

## Double-Ended Shear Beam Load Cell for economical, no-compromise weighing



### Double-ended Shear Beam Weighing

Use the SLD525 in applications requiring center loading to minimize sensitivity to off-center forces. The SLD525 offers an efficient solution by applying the shear beam weighing principle for moderate to medium capacity applications. The cell can also be used to convert mechanical scales to electronic. This robust and economical design is suitable for use in normal to harsh industrial environments.



### Robust Strain Gage Design

The SLD525 load cell uses a reliable Strain Gage design with excellent measurement stability. The high sensitivity output enables the use of economic weight indicators, providing a valuable low-cost solution. The wide capacity range offers the optimum selection to maximize signal for your application.



### Stainless Steel Construction

The SLD525 is available in maximum capacities ranging from 1,000 lb to 75,000 lbs. Each version is constructed of Stainless Steel to ensure good performance even in difficult industrial environments.



### SLD525 Shear Beam Load Cell

Use the SLD525 when is required in moderate to medium capacity applications and weighing performance cannot be compromised. Every SLD525 load cell features:

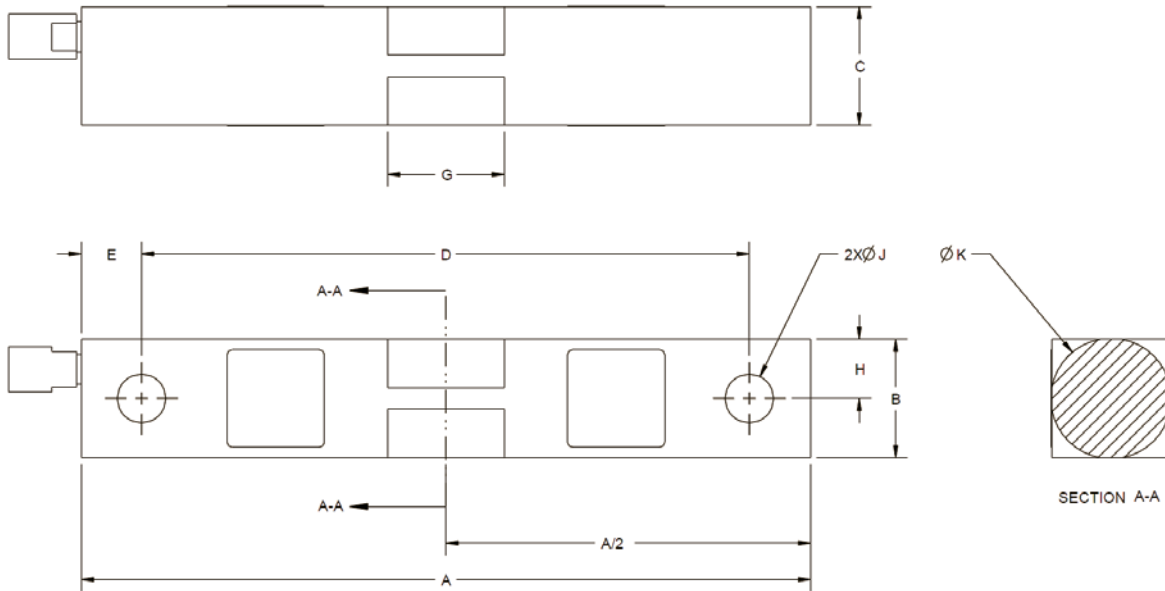
- Reliable Strain Gage design
- Standard mechanical interface
- Robust design, 17-4PH Stainless steel
- High output signal 3mV/V
- 0.03% combined error
- IP67 Protection
- Minimum sensitivity to off-center forces

The load cell's 0.03% combined error specification is suitable for many industrial applications, while its high output signal permits the use of economic terminals and transmitters. Together, these features ensure the best possible system performance.

| Parameter                            | Unit of measure               | Specification <sup>2</sup>        |                 |                 |                 |                 |                |                 |                 |                 |  |
|--------------------------------------|-------------------------------|-----------------------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|--|
|                                      |                               | SLD525                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Model number                         |                               | SLD525                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Rated Capacity (R.C.)                | lb                            | 1000                              | 2000            | 5000            | 10000           | 15000           | 25000          | 35000           | 50000           | 75000           |  |
| Rated Output                         | mV/V @ R.C.                   | 3.00 ± 0.27%                      |                 |                 |                 |                 |                |                 |                 |                 |  |
| Zero load Output                     | % R.C.                        | 1.0                               |                 |                 |                 |                 |                |                 |                 |                 |  |
| Combined Error <sup>1</sup>          | % R.C.                        | ≤ 0.03                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Repeatability Error                  | % AL <sup>3</sup>             | ≤ 0.02                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Creep, 30 minute                     | % AL <sup>3</sup>             | ≤ 0.01                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Temperature effect on                | Min. Dead Load Output         | % R.C./10°C (50°F) ≤ 0.02         |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Sensitivity <sup>2</sup>      | % R.C./10°C (50°F) ≤ 0.027        |                 |                 |                 |                 |                |                 |                 |                 |  |
| Temperature range                    | Compensated                   | °C (°F) -10 to +40 (14 to 104)    |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Operating                     | °C (°F) -35 to +65 (-30 to +150)  |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Safe storage                  | °C (°F) -54 to +82 (-65 to +180)  |                 |                 |                 |                 |                |                 |                 |                 |  |
| Factory Mutual Approval <sup>4</sup> | Number                        | 3036007                           |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Rating                        | IS / I, II, III / 1/ ABCDEFG / T4 |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      |                               | NI / 1 / 2 / ABCD / T4            |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      |                               | S / 2 / II, III / FG / T4         |                 |                 |                 |                 |                |                 |                 |                 |  |
| Entity Parameters                    | Ui = 20V, Ii = 600mA, Pi = 6W |                                   |                 |                 |                 |                 |                |                 |                 |                 |  |
| Excitation voltage                   | Recommended                   | V AC/DC 5 to 12                   |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Maximum                       | V AC/DC 18                        |                 |                 |                 |                 |                |                 |                 |                 |  |
| Terminal resistance                  | Excitation                    | Ω 700 ± 7                         |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Output                        | Ω 703 ± 4                         |                 |                 |                 |                 |                |                 |                 |                 |  |
| Insulation resistance at 50 VDC      | MΩ                            | > 5000                            |                 |                 |                 |                 |                |                 |                 |                 |  |
| Breakdown voltage                    | V AC                          | > 500                             |                 |                 |                 |                 |                |                 |                 |                 |  |
| Material                             | Enclosure                     | 17-4PH Stainless steel            |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Cable entry fitting           | Stainless steel                   |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Cable                         | Polyurethane                      |                 |                 |                 |                 |                |                 |                 |                 |  |
| Protection                           | Type                          | Potted, with metal covers         |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | IP Rating                     | IP67                              |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | NEMA Rating                   | ??                                |                 |                 |                 |                 |                |                 |                 |                 |  |
| Load limit                           | Safe                          | % R.C. 150                        |                 |                 |                 |                 |                |                 |                 |                 |  |
|                                      | Ultimate                      | % R.C. 300                        |                 |                 |                 |                 |                |                 |                 |                 |  |
| Safe dynamic load                    | % R.C.                        | 100                               |                 |                 |                 |                 |                |                 |                 |                 |  |
| Safe side load                       | % R.C.                        | 100                               |                 |                 |                 |                 |                |                 |                 |                 |  |
| Fatigue life                         | Cycles at R.C.                | 1,000,000                         |                 |                 |                 |                 |                |                 |                 |                 |  |
| Direction of loading                 |                               | Shear                             |                 |                 |                 |                 |                |                 |                 |                 |  |
| Deflection @ R.C., nominal           | in (mm)                       | 0.001<br>(0.02)                   | 0.003<br>(0.08) | 0.008<br>(0.19) | 0.004<br>(0.11) | 0.006<br>(0.16) | 0.01<br>(0.27) | 0.015<br>(0.37) | 0.010<br>(0.26) | 0.021<br>(0.54) |  |
| Weight, nominal                      | lb (kg)                       | 2.2 (1)                           | 2.2 (1)         | 2.2 (1)         | 5.5 (2.5)       | 5.5 (2.5)       | 5.5 (2.5)      | 5.5 (2.5)       | 24.2 (11)       | 24.2 (11)       |  |
| Cable length                         | ft (m)                        | 19.7 (6)                          |                 |                 |                 |                 |                |                 |                 |                 |  |
| Overload protection                  |                               | No                                |                 |                 |                 |                 |                |                 |                 |                 |  |

1. Typical error due to the combined effect of non-linearity and hysteresis
2. Typical values only
3. AL = Applied Load
4. Refer to certificate for complete information

### SLD525 Load Cell Dimensional Drawing in mm and (inches)



| Emax/Cap         | A              | B            | C             | D              | E            | G            | H            | ØJ            | ØK           |
|------------------|----------------|--------------|---------------|----------------|--------------|--------------|--------------|---------------|--------------|
| 1,000-5,000 lb   | 190.5 (7.50)   | 30.99 (1.22) | 30.99 (1.22)  | 158.75 (6.25)  | 15.9 (0.63)  | 30.48 (1.20) | 16.76 (0.66) | 12.70 (0.50)  | 31.50 (1.24) |
| 10,000-35,000 lb | 222.25 (8.75)  | 49.15 (1.94) | 36.45 (1.435) | 190.50 (7.50)  | 15.9 (0.63)  | 41.15 (1.62) | 24.58 (0.97) | 20.57 (0.81)  | 50.80 (2.00) |
| 50,000-75,000 lb | 342.90 (13.50) | 74.68 (2.94) | 61.98 (2.44)  | 292.10 (11.50) | 25.40 (1.00) | 82.55 (3.25) | 37.34 (1.47) | 33.32 (1.312) | 75.95 (2.99) |

## SLD525 Load Cell Ordering Information

| Model Number     | Item Number |
|------------------|-------------|
| SLD525, 1000 lb  | 61042069    |
| SLD525, 2000 lb  | 61042072    |
| SLD525, 5000 lb  | 61042073    |
| SLD525, 10000 lb | 61042074    |
| SLD525, 15000 lb | 61042076    |
| SLD525, 25000 lb | 61042077    |
| SLD525, 35000 lb | 61042078    |
| SLD525, 50000 lb | 61042079    |
| SLD525, 75000 lb | 61042080    |

## SLD525 Load Cell Cable Colors

| Color | Function     |
|-------|--------------|
| Red   | + Excitation |
| Black | - Excitation |
| Green | + Signal     |
| White | - Signal     |
|       | + Sense      |
|       | - Sense      |
| Clear | Shield       |

### Full Connectivity

METTLER TOLEDO supplies various data communication interfaces that enable our sensors and instruments to communicate with your PLC, MES, or ERP systems.



### Worldwide Services

Our extensive service network is among the best in the world and ensures maximum availability and service life of your product.

### Weighing Electronics

METTLER TOLEDO offers a complete family of electronics from simple weighing to application solutions for filling, stock control, batching, formulation, counting and checkweighing.



Quality certificate ISO 9001  
Environmental certificate ISO 14001

Subject to technical changes.  
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For more information