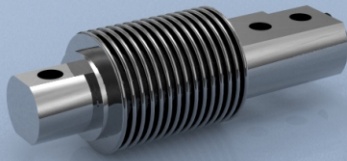




TYPE: BBL-1



BBL-1 Stainless Steel Beam Load Cell

Description

The BBL-1 series of beam load cells are available in a wide range of capacities from 10kg through to 500kg. They are manufactured entirely from stainless steel and have a fully welded construction, providing a high level of environmental and hermetic sealing to IP68. The design makes them ideal for use in harsh weighing environments where wash down of the application is required.

The BBL-1 can be supplied complete with a vessel/tank weighing assembly, which is designed to make installation easier and to provide a means of realising the best accuracy from the product when installed, by eliminating the effects for vessel/tank thermal expansion. More details on the assembly are available on a separate datasheet (BBL-1-WMOUNT).

We offer a wide range of additional instrumentation products to further enhance the product within a complete system. For vessel weighing applications, there are several displays and signal conditioners that can be offered to provide a complete weighing solution.

Specification

| | |
|--|--|
| Rated load (kg) | 10, 20, 50, 100, 200, 250, 500 |
| Accuracy class | C3 |
| Maximum number of verification intervals | 3000 |
| Minimum number of verification intervals | $E_{max}/10,000$ |
| Temperature effect on minimum dead load output | $\pm 0.0014\%$ of rated load/ $^{\circ}\text{C}$ |
| Temperature effect on sensitivity | $\pm 0.001\%$ of rated load/ $^{\circ}\text{C}$ |
| Safe load limit | 200% of rated load |
| Ultimate load | 300% of rated load |
| Safe side load | 100% of rated load |
| Output | 2mV/V ($\pm 0.1\%$) at rated load |
| Zero balance | $\pm 5\%$ of rated load |
| Combined error | $\pm 0.02\%$ of rated load |
| Non-linearity | $\pm 0.0166\%$ of rated load |
| Hysteresis | $\pm 0.0166\%$ of rated load |
| Creep error (30 minutes) | $\pm 0.0166\%$ of rated load |
| Excitation voltage | 5 to 15V |
| Input resistance | $380\Omega \pm 10$ |
| Output resistance | $350\Omega \pm 3$ |
| Insulation resistance | $>5000\text{M}\Omega @ 100\text{vdc}$ |
| Operating temperature range | -40 to $+80^{\circ}\text{C}$ (-40 to $+60^{\circ}\text{C}$ for ATEX version) |
| Compensated temperature range | -10 to $+40^{\circ}\text{C}$ |
| Environmental protection level | IP68 (up to 2m water depth) |
| Connection type | 3 metres PUR screened cable, via cable gland |
| Wiring connections | +ve supply: Green -ve supply: Black +ve signal: White -ve signal: Red + sense: Blue -sense: Brown Shield: Yellow |

Available Options/Accessories

- Hazardous Area certified - Intrinsically Safe (Ex i)
- Vessel mounting assembly
- Shock mounting assembly

ATEX approval pending

Ex i



Features

- Ranges from 10kg to 500kg
- Stainless steel (17-4PH) fully welded construction
- Environmentally sealed to IP68
- Can be supplied with vessel mounting assembly or shock mounts
- High accuracy

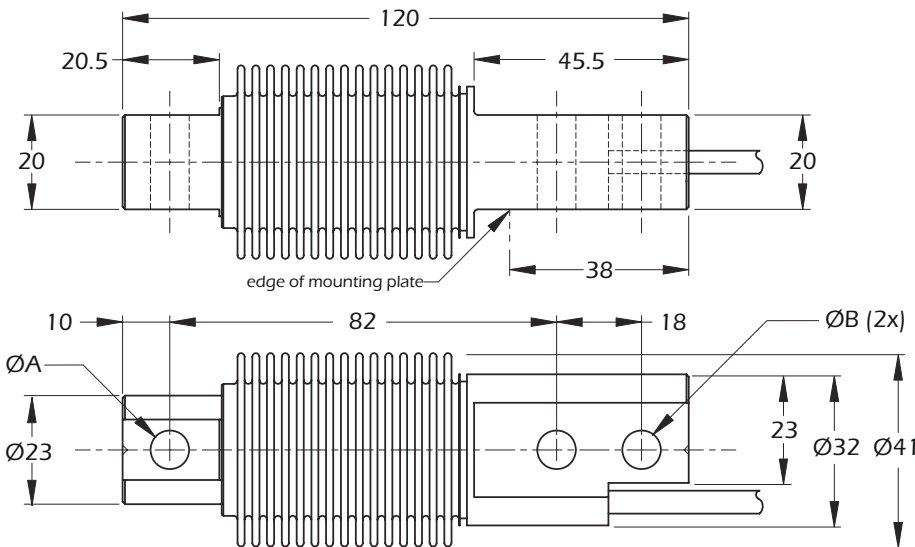
Typical Applications

- Vessel weighing
- Hanging scales
- Tensile test machines
- Conveyor scales
- Small hopper/tank weighing
- Bagging machinery



BBL-1 Stainless Steel Beam Load Cell

Dimensions

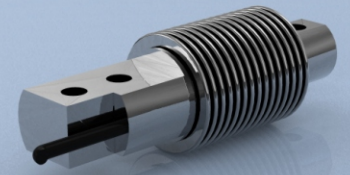


All dimensions are in mm

| Rating (kg) | ØA | ØB | Mounting Bolts | Torque (oiled thread) |
|-------------|------|-----|----------------|-----------------------|
| 10 to 250 | 8.2 | 8.2 | M8 8.8 | 25 Nm |
| 500 | 10.5 | 8.2 | M8 10.9 | 35Nm |

| Rating (kg) | Part Number | Weight (kg) | Resolution (kg) |
|-------------|-------------|-------------|-----------------|
| 10 | BBL-1-10 | 0.62 | 0.002 |
| 20 | BBL-1-20 | 0.62 | 0.005 |
| 50 | BBL-1-50 | 0.64 | 0.01 |
| 100 | BBL-1-100 | 0.64 | 0.02 |
| 200 | BBL-1-200 | 0.64 | 0.05 |
| 250 | BBL-1-250 | 0.64 | 0.05 |
| 500 | BBL-1-500 | 0.80 | 0.1 |

Note: Part numbers for ATEX versions will be suffixed with -ATEX e.g. BBL-1-10-ATEX.



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Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.

ATEX approval pending

Issue No. 4

Issue date: 03/02/2021
APPROVED
(unapproved if printed)