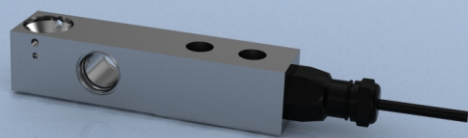




## TYPE: SBL-24



# SBL-24 Stainless Steel Shear Beam Load Cell

## Features

- Ranges: 0.5 to 10klb
- Stainless steel (17-4PH) fully welded construction
- Environmentally sealed to IP68
- Unique blind loading hole
- High input resistance
- Can be supplied with vessel mounting assembly, shock mounts or platform foot mounting assembly



### SCIGATE AUTOMATION (S) PTE LTD

No 1 Bukit Batok Street 22 #01-01 Singapore 659592  
 Tel: (65) 6561 0488 Fax: (65) 6561 0588  
 Email: sales@scigate.com.sg Web: https://scigate.com.sg/

Business Hours: Monday - Friday 8:30AM - 6:15PM

## Typical Applications

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

## Description

The SBL-24 series of beam load cells are available in a wide range of capacities from 0.5lb (227kg) through to 10,000lb (4536kg). 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 SBL-24 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.

## Specification

Rated load (lb)	500, 1000, 2500, 5000, 10,000
Rated load (kg)	227, 454, 1134, 2268, 4536
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 $\Omega$ $\pm 50$
Output resistance	1000 $\Omega$ $\pm 2$
Insulation resistance	>5000M $\Omega$ @ 100vdc
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 mtr PUR screened cable (4.5 mtr for 10klb)
Wiring connections	+ve supply: Green    -ve supply: Black +ve signal: White    -ve signal: Red Shield: Yellow

## Available Options

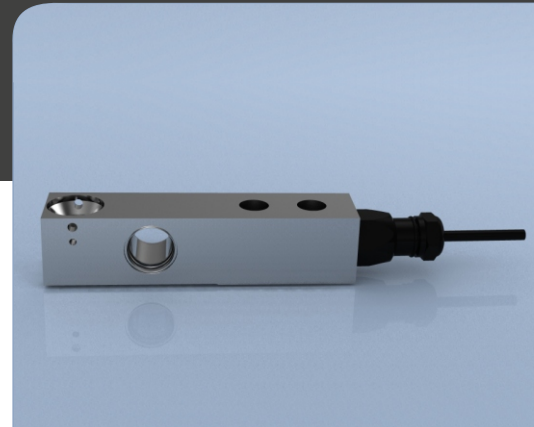
- Hazardous Area certified - Intrinsically Safe (Ex i)
- Vessel mounting assembly (using blind hole version of SBL-24)
- Shock mounting assembly
- Platform foot mounting assembly (using blind hole version of SBL-24)

ATEX approval pending

Ex i

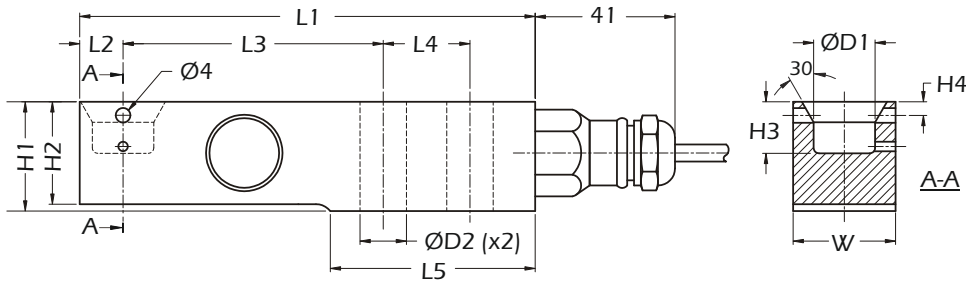


# SBL-24 Stainless Steel Shear Beam Load Cell

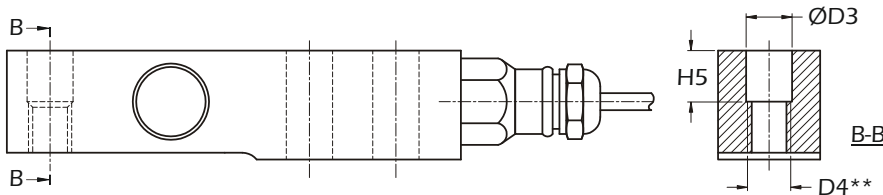


## Dimensions

### Blind Hole Attachment



### Counter Bored Threaded (Metric) Attachment



Rating (lb)	Rating (kg)	L1	L2	L3	L4	L5	H1	H2	H3	H4	H5	W	D1	D2	D3	D4
500	227	133.4	12.7	76.2	25.4	59.9	31	28.8	15	4	15	30	18	13	13.5	M12
1000	454	133.4	12.7	76.2	25.4	59.9	31	28.8	15	4	15	30	18	13	13.5	M12
2500	1134	133.4	12.7	76.2	25.4	59.9	31	30.5	15	4	15	30	18	13	13.5	M12
5000	2268	133.4	12.7	76.2	25.4	59.9	31	30.5	15	4	15	30	18	13	13.5	M12
10,000	4536	177.8	19.1	95.3	38.1	92.7	43.6	38.1	20.5	8	20.1	43	25	21	21.5	M20

All dimensions are in mm

Rating (lb)	Rating (kg)	Part Number Blind Hole	Part Number Counter Bored	Mounting Bolts	Torque (oiled threads)	Weight (kg)	Resolution (lb)
500	227	SBL-24-0.5-BH	SBL-24-0.5-CM	M12 8.8	90 Nm	1.2	0.05
1000	454	SBL-24-1-BH	SBL-24-1-CM	M12 8.8	90Nm	1.2	0.1
2500	1134	SBL-24-2.5-BH	SBL-24-2.5-CM	M12 8.8	90Nm	1.2	0.2
5000	2268	SBL-24-5-BH	SBL-24-5-CM	M12 10.9	120Nm	1.2	0.5
10,000	4536	SBL-24-10-BH	SBL-24-10-CM	M20 8.8	400Nm	2.44	1

**ATEX approval pending**

www.lcm systems.com

### LCM Systems Ltd

Unit 15, Newport Business Park, Barry Way  
Newport, Isle of Wight PO30 5GY UK  
Tel: +44 (0)1983 249264  
sales@lcm systems.com  
www.lcm systems.com

### LCM Systems (România)

Strada Ștefan Cel Mare 26a,  
Tunari, cod.077180, Ilfov, România  
Tel: +40 (0)77 4641899  
ro@lcm systems.com  
www.lcm systems.ro

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

### Issue No. 3

Issue date: 08/03/2021  
APPROVED  
(unapproved if printed)

