

TYPE: SBL-3



SBL-3 Stainless Steel Shear Beam Load Cell

Description

The SBL-3 series of shear beam load cells are available in a wide range of capacities from 200lb (91kg) through to 5000lb (2268kg). They are manufactured entirely from stainless steel and offer environmental sealing to IP67. The high bridge resistance of this model provides extended battery life for portable or battery powered installations. The SBL-3 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 (SBL-WMOUNT).

There are two versions available; one with a threaded end load attachment hole, the other version has a blind hole. The blind hole version is ideal for floor scale applications, where a foot can be attached for simple scale design. This version is also used when the vessel weighing assembly is used. The threaded version is ideal for hanging vessels and hoppers.

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 (lb)	200, 500, 1000, 2500, 5000
Rated load (kg)	91, 227, 454, 1134, 2268
Accuracy class	C3
Maximum number of verification intervals	3000
Minimum number of verification intervals	$E_{max}/11,500$
Temperature effect on minimum dead load output	$\leq \pm 0.00122\%$ of rated load/ $^{\circ}\text{C}$
Temperature effect on sensitivity	$\leq \pm 0.001\%$ 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	$\leq \pm 5\%$ of rated load
Combined error	$\leq \pm 0.02\%$ of rated load
Non-linearity	$\leq \pm 0.0166\%$ of rated load
Hysteresis	$\leq \pm 0.0166\%$ of rated load
Creep error (30 minutes)	$\leq \pm 0.0166\%$ of rated load
Excitation voltage	5 to 15V
Input resistance	1100 Ω ± 50
Output resistance	1000 Ω ± 2
Insulation resistance	>5000M Ω @ 100vdc
Operating temperature range	-20 to +65 $^{\circ}\text{C}$
Compensated temperature range	-10 to +40 $^{\circ}\text{C}$
Sealing	Potted
Environmental protection level	IP67
Connection type	3 metres PUR screened cable, via cable gland
Wiring connections	+ve supply: Green -ve supply: Black +ve signal : White -ve signal: Red Shield: Yellow

Available Options

- Vessel mounting assembly (using blind hole version of SBL-3)
- Shock mounting assembly
- Platform foot mounting assembly (using blind hole version of SBL-3)

Features

- Ranges: 200lb to 5000lb
- Stainless steel (17-4PH) construction
- Environmentally sealed to IP67
- Unique blind loading hole
- High bridge resistance
- Can be supplied with vessel mounting assembly, shock mounts or platform foot mounting assembly

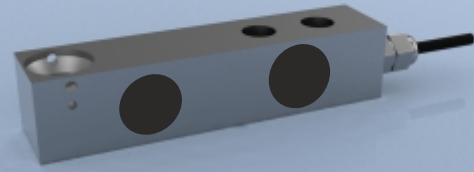
Typical Applications

- Vessel & hopper weighing
- Floor scales
- Rolling roads
- MOT brake testers
- Pallet truck weighing
- Tank & silo weighing

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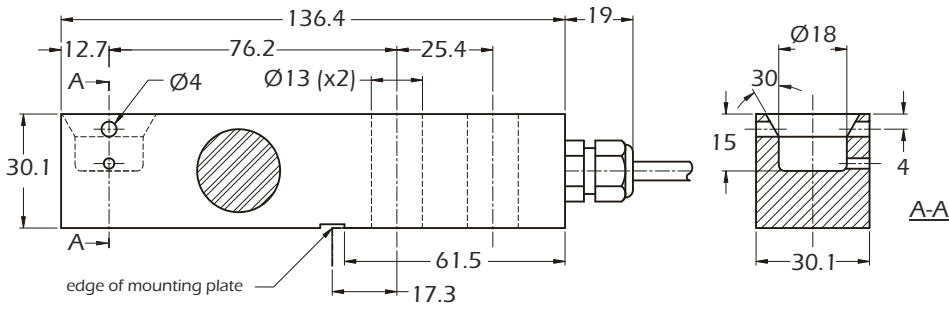
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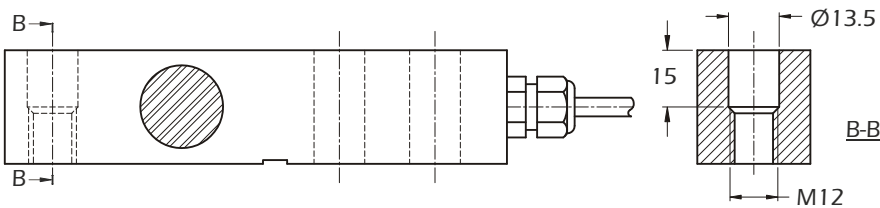
Dimensions

Blind Hole Attachment



All dimensions are in mm

Counter Bored Threaded (Metric) Attachment



Rating (kg)	Part Number Blind Hole	Part Number Counter Bored	Mounting Bolts	Torque (oiled threads)	Weight (kg)	Resolution (kg)
200	SBL-3-200-BH	SBL-3-200-CM	M12 8.8	90 Nm	1.1	0.02
500	SBL-3-500-BH	SBL-3-500-CM	M12 8.8	90Nm	1.1	0.05
1000	SBL-3-1000-BH	SBL-3-1000-CM	M12 8.8	90Nm	1.1	0.1
2500	SBL-3-2500-BH	SBL-3-2500-CM	M12 8.8	90Nm	1.1	0.2
5000	SBL-3-5000-BH	SBL-3-5000-CM	M12 10.9	120Nm	1.2	0.5