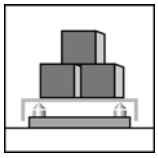
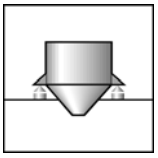
Data Sheet

HLCB2...

Load cells

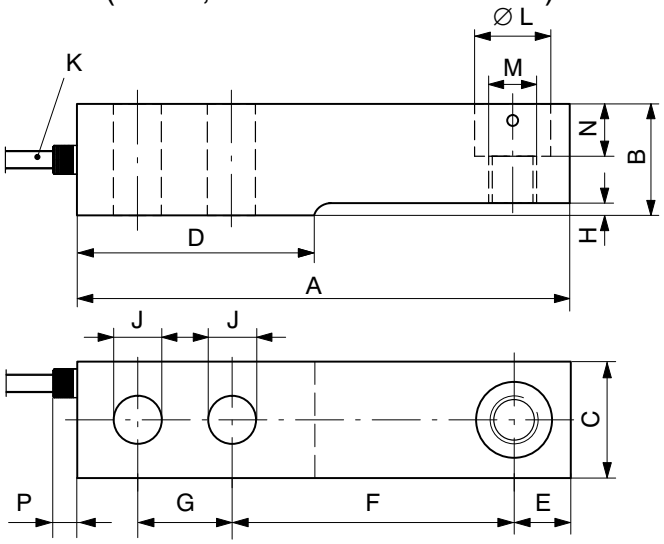




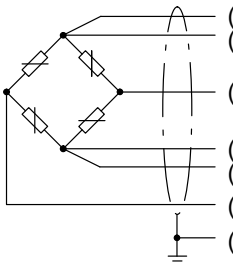
Special features

- **Hermetically sealed (IP68, IP69K)**
- **Max. capacities: 220 kg ... 4,4 t**
- **Stainless steel**
- **Low overall height**
- **Meets EMC/ESD requirements according to EN 45 501**
- **Complies with OIML R60 regulations up to 3000d for scales according to EN 45 501**
- **Explosion-proof versions according to ATEX 95 optional**

Dimensions (in mm; 1 mm= 0.03937 inches)



Wiring code (6-wire circuit)



(grey)	Sense (–)
(black)	Excitation (–)
(white)	Signal (+)
(blue)	Excitation (+)
(green)	Sense (+)
(red)	Signal (–)
(wire strand)	Shield connected with housing

Max. capacity (E_{max})	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**	**∅ L**	**M**	**N**	**P**
220 kg; 550 kg; 1.1 t	133.4	30.2	30.7	57.7	15.4	76.2	25.4	1.7	13	3 m	20.6	M12	14.2	12
1.76 t	133.4	30.2	30.7	51.7	15.4	76.2	25.4	1.7	13	3 m	20.6	M12	14.2	12
2.2 t	171.5	36.5	36.8	76.2	19.1	95.3	38.1	2.5	20.5	6 m	30.2	M20	17.0	12
4.4 t	171.5	42.9	42.9	76.2	19.1	95.3	38.1	2.5	20.5	6 m	30.2	M20	20.1	12

Technical Data

Type		HLCB2
Maximum capacity (E_{max})		**220 kg; 550 kg; 1.1 t; 1.76 t, 2.2 t, 4.4 t**
Accuracy class according to OIML R60		**C3**
Maximum number of load cell intervals (n_{LC})		3000
Minimum LC verification interval (v_{min})	% of E_{max}	0.0100 (220 kg; 1.76 t; 2.2 t; 4.4 t) 0.0090 (550 kg; + 1.1 t)
Sensitivity (C_n)	mV/V	1.94
Sensitivity tolerance	%	± 0.1
Temperature effect on zero balance (TK_0) 1)	% of C_n / 10 K	± 0.0140 (220 kg; 1.76 t; 2.2 t; 4.4 t) ± 0.0127 (550 kg; + 1.1 t)
Temperature effect on sensitivity (TK_C) 1)		± 0.0140
Hysteresis error (d_{hy}) 1)	% of C_n	± 0.0170
Non-linearity (d_{lin})		± 0.0170
Creep (d_{cr}) over 30 min.		± 0.0166
Input resistance (R_{LC})	Ω	> 350
Output resistance (R_0)		350 ± 2
Reference excitation voltage (U_{ref})	V	5
Nominal range of excitation voltage (B_U)		0.5 ... 15 (Ex-Versionen max. 12 V !!!)
Insulation resistance (R_{is})	GΩ	> 5
Nominal temperature range (B_T)	°C	–10 ... +40
Service temperature range (B_{tu})		–30 ... +70
Storage temperature range (B_{tl})		–50 ... +85
Safe load limit (E_L)	% of E_{max}	150
Lateral load limit (E_{lq})		100
Breaking load (E_d)		300
Permissible dynamic load (F_{srel}) (vibration amplitude according to DIN 50100)		70
Deflection at E_{max} (s_{nom}), approx.	mm	0.5 (1.76 t = 1.4 mm)
Weight (G), approx.	kg	0.9 (220 kg ... 1.76 t); 1.6 (2.2 t); 2.2 (4.4 t)
Protection class to EN 60 529 (IEC 529)		IP 68 / IP 69K
Material: Measuring element		Stainless steel
Cable fitting		Stainless steel (Gasket: Viton®)
Cable-sheath		TPE
Application protection (sealing)		**hermetically welded**

1) The data for Non-linearity (d_{lin}), Hysteresis error (d_{hy}) and Temperature effect on sensitivity (TK_C) are typical values. The sum of these data meets the requirements according to OIML R60.

Accessories (see Data sheet **"HLC... - Load Cells"**):

In order to minimize error interferences due to load introduction, HBM offers various proven load introductions for this load cell type, depending on the mounting situation:

HLCB/ZFP/...T Swivel load foot

HLCB/ZAK/1.76T Swivel load foot (height adjustable)

HLCB/...T/ZEL Elastomer bearing

HLCB/ZDP/...T Elastomer bearing ***Easy Top***

HLC/ZPU/...T Base plate / Mounting kit

Options

HLCB2 Load cells, optional versions [!!!] [1])

Order no.	
K-HLCB2 [1])	

Code	Option 1: Design	
S	Standard **(= IP69K protection class; connection cable free of halogen and silicone)**	

Code	Option 2: Accuracy	
C3	C3 (OIML)	

Code	Option 3: Capacity	EUR
220	220kg	326
550	550kg	315
1100	1.1t	315
1760	1.76t	
2200	2.2t	
4400	4.4t	

Code	Option 4: Ex protection (accord. to ATEX 95)
N	non ATEX
1	ATEX Zone 1 + 21 and FM
2	ATEX Zone 2 + 22 (non-conductive dust)

Code	Option 5: Cable length	
S3	3m (Standard)	[only with Option 3 = 220 / 550 / 1100 / 1760]
S6	6m (Standard)	[only with Option 3 = 2200 / 4400]
6	6m	[only with Option 3 = 220 / 550 / 1100 / 1760]
12	12m	
20	20m	

K-HLCB2 - S - C 3 - ☐☐☐☐ - ☐ - ☐☐

[!!!]: Not all codes can be combined with each other. Please take heed of the terms in the square brackets!

[1]) Available for delivery expected from 2nd Quater 2008 - availability on request!

Options for HLC...:

- **Explosion-proof versions according to ATEX:** Ex II 2G EEx ia IIC T4 resp. T6 (Zone 1) **[)]
  Ex II 2D Ex tD A21 IP68 T 80°C (Zone 21) **[)]
  **[)] with EC-Type Examination Certificate

  Ex II 3G EEx nA II T6 (Zone 2)
  Ex II 3D IP68 T 80°C (Zone 22 for non-conductive dust)

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