

## Nickel Plated Steel S-Type Load Cells



### FEATURES

- Capacity range: 50 to 20K lb (22.7 to 9K kg)
- Designed for single or multiple load cell applications
- Nickel-plated, alloy steel construction
- Integral 20-foot cable for maximum mounting flexibility
- Sealed to IP67 standards
- Tension and compression measurement
- NTEP certified
- FM approved

### DESCRIPTION

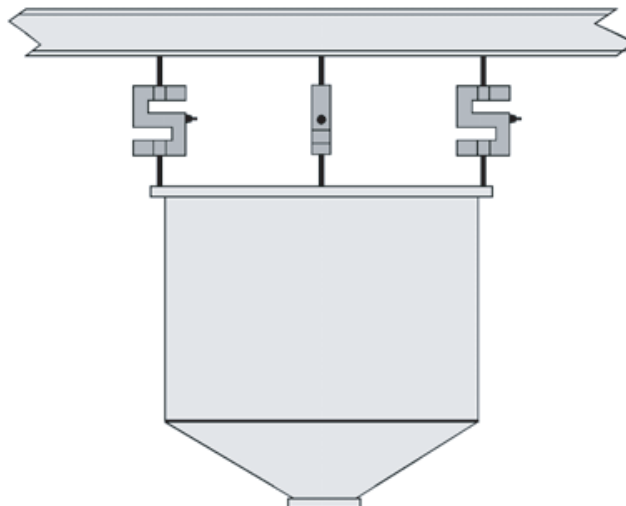
U3SB-A S-Type Load Cells quickly and cost-effectively convert any tank, bin, or hopper into a weighing scale system. The compact size of the U3SB-A makes it ideal for applications where space is at a premium. Superior nickel plating provides excellent environmental protection for general, indoor, factory installations.

The U3SB-A is available in sixteen capacities from 50 to 20K pounds. Each cell has a 20-foot, four conductor cable for maximum flexibility in mounting and positioning.

### APPLICATIONS

- Bin and hopper weighing systems
- Mechanical scale conversion
- Tension force measurement
- OEM scale construction
- Truck scale conversions
- Level and inventory measurement

### CONFIGURATION



### SPECIFICATIONS

#### Performance

|  |   |
|--|---|
| Rated Capacities (lb)                    | 50, 100, 150, 250, 300, 500, 750<br>1K, 1.5K, 2K, 2.5K, 3K, 5K, 10K,<br>15K, and 20K lb |
| Rated Output (R.O.)                      | 3.0mV/V ± 0.25%   |
| Repeatability                            | 0.01% R.O.  |
| Combined Error                           | 0.02% R.O.  |
| Zero Balance                             | 1.0% R.O.   |
| Creep (20 minutes)                       | 0.030% R.O.   |
| Temperature Effects (compensated range): |   |
| On Zero Balance                          | 0.0008% RO/°F   |
| On Span                                  | 0.0006% Load/°F   |

#### Electrical

|                        |                                      |
|------------------------|--------------------------------------|
| Recommended Excitation | 10Vdc (15Vdc max.)                   |
| Input Resistance       | 343 - 450 ohms                       |
| Output Resistance      | 49 - 355 ohms                        |
| Cable Connection       | 20-ft, 4-conductor<br>shielded cable |

#### Temperature

|                   |               |
|-------------------|---------------|
| Storage Range     | -65 to +185°F |
| Operating Range   | 0 to +150°F   |
| Compensated Range | +14 to +104°F |

#### Adverse Load Ratings

|                   |                     |
|-------------------|---------------------|
| Safe Overload     | 150% rated capacity |
| Ultimate Overload | 300% rated capacity |

#### Material

|               |                           |
|---------------|---------------------------|
| Material      | nickel plated alloy steel |
| Cable Fitting | stainless steel           |

#### Sealing

|                     |      |
|---------------------|------|
| Environmental Class | IP67 |
|---------------------|------|

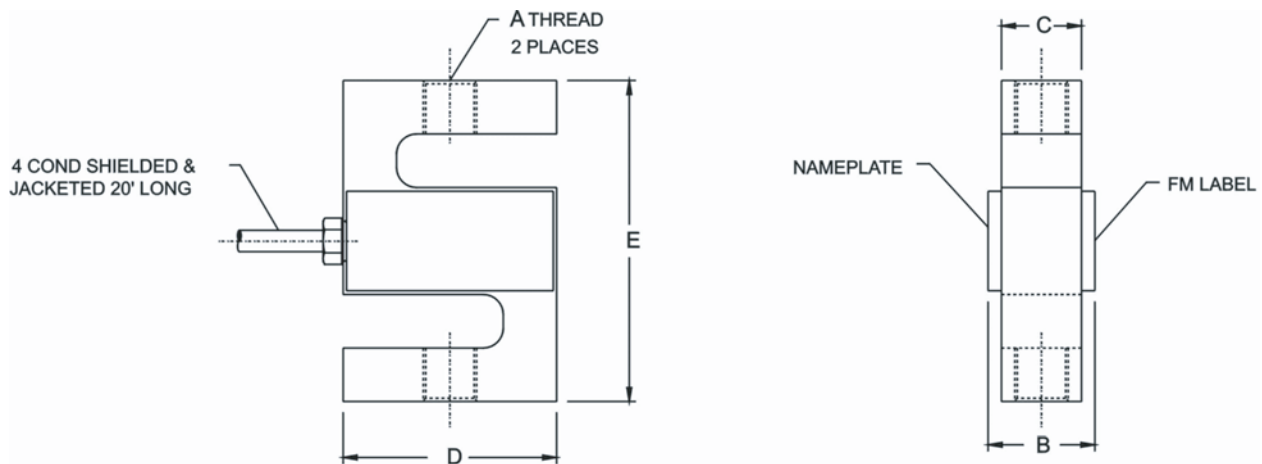
#### Deflection

|               |                      |
|---------------|----------------------|
| 50 - 150 lb   | 0.010 - 0.015 inches |
| 250 - 300 lb  | 0.010 inches         |
| 500 - 1.5K lb | 0.010 - 0.012 inches |
| 2K - 3K lb    | 0.012 inches         |
| 5K lb         | 0.017 inches         |
| 10K - 20K lb  | 0.025 inches         |

#### Approvals

|                      |  |
|----------------------|--|
| NTEP Class III, IIIL | 5,000 single, 10,000 multiple            |
| FM (Factory Mutual)  | Class I, II, III; Div 1, 2<br>Groups A-G |

### OUTLINE DIMENSIONS



| WIRING      |       |
|-------------|-------|
| FUNCTION    | COLOR |
| +EXCITATION | RED   |
| -EXCITATION | BLACK |
| +OUTPUT     | GREEN |
| -OUTPUT     | WHITE |

| CAPACITY (lbs) | A               | B    | C    | D    | E    |
|----------------|-----------------|------|------|------|------|
| 50-150         | 1/4-28 UNF-2B   | .65  | .50  | 2.00 | 2.50 |
| 250-300        | 3/8-24 UNF-2B   | .75  | .50  | 2.00 | 3.00 |
| 500-2K         | 1/2-20 UNF-2B   | 1.00 | .75  | 2.00 | 3.00 |
| 2.5K-3K        | 1/2-20 UNF-2B   | 1.25 | 1.00 | 2.00 | 3.00 |
| 5K             | 3/4-16 UNF-2B   | 1.25 | 1.00 | 3.00 | 4.25 |
| 10K            |                 | 1.25 | 1.00 | 3.50 | 4.75 |
| 15K            |                 | 1.50 | 1.25 | 4.00 | 5.50 |
| 20K            | 1 1/4-12 UNF-2B | 2.25 | 2.00 | 5.00 | 7.00 |

BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.

## Disclaimer

All product specifications and data are subject to change without notice.

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