

# Beam Load Cell SBL (SBL-Ex)

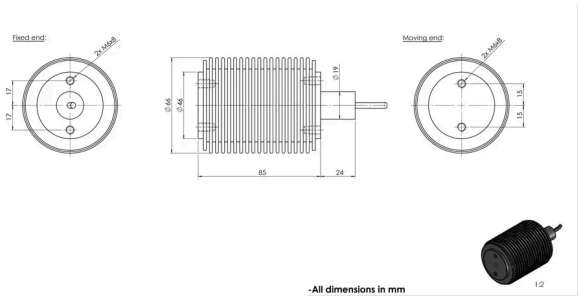
Compact digital beam load cell for single-use bag weighing, process weighing, force measurement, and general weighing in food, biopharmaceutical, and life science applications. This load cell is a shorter version of the BL beam load cell and is manufactured in stainless steel and laser welded (IP68).

| | |
|---|---|
| **Type:** | SBL |
| **Capacity (Emax):** | 1, 2, 5, 10, 20, 30, 50 kg |
| **Accuracy:** | High Precision 0.025% and 0.015% |
| **Overload Tolerance:** | 500% at 1 kg, 200% at 50 kg capacity |

# Special Features

- Short version of BL load cell
- Made in Denmark
- Electropolished stainless steel 1.4542 (17-4 PH)
- Robust capacitive technology
- Patented high reliability capacitive sensor
- High tolerance of up to 500% overload
- Hermetically sealed to IP68
- High accuracy, High resolution
- Small deflection at rated capacity
- Capacity (Emax): 1, 2, 5, 10, 20, 30, 50 kg
- Accuracy: High Precision 0.025%
- High resonance frequency (spring rate) for rapid dynamic weighing
- Digital filters
- Cable length up to 100 meters
- Calibration independent of cable length
- Replaceable load cell cable
- Easy mechanical and electrical installation

# Dimensions (mm)



# Specifications

| Parameter | Unit | 0.025% | 0.015%* |
|---|---|---|---|
| Rated capacity ($E_{max}$) | kg | 1, 2, 5, 10, 20, 30, 50 | 1, 2, 5, 10, 20, 30, 50 |
| Safe overload limit | % of $E_{max}$ | 200 to 500 | 200 to 500 |
| Safe sideload limit | % of $E_{max}$ | 300 to 500 | 300 to 500 |
| Combined accuracy | % of $E_{max}$ | 0.025 | 0.015 |
| Repeatability | % of $E_{max}$ | 0.012 | 0.010 |
| Linearity | % of $E_{max}$ | 0.017 | 0.010 |
| Creep 30 min. | % of $E_{max}$ | 0.017 | 0.015 |
| Temperature effect on zero | % of $E_{max}$ | 0.035 | 0.035 |
| Temperature effect on sensitivity | % /10°C | 0.035 | 0.035 |
| Compensated temperature range | °C | -10 to 50 | -10 to 50 |
| Operating temperature range | °C | -50 to 60 | -50 to 60 |
| Deflection at $E_{max}$ | mm | max 0.30 | max 0.30 |
| Measuring rate | Hz | 500 | 500 |
| Supply | Vdc | 24Vdc ±5% | 24Vdc ±5% |
| Internal resolution | Bit | 24 | 24 |
| Material | | Stainless Steel 17-4 PH and AISI 316 | Stainless Steel 17-4 PH and AISI 316 |
| Protection | | IP68 | IP68 |
| Cable | | 6 meter standard coaxial RG-58 (Ø6mm) with BNC connector | 6 meter standard coaxial RG-58 (Ø6mm) with BNC connector |
| Maximum Cable Length | m | 100 | 100 |
| Weight | kg | 1.5 | 1.5 |

| | | |
|---|---|---|
| Output Options | EtherNet/IP, PROFINET, EtherCAT, Profibus DP, Modbus TCP/IP, DeviceNet, RS485/422, 4-20mA, 0-10Vdc | EtherNet/IP, PROFINET, EtherCAT, Profibus DP, Modbus TCP/IP, DeviceNet, RS485/422, 4-20mA, 0-10Vdc |

* Higher accuracies on request

# Applications

Web tension measurement

Force measurement

Dynamic weighing

Process weighing

Small tanks and vessels

Vibration sorters

Filling and dosing

# Options

Load cell cable length 10, 20, 50 or 100 meters

Special PE load cell cable available for freezing low temperature (can be used down to -50 degrees Celsius)

Special Teflon load cell cable available for very high temperature (can be used up to 100 degrees Celsius)

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