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## Type SB4 load cell



- **High Accuracy**
- **Stainless Steel Construction**
- **Resistant to off axis loads**
- **Allows vessel expansion**

### Description

Flintec loadcells are designed to meet the most stringent accuracy requirements. Certifications have been obtained from Weights & Measures Authorities , worldwide.

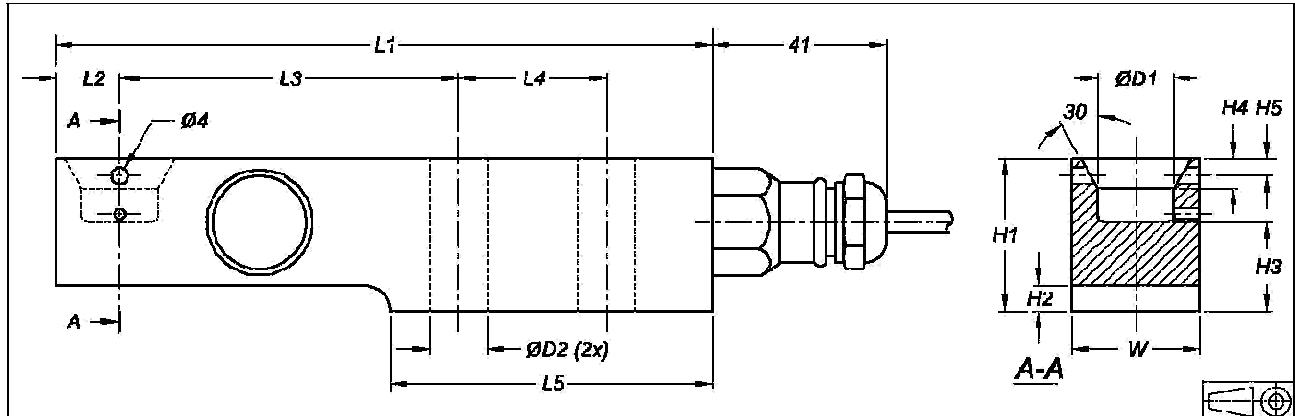
SB4 loadcells are available in the capacities 5 kN to 100 kN (510kg to 10197kg) and include Accuracy Classifications GP, C1, C3, C3 MI 7.5, C4 and C4 MI 7.5 according to OIML R 60; NTEP n max=5000.

They offer total stainless steel construction and complete hermetic sealing, making them suitable for use in the toughest industrial environments.

The unique "blind" loading hole combined with the available Flintec loading hardware provides an excellent price-performance ratio.

It allows very low profile platform design and offers advantages in all kinds of weighing applications. The Flintec calibration technique (inmV/V) eliminates time consuming corner calibration in multiple load cell systems. The SB4 is available for use in hazardous areas zone 1, 2 (gas) and 21, 22 (dust) according to EExia IIC T6...T4 T130°CATEX.

## Dimensions



| Type                 | L1  | L2 | L3  | L4 | L5  | I11 | I12  | I13  | I14 | I15  | W  | D1 | D2 | Mounting bolts | Torque* |
|----------------------|-----|----|-----|----|-----|-----|------|------|-----|------|----|----|----|----------------|---------|
| SB4-5 kN/10 kN/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  |

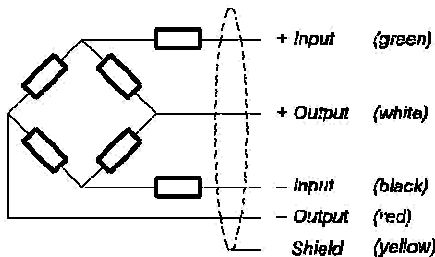
All dimensions in mm. Dimensions and specifications are subject to change without notice.

\* Torque values assume oiled threads.

## SB4 Specifications

|   |                   |  |                        |                         |                          |                         |                          |  |
|---|-------------------|--|------------------------|-------------------------|--------------------------|-------------------------|--------------------------|--|
| Maximum capacity (=E <sub>max</sub> )                       | kN                | 5 / 10 / 20 / 50 / 100   |                        |                         |                          |                         | 5 / 10 / 20 / 50         |  |
| Metric equivalents (1 N=0.10197 kg)                         | kg                | 510 / 1020 / 2039 / 5099 / 10197                                       |                        |                         |                          |                         | 510 / 1020 / 2039 / 5099 |  |
| Rated Output (=RO)  | mV/V              | 2 ± 0.1%   |                        |                         |                          |                         |                          |  |
| Calibration in mV/V/ (A...I classified)                     | %RO               | ± 0.05 ( ± 0.005)  |                        |                         |                          |                         |                          |  |
| Accuracy class according to OIML R 60                       |                   | (GP)   | C1                     | C3                      | C3 MI 7.5                | C4                      | C4 MI 7.5                |  |
| Maximum number of verification intervals (n)                |                   | n.a.   | 1000                   | 3000                    | 3000                     | 4000                    | 4000                     |  |
| Minimum load cell verification interval (V <sub>min</sub> ) |                   | n.a.   | E <sub>max</sub> /5000 | E <sub>max</sub> /11000 | E <sub>max</sub> /11000* | E <sub>max</sub> /11000 | E <sub>max</sub> /11000  |  |
| Combined error  | %RO               | ± 0.040  | ± 0.030                | ± 0.020                 | ± 0.020                  | ± 0.018                 | ± 0.018                  |  |
| Creep error (30 minutes)                                    | %RO               | ± 0.060  | ± 0.049                | ± 0.024                 | ± 0.011                  | ± 0.018                 | ± 0.011                  |  |
| Temperature effect on minimum dead load output              | %RO/°C            | ± 0.0040   | ± 0.0028               | ± 0.0012                | ± 0.0007                 | ± 0.0012                | ± 0.0012                 |  |
| Temperature effect on sensitivity                           | %/°C              | ± 0.0020   | ± 0.0016               | ± 0.0011                | ± 0.0011                 | ± 0.0008                | ± 0.0008                 |  |
| Excitation voltage  | V                 | 5...15   |                        |                         |                          |                         |                          |  |
| Zero balance  | %RO               | ± 1.0  |                        |                         |                          |                         |                          |  |
| Input resistance  |                   | 1106 ± 5   |                        |                         |                          |                         |                          |  |
| Output resistance   |                   | 1000 ± 1   |                        |                         |                          |                         |                          |  |
| Insulation resistance                                       | M                 | 5000   |                        |                         |                          |                         |                          |  |
| Compensated temperature range                               | °C                | -10...+40  |                        |                         |                          |                         |                          |  |
| Operating temperature range                                 | °C                | -40...+80  |                        |                         |                          |                         |                          |  |
| Safe load limit   | %E <sub>max</sub> | 200  |                        |                         |                          |                         |                          |  |
| Ultimate load   | %E <sub>max</sub> | 300  |                        |                         |                          |                         |                          |  |
| Safe side load  | %E <sub>max</sub> | 100  |                        |                         |                          |                         |                          |  |
| Load cell material  |                   | stainless steel 17-4 PH (1.4548)                                       |                        |                         |                          |                         |                          |  |
| Sealing   |                   | complete hermetic sealing; cable entry sealed by glass to metal header |                        |                         |                          |                         |                          |  |
| Protection according DIN 49.050                             |                   | IP 68  |                        |                         |                          |                         |                          |  |

\* Available with E<sub>max</sub>/20000 for 3-range scales.



### Wiring

- The load cell is provided with a shielded, 4 conductor cable.
- Cable length: 3 m
- Cable diameter: 5 mm
- The shield is connected to the load cell body.

### Note:

Maximum errors (+/-) are expressed as a percentage of rated load (when measured at 10Vdc excitation). The linearity and hysteresis is the maximum deviation from a straight line drawn between the no load and the rated load outputs for both increasing and decreasing loads. Accuracy classes apply when active range (live weight) is within 20 to 90% of rated load.