

## Single-Ended Load Beam

### FEATURES

- Capacities: 5–500 kg
- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 4000d and NTEP class III L, 10000 divisions
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells
- **Optional**
  - ATEX and FM certified versions are available for use in potentially explosive atmospheres



### APPLICATIONS

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

### DESCRIPTION

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

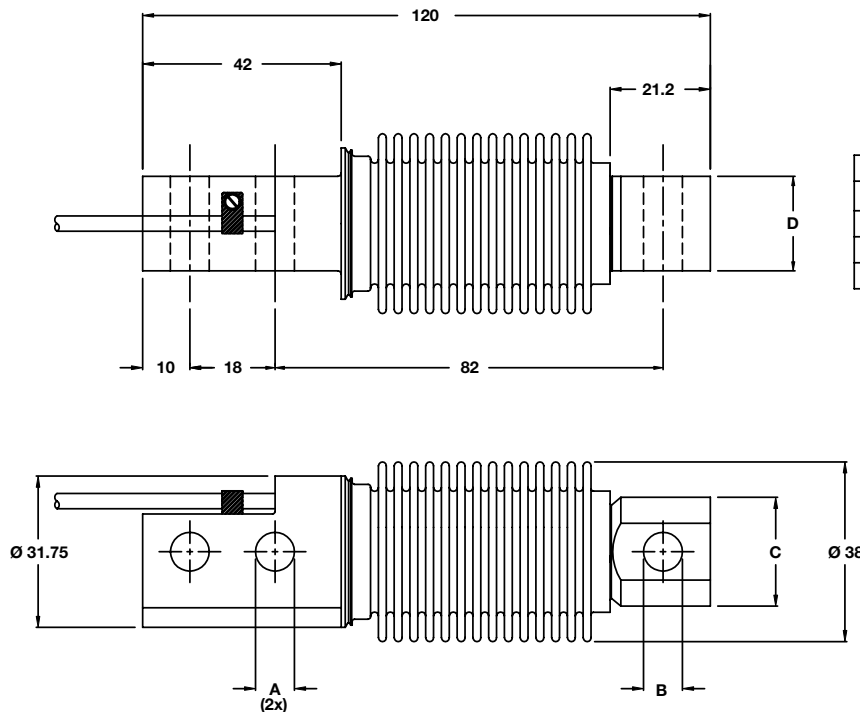


This product is suitable for low capacity platform scales, packaging machines, hybrid scales and process weighing.

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.

### OUTLINE DIMENSIONS in millimeters



Capacity (kg)	5-200	350 / 500
A	8.2	10.3
B	8.2 $\pm 0.1$	10.3 $\pm 0.1$
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

Document No.: 11900 Revision: 17 Dec 2014

### Single-Ended Load Beam

SPECIFICATIONS						
PARAMETER	VALUE					UNIT
Standard capacities (E <sub>max</sub> )	5, 10, 20, 30, 50, 100, 200, 350, 500 <sup>(1)</sup>				100, 200, 350, 500 <sup>(2)</sup>	kg
Accuracy class according to OIML R-60 /NTEP	NTEP IIIIL	Non-Approved	C3	C4	C3MI7.5	
Max. no. of verification intervals	10000		3000	4000	3000	
Min. verification interval (V <sub>min</sub> =E <sub>max</sub> /Y)			E <sub>max</sub> /15,000	E <sub>max</sub> /15,000	E <sub>max</sub> /15,000	
MDLOR (Z=E <sub>max</sub> /2*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 <sub>max</sub>
Maximum safe over load	150					% E <sub>max</sub>
Ultimate over load	300					% E <sub>max</sub>
Maximum safe side load	100					% E <sub>max</sub>
Deflection at E <sub>max</sub>	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 350/500 kg)					N*m

<sup>(1)</sup> 5 and 10 kg capacities are not approved by NTEP.  
5 kg is not approved by OIML.

<sup>(2)</sup> D<sub>max</sub> = 0.75 \* E<sub>max</sub>

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.

All specifications subject to change without notice.

## 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, "VPG"), 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 VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG 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, VPG 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 VPG's knowledge of typical requirements that are often placed on VPG 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. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at [vpgsensors.com](http://vpgsensors.com).

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

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

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.

Document No.: 63999 Revision: 15-Jul-2014