

S-Type Load Cell

FEATURES

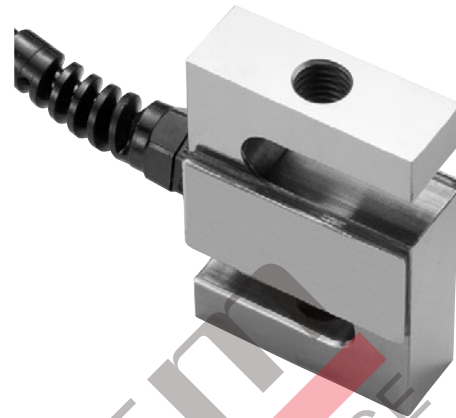
- Capacities:
Aluminum construction—5, 10, 20 kg;
Alloy Steel construction— 25 to 5000 kg, 250 to 40k lbs
- Bi-direction (tension/compression)
- Rationalized output
- NTEP Class III 5000S, IIL10000 approval from 250 lbs to 20k lbs
- **Optional**
 - Stainless steel available
 - FM approval available

APPLICATIONS

- Electro-mechanical conversion scales
- Silo/hopper/tank weighing
- Crane scales
- Fork-lift scales
- Dosing/filling
- Universal material tester
- Tensile/pulling force measurement

DESCRIPTION

The S-type load cell, as the name indicates, can be easily identified by S-shaped body. They can be loaded either in tension or compression, and used for single or multiple-cell application if the output is rationalized.



STC is made of Aluminum, Alloy Steel or Stainless Steel, sealed to IP67 providing excellent protection against moisture and humidity.

OUTLINE DIMENSIONS—ALUMINUM in inches [millimeters]

| | | Wiring + Excitation Red - Excitation Black + Signal Green - Signal White | | | | |
|----------------|--------|---|------|----------------|------|----------|
| | | All Capacity Cable Length: 20'/6.1m | | | | |
| CAPACITY | | L | W | W ₁ | H | T |
| 5 / 10 / 20 kg | mm | 50.8 | 16.6 | 16.6 | 63.5 | M6 x 1.0 |
| | (inch) | 0.65 | 1.05 | 0.65 | 2.50 | |

Outline dimension for Alloy Steel supplied on next page

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| OUTLINE DIMENSIONS—ALLOY STEEL in inches [millimeters] | | | | | | |
|--|--------|---|-------|----------------|-------|---|
| | | | | | | <p>Wiring</p> <ul style="list-style-type: none"> + Excitation Red - Excitation Black + Signal Green - Signal White |
| | | <p>All Capacity Cable Length: 20'/6.1m</p> | | | | |
| CAPACITY | | L | W | W ₁ | H | T |
| 25 / 50 / 75 kg | mm | 50.8 | 26.7 | 12.7 | 63.5 | M6 x 1.0 |
| | (inch) | 2.00 | 1.05 | 0.50 | 2.50 | |
| 100 / 150 kg | mm | 50.8 | 22.92 | 19.1 | 76.2 | M10 x 1.5 |
| | (inch) | 2.00 | 0.9 | 0.75 | 3.00 | |
| 250 / 300 lbs | mm | 50.8 | 26.7 | 12.7 | 76.2 | 3/8-24UNF |
| | (inch) | 2.00 | 1.05 | 0.50 | 3.00 | |
| 250 kg 500 / 750 lbs | mm | 50.8 | 30.4 | 19.1 | 76.2 | M12 x 1.75 |
| | (inch) | 2.00 | 1.2 | 0.75 | 3.00 | 1/2-20UNF |
| 500 / 750 kg | mm | 50.8 | 25.4 | 19.1 | 76.2 | M12 x 1.75 |
| | (inch) | 2.00 | 1.00 | 0.75 | 3.00 | |
| 1k / 1.5k lbs | mm | 50.8 | 26.1 | 19.1 | 76.2 | 1/2-20UNF |
| | (inch) | 2.00 | 1.03 | 0.75 | 3.00 | |
| 1000 / 1500 kg 2k / 2.5k / 3k lbs | mm | 50.8 | 31.8 | 25.4 | 76.2 | M12 x 1.75 |
| | (inch) | 2.00 | 1.25 | 1.00 | 3.00 | 1/2-20UNF |
| 5k / 7.5k lbs | mm | 76.2 | 31.8 | 25.4 | 107.9 | 3/4-16UNF |
| | (inch) | 3.00 | 1.25 | 1.00 | 4.25 | |
| 2000 / 2500 / 5000 kg | mm | 76.2 | 38.1 | 31.8 | 100.4 | M20 x 1.5 |
| | (inch) | 3.00 | 1.50 | 1.25 | 3.95 | |
| 10k lbs | mm | 88.9 | 31.8 | 25.4 | 120.7 | 3/4-16UNF |
| | (inch) | 3.50 | 1.25 | 1.00 | 4.75 | |
| 15k lbs | mm | 101.6 | 38.1 | 31.8 | 139.7 | 1-14UNS |
| | (inch) | 4 | 1.50 | 1.25 | 5.50 | |
| 20k lbs | mm | 127 | 55.7 | 50.8 | 177.8 | 1 1/4-12UNF |
| | (inch) | 5 | 2.19 | 2 | 7.00 | |
| 40k lbs | mm | 152.4 | 69.9 | 63.5 | 254.0 | 1 1/2-12UNF |
| | (inch) | 6.00 | 2.75 | 2.50 | 10.00 | |

S-Type Load Cell

| SPECIFICATIONS | | | |
|--|--|------------------|-----------------------|
| PARAMETER | VALUE | | UNIT |
| NTEP/OIML accuracy class | NTEP III & IIIL | Non-Approved | |
| Maximum no. of intervals (n) | III 5000 single* IIIL10000 single* | 2000 | |
| Y = E _{max} /V _{min} | 10000 | 5000 | Maximum available |
| Standard capacities (E _{max}) (Aluminum) | 5, 10, 20 | | kg |
| Standard capacities (E _{max}) (Steel) | 25, 50, 75, 100, 250, 500, 750, 1000, 1500, 2000, 2500, 5000 | | kg |
| | 250, 300, 500, 750, 1k, 1.5k, 2k, 2.5k, 3k, 5k, 7.5k, 10k, 15k, 20k, 40k | | lbs |
| Rated output—R.O. (Aluminum) | 2.0 | | mV/V |
| Rated output—R.O. (Steel) | 3.0 | | mV/V |
| Rated output tolerance | 0.25 | | ±% of rated output |
| Zero balance | 1 | | ±% of rated output |
| Non-linearity | 0.020 | 0.020 (SS: 0.05) | ±% of rated output |
| Hysteresis | 0.020 | 0.020 (SS: 0.05) | ±% of rated output |
| Non-repeatability | 0.020 | | ±% of rated output |
| Creep error (20 minutes) | 0.030 | | ±% of rated output |
| Zero return (20 minutes) | 0.030 | | ±% of rated output |
| Temperature effect on min. dead load output | 0.0015 | 0.0026 | ±% of rated output/°C |
| Temperature effect on sensitivity | 0.0010 | 0.0015 | ±% of applied load/°C |
| Compensated temperature range | -10 to +40 | | °C |
| Operating temperature range | -20 to +60 | | °C |
| Safe overload | 150 | | % of R.C. |
| Ultimate overload | 200 (Aluminum) / 300 (Steel) | | % of R.C. |
| Excitation, recommended | 10 | | VDC or VAC RMS |
| Excitation, maximum | 15 | | VDC or VAC RMS |
| Input impedance | 410±5 (Aluminum) / 385±5 (Steel) | | Ω |
| Output impedance | 350±3 | | Ω |
| Insulation resistance | >5000 | | MΩ |
| Construction | Aluminium or Nickel-plated alloy steel ** | | |
| Environmental protection | IP67 | | |

* Capacities 250–20k lbs

** Stainless steel available

All specifications subject to change without notice.

FM Approval

Intrinsically Safe: Class I, II, III; Div. 1 Groups A-G

Non-Incendive: Class I; Div. 2 Groups A-D

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