

Universal Load Cell

FEATURES

- Capacities: 50–5000 kg, 100–10k lbs
- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 3000d
- Integrated overload stop (50–500 kg)
- 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

- Hybrid scales
- Process weighing
- Belt checkweighers
- Dynamometers
- Material testing machines

DESCRIPTION

The BSP is a stainless steel S-type load cell that can be used in either tension or compression.

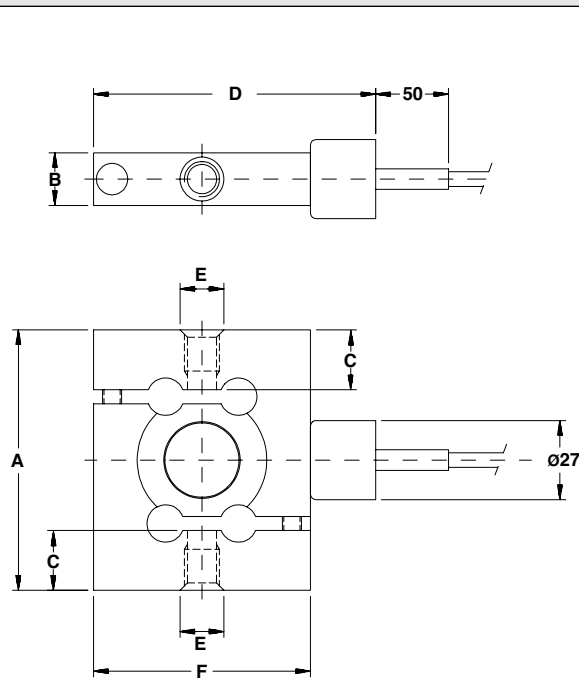


This product is suitable for a wide range of hybrid scales, overhead track scales, belt scales, and process weighing applications.

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

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

OUTLINE DIMENSIONS in millimeters



Cable specifications

Cable length: 10m

- Excitation + Green
- Excitation - Black
- Output + White
- Output - Red
- Shield Transparent

Cable screen is not connected to the load cell body. Performance may be affected if load cell cables are shortened. Tension applications result in a negative output signal.

| Capacity (kg) | 50, 125 | 250 | 500 | 1250 | 2500, 5000 |
|---------------|---------|------|-------|------|------------|
| A | 84.3 | 88.9 | 88.9 | 95.2 | 120.6 |
| B | 23.9 | 18.0 | 18.0 | 24.1 | 36.6 |
| C thread | 12.7 | 14.0 | 14.0 | 14.0 | 29.2 |
| D | 85.7 | 84.1 | 96.8 | 84.1 | 84.1 |
| E | M8x1.25 | | M12x1 | | M24x2 |
| F | 63.5 | 61.9 | 74.6 | 61.9 | 61.9 |

| Capacity (lb) | 100, 250 | 500 | 1k | 2.5k | 5k, 10k |
|---------------|--------------|------|---------------|------|-------------|
| A | 3.32 | 3.50 | 3.50 | 3.75 | 4.75 |
| F | 2.48 | 2.44 | 2.94 | 2.44 | 2.44 |
| B | 0.94 | 0.71 | 0.71 | 0.95 | 1.44 |
| D | 3.36 | 3.32 | 3.81 | 3.31 | 3.31 |
| E threads | 3/8-24UNF-3B | | 1/2-20 UNF-3B | | 1-14 UNS-3B |

Universal Load Cell

| SPECIFICATIONS | | | | |
|---|--|--------------|--------|-------------------------|
| PARAMETER | VALUE | | | UNIT |
| Standard capacities (E _{max}) | 50, 125, 250, 500, 1250, 2500, 5000 | | | kg |
| Standard capacities (E _{max}) | 100, 250, 500, 1000, 2500, 5000, 10000 | | | lbs |
| Accuracy class according to OIML R-60 /NTEP | NTEP IIIIL | Non-Approved | C3 | |
| Maximum number of verification intervals | 10000 | | 3000 | |
| Minimum verification interval = V _{min} /E _{max} /Y | | | | E _{max} /10000 |
| Rated output (=S) | 3 (2 for 2500 and 5000 kg) | | | mV/V |
| Rated output tolerance | 0.03 (0.02 for 2500 and 5000 kg) | | | ± mV/V |
| Zero balance | 1.0 | | | ±% FSO |
| Combined error | 0.0200 | 0.0500 | 0.0200 | ±% FSO |
| Non-repeatability | 0.0100 | 0.0200 | 0.0100 | ±% FSO |
| Minimum dead load output return | | 0.0500 | 0.0167 | ±% FSO |
| Creep error (30 minutes) | | 0.0600 | 0.0245 | ±% FSO |
| Creep error (20–30 minutes) | 0.0300 | 0.0200 | | ±% FSO |
| Temp. effect on minimum dead load output | (0.0008) | 0.0250 | 0.0070 | ±% FSO/5°C (°F) |
| Temperature effect on sensitivity | (0.0010) | 0.0250 | 0.0050 | ±% FSO/5°C (°F) |
| Minimum dead load | 0 | | | % E _{max} |
| Maximum safe overload | 150 | | | % E _{max} |
| Ultimate overload | 300 | | | % E _{max} |
| Maximum safe side load | 100 | | | % E _{max} |
| Deflection at E _{max} | 0.28 max. | | | mm |
| Excitation voltage | 5 to 15 | | | V |
| Maximum excitation voltage | 18 | | | V |
| Input resistance | 350±3.5 | | | 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 | | | |

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.

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.