

Single Ended Load Beam



DESCRIPTION

The SHBxR is a fully weld-sealed stainless steel bending beam type load cell.

This product is suitable for low capacity platform scales, packaging machines, hybrid scales and process weighing.

Fully welded construction and water block cable-entry ensure that this product can be used successfully in harsh environments found in the food, chemical and allied industries.

This product meets the stringent Weights and Measures requirements throughout Europe.

FEATURES

- Capacities: 5 - 500kg
- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 4000d and NTEP class III, 10000 divisions
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells

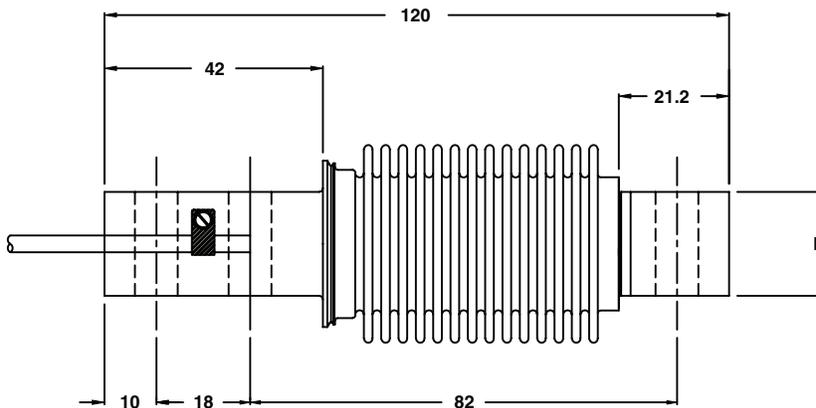
OPTIONAL FEATURES

- ATEX and FM certified versions are available for use in potentially explosive atmospheres

APPLICATIONS

- Platform scales
- Belt scales
- Packaging machines
- Silo/hopper weighing

OUTLINE DIMENSIONS in millimeters



Capacity (kg)	5 - 200	350 / 500
A	8.2	10.3
B	8.2 ^{+0.1} ₀	10.3 ^{+0.1} ₀
C	23.0	24.0
D	20.0	19.0

Note: Dimensions in millimeters

Cable specifications:

Cable length	3m
Excitation +	Green
Excitation -	Black
Output +	White
Output -	Red
(Sense+)	Yellow
(Sense-)	Blue
Shield	Transparent

4-wire cable standard,
6-wire cable optional

SPECIFICATIONS						
PARAMETER	VALUE					UNIT
Standard capacities (E_{max})	5, 10, 20, 30, 50, 100, 200, 350, 500 ⁽¹⁾				100, 200, 350, 500 ⁽²⁾	kg
Accuracy class according to OIML R-60 /NTEP	NTEP III L	Non-Approved	C3	C4	C3MI7.5	
Max. no. of verification intervals	10000		3000	4000	3000	
Min. verification interval ($V_{min}=E_{max}/Y$)			$E_{max}/15,000$	$E_{max}/15,000$	$E_{max}/15,000$	
MDLOR ($Z=E_{max}/2 \cdot DR$)					7500	
Rated output (=S)	2					mV/V
Rated output tolerance	0.02					±mV/V
Zero balance	1.0					±% FSO
Combined error	0.0200	0.05000	0.0200	0.0170	0.0200	±% FSO
Non-repeatability	0.0100	0.0200	0.0100	0.0090	0.0100	±% FSO
Minimum dead load output return	0.0250	0.0500	0.0167	0.0125	0.0067	±% applied load
Creep error (30 minutes)		0.0600	0.0245	0.0184	0.0245	±% applied load
Creep error (20 - 30 minutes)	0.0300	0.0500				±% applied load
Temp. effect on min. dead load output	(0.0008)	0.0250	0.0047	0.0047	0.0047	±% FSO/5°C (°F)
Temperature effect on sensitivity	(0.0010)	0.0250	0.0050	0.0045	0.0050	±% applied load/5°C (°F)
Minimum dead load	0					% E_{max}
Maximum safe over load	150					% E_{max}
Ultimate over load	300					% E_{max}
Maximum safe side load	100					% E_{max}
Deflection at E_{max}	0.30±0.03					mm
Excitation voltage	5 to 12					V
Maximum excitation voltage	15					V
Input resistance	460±50					Ω
Output resistance	350±3.5					Ω
Insulation resistance	≥5000					MΩ
Compensated temperature range	-10 to +40					°C
Operating temperature range	-40 to +80					°C
Storage temperature range	-40 to +90					°C
Element material (DIN)	Stainless steel 1.4542					
Sealing (DIN 40.050 / EN60.529)	IP66 and IP68					
SC-Version (current calibration)	Standard					
Recommended torque on fixation bolts	23 (70 for 350/500kg)					N*m

Notes

⁽¹⁾ 5 & 10kg capacities are not approved by NTEP.

5 kg is not approved by OIML.

⁽²⁾ $D_{max} = 0.75 \cdot E_{max}$

FSO - Full Scale Output

SC-version: The rated output and the output resistance are balanced in such a way, that the output current is calibrated to within 0.05% of a reference value. This allows easy parallel connection of the load cells.

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay Precision Group"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify Vishay Precision Group's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

Vishay Precision Group makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, Vishay Precision Group disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on Vishay Precision Group's knowledge of typical requirements that are often placed on Vishay Precision Group products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of Vishay Precision Group.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay Precision Group products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay Precision Group for any damages arising or resulting from such use or sale. Please contact authorized Vishay Precision Group personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.