

# SB4 beam load cell



## product description

The SB4 is a high accuracy, low profile bending beam load cell available in a wide range of capacities. All stainless steel construction and complete hermetic sealing ensures reliable accuracy and robustness in harsh industrial applications. The SB4 is the ideal choice for high accuracy weighing platforms due to the blind-hole load introduction arrangement combined with the self-aligning feet. This model is fully interchangeable with the potted SB5.

## applications

Industrial platform scales, pallet truck scales, vessel and tank weighing systems.

## key features

Stainless steel construction

Hermetically sealed

Wide range of capacities from 5kN to 100kN (510kg to 10,197kg)

High accuracy

Unique blind loading hole

Calibration in mV/V/Ω

## approvals

OIML approvals to C1 (Y = 5,000), C3, C3 MI7.5 available for 5-100kN models

OIML approvals to C4 and C4 MI7.5 (Y = 11,000) available for 5-50kN models.

NTEP approval to 5,000 intervals, Class III (for 5 kN to 50 kN) for multiple load cell applications

ATEX hazardous area approval for zones 0, 1, 2, 20, 21 and 22

FM hazardous area approval

## accessories

Compatible range of hardware

Compatible range of electronics



RoHS  
compliant



 **flintec**  
quality + precision

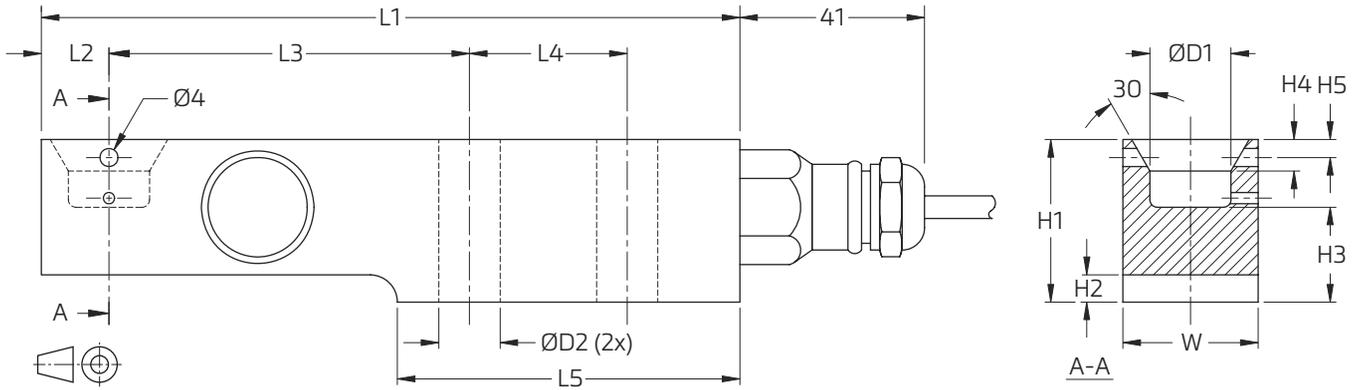
## specifications

Maximum capacity ( $E_{max}$ )	kN	5 / 10 / 20 / 50 / 100				5 / 10 / 20 / 50	
Metric equivalents (1lb=0.45359kg)	kg	510 / 1,020 / 2,039 / 5,099 / 10,197				510 / 1,020 / 2,039 / 5,099	
Accuracy class according to OIML R60	-	(GP)	C1	C3	C3 MI 7.5	C4	C4 MI 7.5
Max number of verification intervals ( $n_{max}$ )	-	n.a.	1,000	3,000		4,000	
Minimum load cell verification interval ( $v_{min}$ )	-	n.a.	$E_{max} / 5,000$	$E_{max} / 11,000$			
Temperature effect on minimum dead load output ( $TC_0$ )	%*RO/°10C	± 0.0400	± 0.0275	± 0.0127			
Temperature effect on sensitivity ( $TC_{RO}$ )	%*RO/°10C	± 0.0200	± 0.0160	± 0.0100		± 0.0080	
Combined error	%*RO	± 0.0500	± 0.0300	± 0.0200	± 0.0180	± 0.0180	± 0.0150
Non-linearity	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0166	± 0.0125	± 0.0125
Hysteresis	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0066	± 0.0125	± 0.0066
Creep error (30 minutes) / DR	%*RO	± 0.0600	± 0.0490	± 0.0166	± 0.0066	± 0.0125	± 0.0066
Rated Output (RO)	mV/V	2 ± 0.1%					
Calibration in mV/V/ (A...I classified)	%	± 0.05 (± 0.005)					
Excitation voltage	V	5...15					
Zero balance	%*RO	± 5					
Input resistance ( $R_{ic}$ )	$\Omega$	1,100 ± 50					
Output resistance ( $R_{out}$ )	$\Omega$	1,000 ± 2					
Insulation resistance (100 V DC)	M $\Omega$	≥ 5,000					
Safe load limit ( $E_{lim}$ )	%* $E_{max}$	200					
Ultimate load	%* $E_{max}$	300					
Safe side load	%* $E_{max}$	100					
Compensated temperature range	°C	-10...+40					
Operating temperature range	°C	-40...+80 (ATEX -40...+60)					
Load cell material	-	stainless steel 17-4 PH (1.4548)					
Sealing	-	complete hermetic sealing; cable entry sealed by glass to metal header					
Protection according EN 60 529	-	IP68 (up to 2 m water depth) / IP69K					
Packet weight	kg	1.4 (5-20kN), 2.9 (50kN), 7.1 (100kN)					

The limits for Non-Linearity, Hysteresis, and  $TC_{RO}$  are typical values.

The sum of Non-linearity, Hysteresis and  $TC_{RO}$  meets the requirements according to OIML R60 with  $p_{LC}=0.7$ .

## product dimensions (mm)



\*\*As it has in no way influence on the functionality and accuracy of the load cell, this dimension might be in singular cases shorter.

Type	L1	L2	L3	L4	L5	H1	H2	H3	H4	H5	W	D1	D2	Mount bolts	Torque*
SB4-5/10/20 kN	155	15	80	35	76	36	6	21	7	4	30	18	13	M12 8.8	90 Nm
SB4-50 kN	190	21	105	40	93	49	8	28.5	6	8	43	25	21	M20 8.8	400 Nm
SB4-100 kN	245	30	135	50	120	73	12.5	42	10	n.a.	60	30	27	M24 8.8	700 Nm

Torque\* - values assume oiled threads.

## wiring

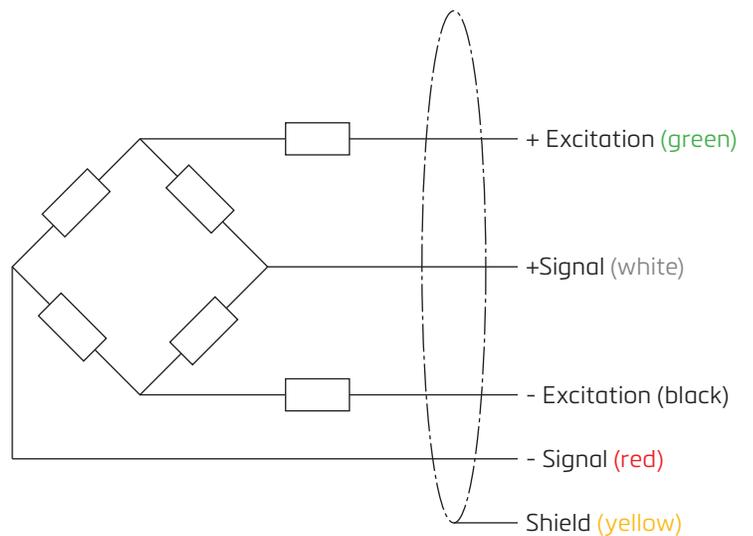
The load cell is provided with a shielded, 4 conductor cable (AWG 24).

Cable jacket polyurethane

Cable length: 3 m for SB4-5 kN/10 kN/20 kN  
4.5 m for SB4-50 kN/100 kN

Cable diameter: 5 mm

Shield is floating or connected to the load cell body



Specifications and dimensions are subject to change without notice.