

## Double Ended Beam Load Cell



### FEATURES

- Capacities: 5K to 250Klb
- Low profile construction
- Stainless steel construction
- Certified to NTEP class IIIIL, 10,000 divisions
- Sealing: IP67 (DIN 40.050)

### OPTIONAL FEATURE

- FM and ATEX certified versions are available for use in potentially explosive atmospheres

### DESCRIPTION

The 9103 is a double ended, center loaded shear beam type load cell constructed of stainless steel.

This product is suitable for tank weighing systems, low cost weighbridges and axle weighers.

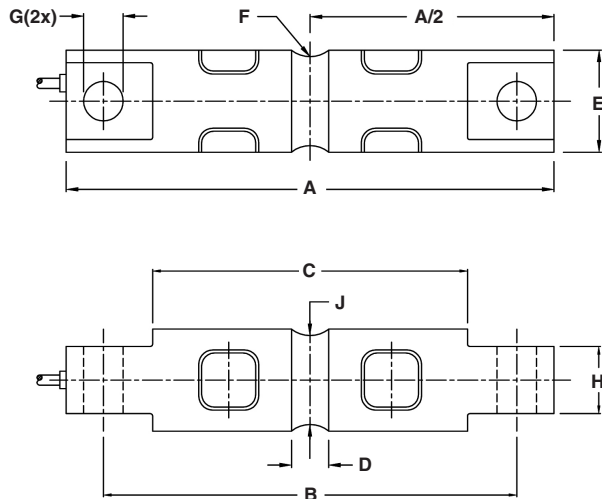
A reliable sealing is ensured by the proprietary TRANSEAL potting compound and additional mechanical protection of the strain gage area.

A specially designed mounting arrangement is available, providing the ideal solution for vessel / tank weighing.

### APPLICATIONS

- Platform scales
- On-board weighing
- Weighbridges
- Silo hopper weighing

### OUTLINE DIMENSIONS in mm



#### Cable specifications:

Cable length: 10 meters (6 meters for 5 - 20K)

Excitation + Red  
 Excitation - Black  
 Output + Green  
 Output - White  
 Shield Transparent

Cable screen is not connected to the load cell body

| Capacity (lbs) | 5K, 10K | 20K   | 30 - 60K | 100K  | 150K  | 200K, 250K |
|----------------|---------|-------|----------|-------|-------|------------|
| A              | 206.2   | 206.2 | 260.4    | 285.8 | 285.8 | 408.9      |
| B              | 174.6   | 174.6 | 215.9    | 241.3 | 241.3 | 330.2      |
| C              | 133.1   | 133.1 | 165.1    | 190.5 | 190.5 | 254.0      |
| D              | 15.7    | 21.3  | 25.4     | 31.8  | 31.8  | 33.0       |
| E              | 43.2    | 49.5  | 76.2     | 88.9  | 99.1  | 136.5      |
| F              | 12.7    | 12.7  | 25.4     | 38.1  | 38.1  | 50.8       |
| G              | 16.7    | 16.7  | 26.9     | 26.9  | 26.9  | 39.6       |
| H              | 28.4    | 28.4  | 60.2     | 63.5  | 71.1  | 116.8      |
| J              | 37.6    | 37.6  | 69.3     | 82.3  | 92.5  | 131.4      |



### SPECIFICATIONS

| PARAMETER  | VALUE  |                     | UNIT                      |
|--|--|---------------------|---------------------------|
| Standard capacities ( $E_{max}$ )                  | 5*, 10, 20, 30, 40, 50, 60, 100, 150*, 200*, 250*            |                     | Klbs                      |
| Metric equivalents                                 | 2.3*, 4.5, 9.1, 13.6, 18.2, 22.7, 27.2, 45.4, 68*, 91*, 113* |                     | ton                       |
| Accuracy class according to NTEP                   | <b>NTEP III L</b>  | <b>Non-Approved</b> |                           |
| Maximum no. of verification intervals ( $n_{Ic}$ ) | 10000  |                     |                           |
| Rated output (=S)                                  | 3.0  |                     | mV/V                      |
| Rated output tolerance                             | 0.03   |                     | ±mV/V                     |
| Zero balance                                       | 2.0  |                     | ±% FSO                    |
| Combined error                                     | 0.0200   | 0.1000              | ±% FSO                    |
| Non-repeatability                                  | 0.0100   | 0.0200              | ±% FSO                    |
| Minimum dead load output return                    | 0.0300   | 0.0500              | ±% applied load           |
| Creep error (30 minutes)                           |  | 0.0600              | ±% applied load           |
| Creep error (20 - 30 minutes)                      | 0.0300   | 0.0200              | ±% applied load           |
| Temperature effect on minimum dead load output     | 0.0008)  | (0.0140)            | ±% FSO/°F (/5°C)          |
| Temperature effect on sensitivity                  | 0.0010   | (0.0070)            | ±% applied load/°F (/5°C) |
| Minimum dead load                                  | 0  |                     | % $E_{max}$               |
| Maximum safe over load                             | 150  |                     | % $E_{max}$               |
| Ultimate over load                                 | 300  |                     | % $E_{max}$               |
| Maximum safe side load                             | 100  |                     | % $E_{max}$               |
| Deflection at $E_{max}$                            | 0.5/ 0.6/ 1.1/ 0.5/ 0.5/ 0.5/ 0.6/ 0.5/ 0.5/ 0.9/ 0.9        |                     | mm                        |
| Excitation voltage                                 | 5 to 12  |                     | V                         |
| Maximum excitation voltage                         | 15   |                     | V                         |
| Input resistance                                   | 880±80   |                     | Ω                         |
| Output resistance                                  | 700±7  |                     | Ω                         |
| Insulation resistance                              | ≥5000  |                     | MΩ                        |
| Compensated temperature range                      | -10 to +40   |                     | °C                        |
| Operating temperature range                        | -40 to +80   |                     | °C                        |
| Storage temperature range                          | -40 to +90   |                     | °C                        |
| Element material (DIN)                             | Stainless steel  |                     |                           |
| Sealing (DIN 40.050 / EN60.529)                    | IP67   |                     |                           |
| Recommended torque on fixation bolts               | 12 to 14   |                     | N*m                       |

\* Capacities 5, 150, 200 and 250 Klbs are not approved by NTEP

FSO-Full Scale Output

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