

# SB Series

## Shear Beam Medium to Heavy Capacity Load Cells



- Welded cup for superior protection
- Environmentally-sealed (IP68)
- Stainless steel construction
- NTEP and OIML certified

Cardinal Scale's SB series shear beam load cells are ideal for low profile platform scales, tank/hopper weighing, and other process control systems. These load cells are fabricated from stainless steel to provide the ultimate in protection when caustic or wet environments are encountered. Provided with the SB load cell are mounting holes for securing the cell. Each load cell is furnished with a 20-ft/6-m integral multiconductor cable secured by strain relief seal. Capacities available from 2,500 lb/1,130 kg to 20,000 lb/9,000 kg.

### MECHANICAL DATA

|   |  |
|---|--|
| <b>Rated Capacity, (R.C.) E<sub>max</sub></b> | 2,500 lb / 1,130 kg<br>5,000 lb / 2,260 kg<br>10,000 lb / 4,500 kg<br>20,000 lb / 9,000 kg |
| <b>Minimum Dead Load</b>                      | 0 lb / 0 kg  |
| <b>Safe Load Limit</b>                        | 150% R.C.  |
| <b>Ultimate Load</b>                          | 300% R.C.  |
| <b>Deflection at R.C.</b>                     | 1.5-.04 in / 38-.97 mm   |
| <b>Spring Element Material</b>                | 17-4 PH  |
| <b>Net Weights</b>                            | 5 lb / 2 kg - 10 lb / 5 kg   |

### CERTIFICATE DATA

|  |   |                             |
|--|---|-----------------------------|
| <b>Issuing Body</b>  | NTEP  | OIML                        |
| <b>Certificate Number</b>                                      | 87-059  | R60/1991-DK-97.02           |
| <b>Accuracy Class</b>  | III/IIIL  | C3                          |
| <b>Maximum Number of Load Cell Intervals, n<sub>max</sub></b>  | 5,000/10,000  | 3,000                       |
| <b>Single/Multiple</b>   | S/M   |                             |
| <b>Humidity Symbol</b>   |   | CH                          |
| <b>Minimum Load Cell Verification Interval V<sub>min</sub></b> | III 0.16, 0.32, 0.64 & 1.27 kg<br>IIIL 0.1, 0.2, 0.4 & 0.8 kg | 0.086, 0.17, 0.35 & 0.70 kg |

### ELECTRICAL DATA

|  |                         |
|--|-------------------------|
| <b>Rated Output</b>                    | 2mV/V ± 0.1%            |
| <b>Excitation Voltage, Recommended</b> | 10 VDC                  |
| <b>Excitation Voltage, Maximum</b>     | 15 VDC                  |
| <b>Cable Length</b>                    | 20 ft / 6 m             |
| <b>Terminal Resistance</b>             |                         |
| Excitation                             | 386 ± 20 ohms           |
| Signal                                 | 350 ± 5 ohms            |
| <b>Zero Load Output</b>                | ± 1% R.C.               |
| <b>Insulation Resistance</b>           | >5000 megohms at 50 VDC |

### ENVIRONMENTAL DATA

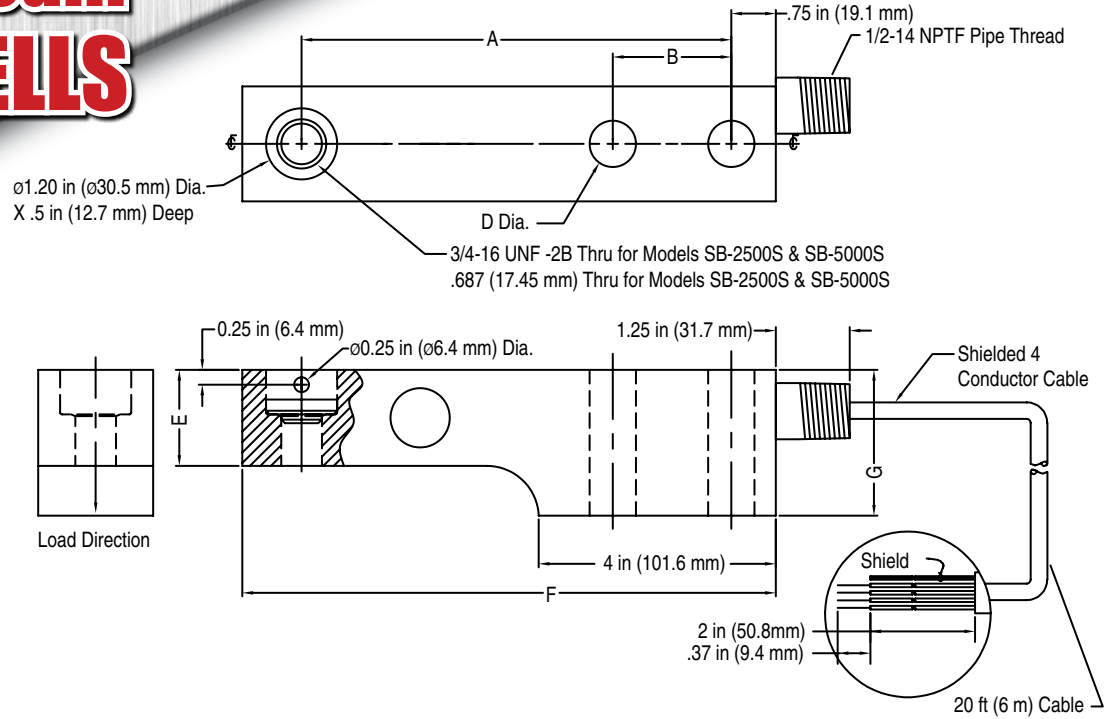
|   |                 |
|---|-----------------|
| <b>Temperature Compensation Range</b>                 | -10½° to +40½°C |
| <b>Operating Temperature Range</b>                    | -29½° to +93½°C |
| <b>Construction &amp; Protection Code</b>             | CP-67 HU, IP68  |
| <b>Barometric Pressure Effect on Zero Load Output</b> | <1 v (min)/1kPa |

LOAD CELL

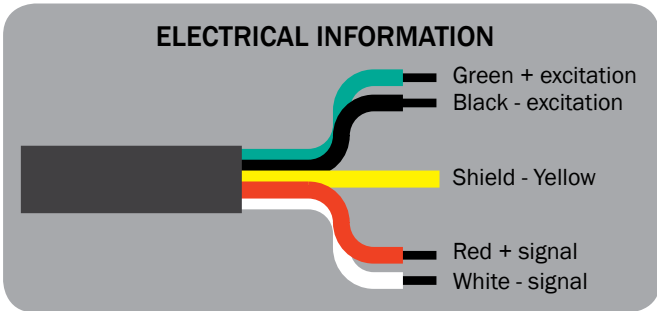
SB

# SB Series | Medium to Heavy Capacity

## Shear Beam LOAD CELLS



| MODEL     | CAPACITY             | "A"                 | "B"               | "C"               | "D"                          | "E"               | "F"                | "G"               |
|-----------|----------------------|---------------------|-------------------|-------------------|------------------------------|-------------------|--------------------|-------------------|
| SB-2500S  | 2,500 lb / 1,130 kg  | 6.375 in / 161.9 mm | 2.50 in / 63.5 mm | 1.45 in / 36.8 mm | .531 in / 13.51 mm Dia. Thru | 1.25 in / 31.7 mm | 8.00 in / 203.2 mm | 1.94 in / 49.2 mm |
| SB-5000S  | 5,000 lb / 2,260 kg  | 6.375 in / 161.9 mm | 2.50 in / 63.5 mm | 1.45 in / 36.8 mm | .531 in / 13.51 mm Dia. Thru | 1.43 in / 36.3 mm | 8.00 in / 203.2 mm | 1.94 in / 49.2 mm |
| SB-10000S | 10,000 lb / 4,500 kg | 7.250 in / 184.2 mm | 2.00 in / 50.8 mm | 1.94 in / 49.3 mm | .781 in / 19.83 mm Dia. Thru | 1.62 in / 41.1 mm | 9.00 in / 228.6 mm | 2.46 in / 62.5 mm |
| SB-20000S | 20,000 lb / 9,000 kg | 7.250 in / 184.2 mm | 2.00 in / 50.8 mm | 1.94 in / 49.3 mm | .781 in / 19.83 mm Dia. Thru | 2.00 in / 50.8 mm | 9.00 in / 228.6 mm | 2.46 in / 62.5 mm |



### State-of-the-Art Load Cell Manufacturing Facility ISO 9001 Quality Environment



### CERTIFICATIONS



The SB shear beam load cell meets all requirements of OIML R60 and has been issued OIML Certificate No. **R60/1991-DK-97.02**



The SB shear beam load cell meets all requirements of Handbook 44, issued by the National Institute of Standards and Technology and have been issued the NTEP Certificate of Conformance No. **87-059**.

#### VCAP CERTIFIED

Cardinal Scale has been formally audited and found to be fully compliant with the Verified Conformity Assessment Program (VCAP) administered by the National Type Evaluation Program (NTEP) of the National Conference on Weights and Measures (NCWM).

Cardinal Scale reserves the right to improve, enhance or modify features and specifications without prior notice. All registered trademarks are the property of their respective owners.

**Cardinal**  
 Cardinal Scale Manufacturing Co.  
 203 E. Daugerty, Webb City, MO 64870 USA  
 Ph: 417-673-4631 or 800-441-4237 • Fax: 417-673-5001  
 www.CardinalScale.com

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