

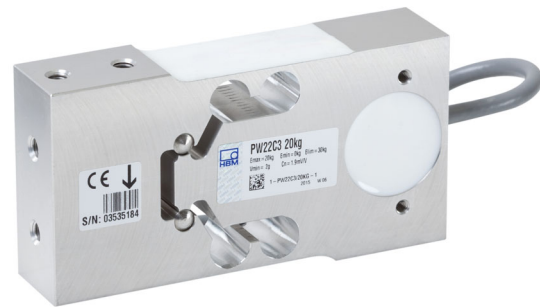
# PW22...

## Single point load cells

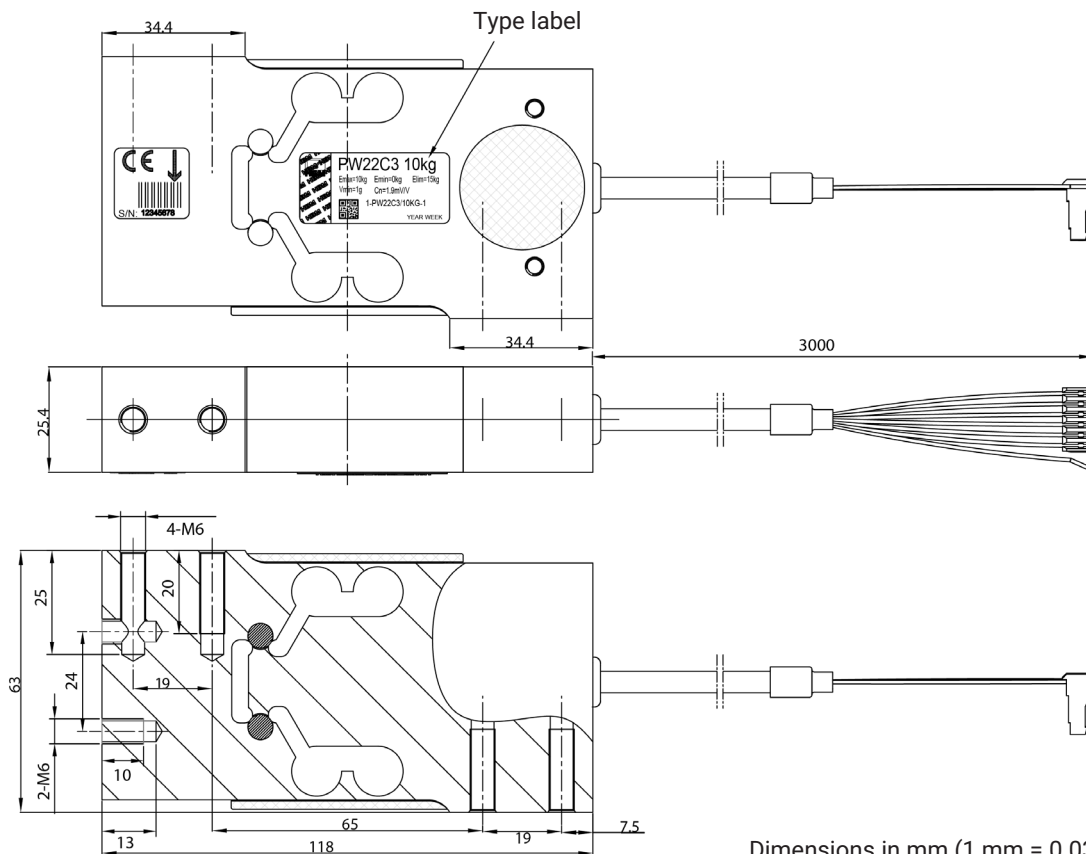
with  **IO-Link**  
option

### 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



## SPECIFICATIONS

Type			PW22...					
Accuracy class <sup>1)</sup>			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 $C_n/10\text{ K}$	±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 <sup>2)</sup> in the temperature range +20 ... +40 °C -10 ... +20 °C	$TK_c$	% of $C_n/10\text{ K}$	±0.0175 ±0.0117					
Relative reversibility error <sup>2)</sup>	$d_{hy}$	% of $C_n$	±0.0166					
Linearity deviation <sup>2)</sup>	$d_{lin}$		±0.0166					
Ratio of minimum dead load output return	DR		±0.0166					
Off-center load error <sup>3)</sup>			±0.0233					
Input resistance	$R_{LC}$	$\Omega$	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 <sub>DC</sub>	$R_{is}$	G $\Omega$	> 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 <sup>4)</sup>			IP67					
Material			Aluminum					
Measuring body			Silicone rubber					
Application protection			PVC					
Cable sheath			PVC					

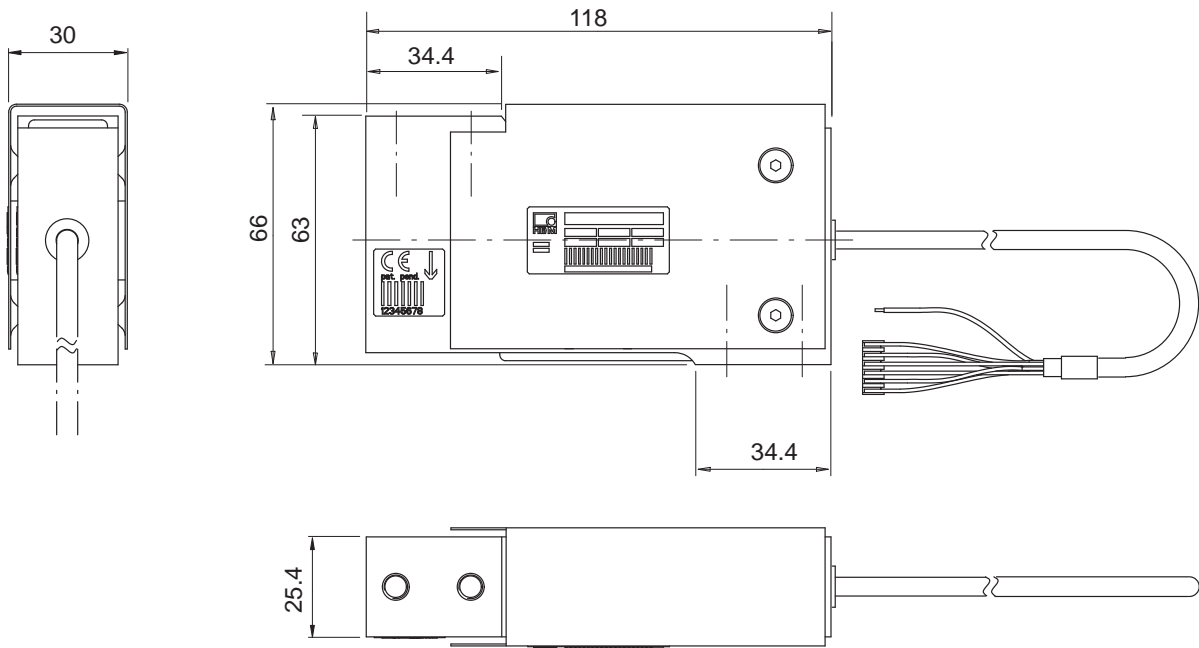
<sup>1)</sup> According to OIMLR60 with  $P_{LC} = 0.7$

<sup>2)</sup> 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

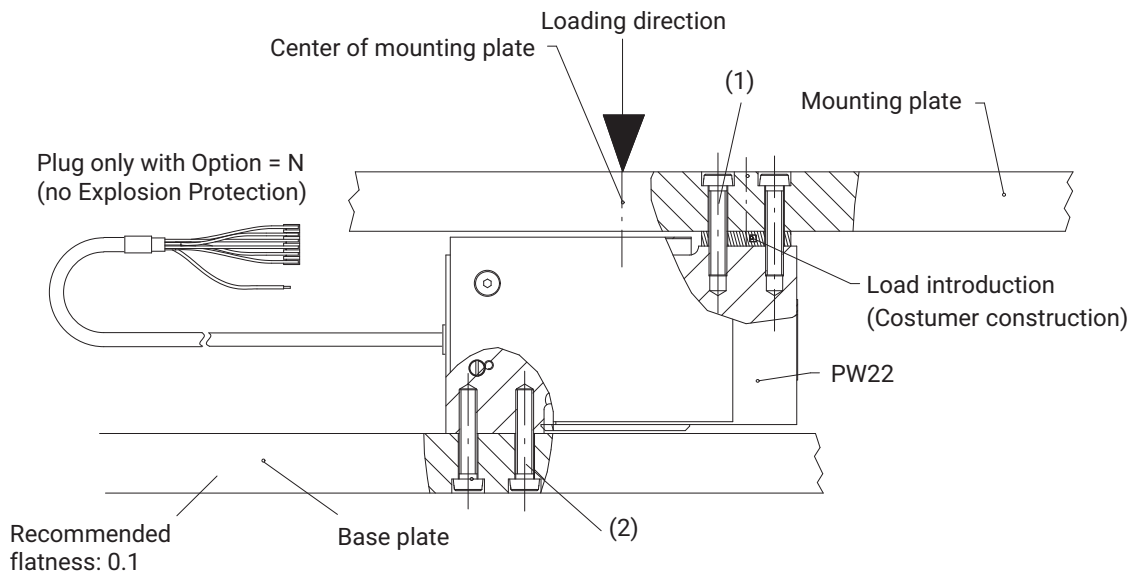
<sup>3)</sup> Loaded with 30 % of the max. capacity at 142 mm eccentricity (acc. to OIML R76)

<sup>4)</sup> According to EN 60 529 (IEC 529)

## DIMENSIONS FOR VERSION WITH PROTECTION HOUSING



## MOUNTING HINTS

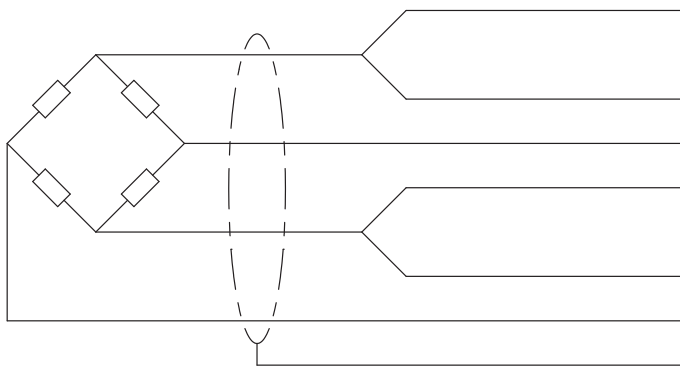
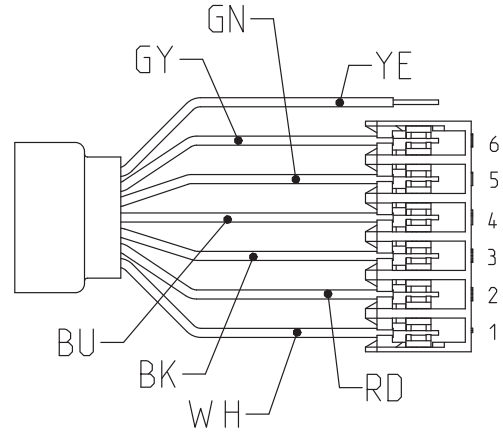
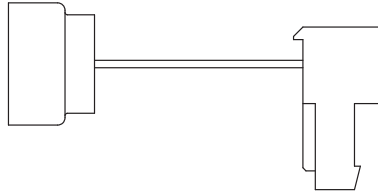
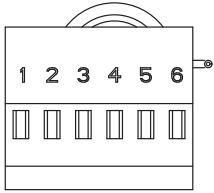


- 1: Attachment PW22 at load introduction: 2 x M6; property class 10.9 tightening torque 10 N·m; max. thread reach 20 mm. Recommended flatness 0.1 mm on connection surface
- 2: Attachment PW22 with base plate: 2 x M6; property class 10.9: tightening torque 10 N·m; max. thread reach 20 mm

## WIRING CODE

### Connection with 6 wire cable, 6 x 0.14 mm<sup>2</sup>/AWG 26

Schematic diagram of 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 [YE]) = Cable shield

## 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

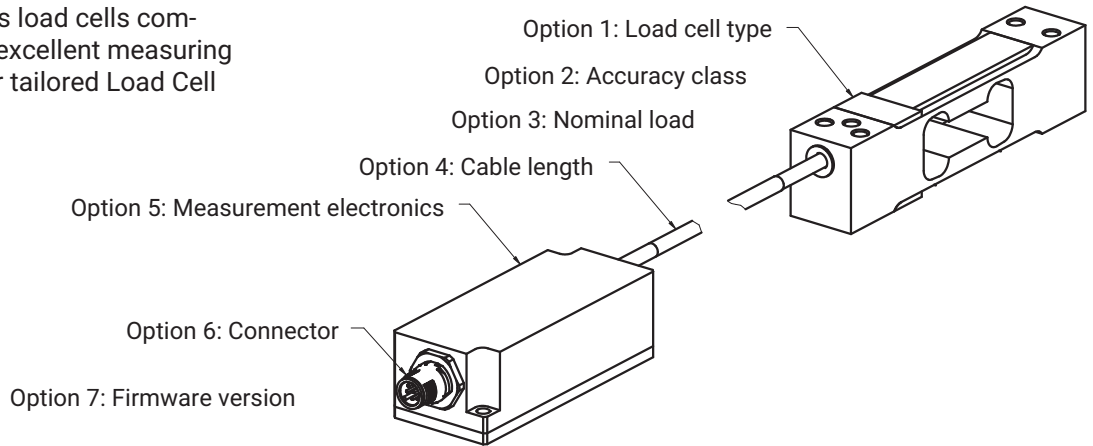
K-PW22		
1	<b>Code</b>	<b>Option 1: Mechanical version</b>
	0	Without protection housing
	1	With protection housing
2	<b>Code</b>	<b>Option 2: Accuracy</b>
	MR	C3MR (OIML) (Multi Range)
3	<b>Code</b>	<b>Option 3: Capacity</b>
	6	6 kg
	10	10 kg
	20	20 kg
4	<b>Code</b>	<b>Option 4: Explosion protection</b>
	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	<b>Code</b>	<b>Option 5: Cable length</b>
	0.5	0.5 m
	1.5	1.5 m
	3	3 m (standard)
	6	6 m
6	<b>Code</b>	<b>Option 6: Miscellaneous</b>
	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
4	Code	Option 4: Cable length
	0M3	0.3 m
	0M5	0.5 m
	1M0	1.0 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
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
---	---	---	---

 - 

M	R
---	---

 - 

--	--	--	--

 - 

--	--	--

 - 

--	--	--	--	--

 - 

--	--	--	--	--	--

 - 

--	--

1                      2                      3                      4                      5                      6                      7

**Hottinger Brüel & Kjaer GmbH**

Im Tiefen See 45 · 64293 Darmstadt · Germany  
Tel. +49 6151 803-0 · Fax +49 6151 803-9100  
www.hbkworld.com · info@hbkworl.com

Subject to modifications. All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.