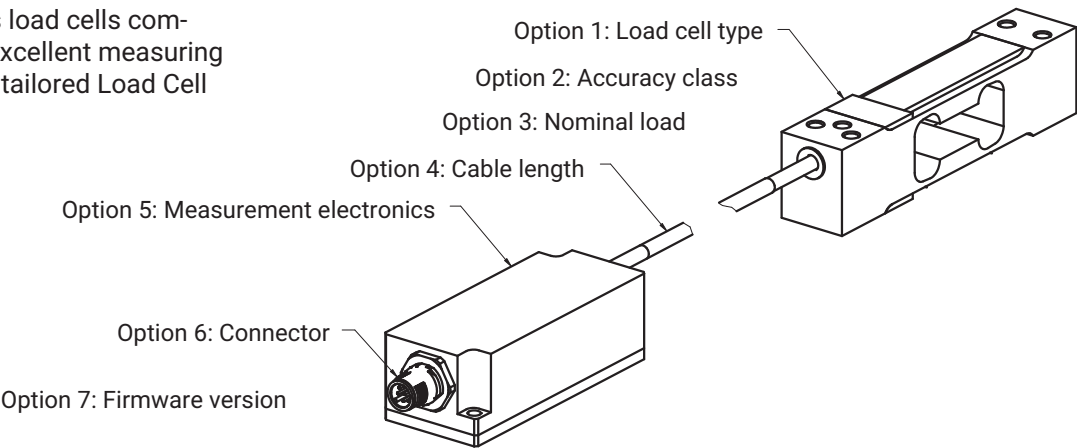
K-PW22		
1	Code	Option 1: Mechanical version
	0	Without protection housing
	1	With protection housing
2	Code	Option 2: Accuracy
	MR	C3MR (OIML) (Multi Range)
3	Code	Option 3: Capacity
	6	6 kg
	10	10 kg
	20	20 kg
	30	30 kg
4	Code	Option 4: Explosion protection
	N	No explosion protection
	AI1/21	IECEx+ATEX Zone 1/21+FM, intrinsically safe II 2G Ex ia IIC T6/T4 Gb, II 2D Ex ia IIIC T125°C Db*
	AI2/22	IECEx+ATEX 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
	0.5	0.5 m (free ends)
	1.5	1.5 m (connector)
	3	3 m (standard, connector)
	6	6 m (connector)
	12	12 m (connector)
6	Code	Option 6: Miscellaneous
	N	Without

K-PW22 - - - - - -

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-PW22 ordering options

K-LCMC		
1	Code	Option 1: Load cell type
	PW22	PW22
2	Code	Option 2: Accuracy class
	MR	C3 MR (OIML)
3	Code	Option 3: Nominal load
	6K00	6 kg
	10K0	10 kg
	20K0	20 kg
	30K0	30 kg
	50K0	50 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 -

P	W	2	2
1			

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M	R

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3		

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4		

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5			

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6				

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7	

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