

BSP UNIVERSAL LOAD CELL



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 European Weights and Measures requirements through Europe.

FEATURES:

- Fully welded, stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, **3000d**
- Integrated overload stop (50 → 500 kg)
- ATEX certified versions are available for use in potentially explosive atmospheres
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells
- **CAPACITIES: 50 → 5000 kg**

BSP: SPECIFICATIONS

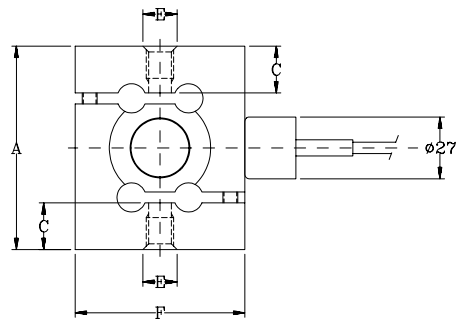
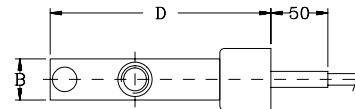
| Standard Capacities (=E _{max}) | Kg | 50, 125, 250, 500, 1250, 2500, 5000 | | | |
|---|-------------------|-------------------------------------|-------------------------|-------------------------|------------|
| Accuracy Class According to OIML R-60 | | C1 | C2 | C3 | |
| Max. Number of Verification Intervals (n _v) | | 1000 | 2000 | 3000 | |
| Minimum Verification Interval (V _{min}) | | E _{max} /5000 | E _{max} /10000 | E _{max} /10000 | |
| Accuracy According to Type Designation | | CC | C1 | C2 | C3 |
| Combined Error | %S | ≤ ± 0.0500 | ≤ ± 0.0300 | ≤ ± 0.0230 | ≤ ± 0.0200 |
| Non-Repeatability | %S | ≤ ± 0.0200 | ≤ ± 0.0200 | ≤ ± 0.0100 | ≤ ± 0.0100 |
| Minimum Dead Load Output Return ¹ | %S | ≤ ± 0.0500 | ≤ ± 0.0500 | ≤ ± 0.0250 | ≤ ± 0.0167 |
| Creep Error (30 Minutes) ¹ | %S | ≤ ± 0.0600 | ≤ ± 0.0490 | ≤ ± 0.0245 | ≤ ± 0.0245 |
| Creep Error (20-30 Minutes) ¹ | %S | ≤ ± 0.0200 | ≤ ± 0.0105 | ≤ ± 0.0053 | ≤ ± 0.0053 |
| Temp. Effect on Min. Dead Load Output | %S/5°C | ≤ ± 0.0250 | ≤ ± 0.0014 | ≤ ± 0.0070 | ≤ ± 0.0070 |
| Temp. Effect on Sensitivity | %S/5°C | ≤ ± 0.0250 | ≤ ± 0.0085 | ≤ ± 0.0060 | ≤ ± 0.0050 |
| Minimum Dead Load | %E _{max} | 0 | | | |
| Maximum Safe Over Load | %E _{max} | 150 | | | |
| Ultimate Over Load | %E _{max} | 300 | | | |
| Maximum Safe Side Load | %E _{max} | 100 | | | |
| Deflection at E _{max} | mm | 0.28 max. | | | |
| Excitation Voltage | V | 5...15 | | | |
| Maximum Excitation Voltage | V | 18 | | | |
| Rated Output (=S) | mV/V | 3 (2 for 2500 and 5000kg) | | | |
| Tolerance on Rated Output | mV/V | ±0.03 (±0.02 for 2500 and 5000kg) | | | |
| Zero Balance | %S | ≤ ± 1.0 | | | |
| Input Resistance | Ω | 350 ± 3.5 | | | |
| Output Resistance | Ω | 350 ± 3.5 | | | |
| Insulation Resistance | MΩ | ≥ 5000 | | | |
| Compensated Temperature Range | °C | -10...+40 | | | |
| Operating Temperature Range | °C | -40...+80 | | | |
| Storage Temperature Range | °C | -40...+90 | | | |
| Element Material (DIN) | | Stainless Steel 1.4542 | | | |
| Sealing (DIN 40.050 / EN 60.529) | | IP66 and IP68 | | | |
| ATEX options for potentially explosive atmospheres | | II2G EEx ib IIC T4/T6, II2D or II3D | | | |
| SC-Option (Current Calibration) | | Standard | | | |

1 Applies for the temperature range -10 to +40 °C

"SC-Option" 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 multiple load cells.

Accuracy classes C1, C2 and C3 are in agreement with the OIML recommendation R-60. The BSP is certified for tension applications only.

Correct mounting of the load cells is essential to ensure optimum performance. Cable length 10m. Further information is available on request.



| E _{max} (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 |

Cable specifications:

Cable length: 10m
 Excitation + Green
 Excitation - Black
 Output + White
 Output - Red
 Shield Orange

Cable screen is not connected to load cell body. Performance may be affected if load cell cables are shortened.

Attention:

All dimensions: mm.
 Dimension tolerances according to ISO 2768m,; unless otherwise specified.

Tension applications result in a negative output signal.

All specifications subject to change without notice

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