



YJ

SINGLE POINT LOAD CELL

applications

- Low Force Measurements
- Hopper & Netweight Weighing
- Platform and Checkweighing
- High Moment/Off-Center Loading
- OEM and VAR Solutions

features

- 1 to 100 lbs. Capacities
- Steel or Stainless Steel Element
- Low Profile/Compact Size
- Excellent Overall Performance
- 0.03% Accuracy Class
- Exceeds NIST H-44 Requirement
- Application Versatility
- IP65 Environmental Sealing
- Two Year Warranty

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Application Tip:

The Model YJ1 & YJ3 load cells are ideal for low range measurements, featuring integral overload protection.

The YJ Series is an industrial-grade, high performance, bonded foil strain gage load cell constructed of nickel-plated alloy tool steel (YJ1) or electro-polished stainless steel (YJ3). The YJ Series is designed to accurately measure compression loads for single cell applications in the capacity range of 1 lbs. to 100 lbs. The parallelogram design readily tolerates moments induced by angular, eccentric and off-center loading, with minimal sensitivity to these anomalies. To achieve a sealing rating of IP67 (thoroughly sealed against airborne particles and the effects of immersion in water up to 1 meter.) proprietary, multi-redundant environmental barriers are integrated to protect the strain gage area and all electronic components. Additional protection is provided by stainless steel covers, which also serves to enhance the aesthetics of the YJ Series as a component of an assembly or measurement system. The cable is a durable polyurethane-jacketed cable, with a tin-copper braided shield for mechanical protection and to minimize the effects of RFI and EMI. The attributes of the YJ Series makes it an ideal choice for very low range force measurements, small hopper and platform weighing, checkweigher scales and O.E.M. weighing situations where an exceptional low capacity, moment-compensated, well sealed, and high performance load cell solution is needed. Non-standard or custom configurations can be accommodated consistent with solutions-driven requirements.

Innovative Measurement Solutions





performance

YJ Series load cells feature a loading bracket and an integral overload stop.

| | |
|--------------------------|-------------------------------|
| Rated capacities (lbs.): | 1, 2, 5, 10, 20, 25, 50 & 100 |
| Rated output (FSO) | 2 mV/V + 25%/- 10% |
| Combined error | ≤ 0.03 % FSO |
| Non-linearity | ≤ 0.03 % FSO |
| Hysteresis | ≤ 0.02 % FSO |
| Non-repeatability | ≤ 0.01 % FSO |
| Moment Sensitivity | See Table Below |
| Maximum Moment | See Table Below |
| Creep (30 minutes) | ≤ 0.03 % of load |
| Zero balance | ≤ 1 % FSO |
| Zero return (20 minutes) | Better than 0.03 % FSO |

mechanical

| | |
|-------------------|---|
| Material: | Alloy tool steel (YJ1) 17-4ph Stainless steel (YJ3) |
| Finish: | Electroless nickel plated (YJ1) Electro-polished (YJ3) |
| Safe overload | Compression/Tension: 150% FSO Side load: 50% FSO |
| Ultimate overload | Compression/Tension: 300% FSO Side load: 100% FSO |
| Deflection | See Table Below |
| Weight | See Table Below |

electrical

| | |
|-----------------------|---|
| Input impedance | 400 ± 35 ohms |
| Output impedance | 352 ± 3 ohms |
| Insulation resistance | >5000 Megohms @ 50VDC |
| Excitation Voltage | 10 V AC/DC (15 V maximum) |
| Cable Color code: | + Excitation (red) - Excitation (black) + Output (green) - Output (white) Shield (bare) |
| Cable type | 4-conductor; 22 AWG; tin-copper braided shield; polyurethane jacket |
| Cable termination | Finished conductors |

environmental

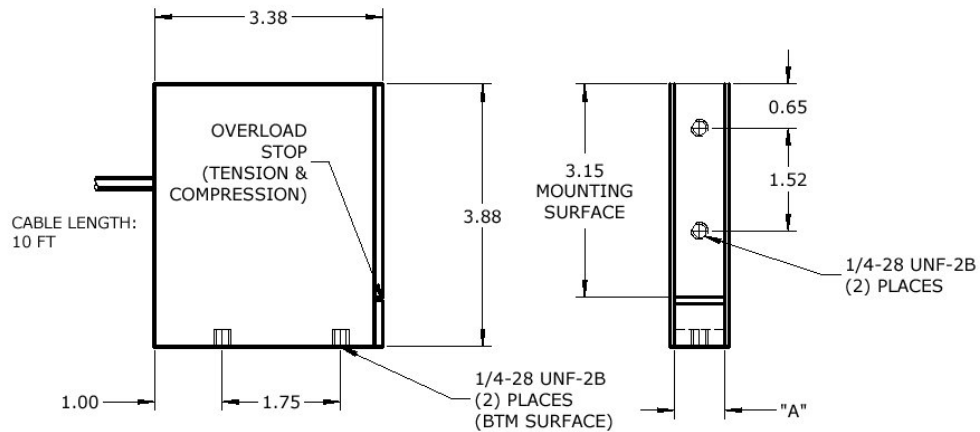


| | |
|--------------------------|--|
| Temperature, operating | 4 to +140 °F (-20 to +60°C) |
| Temperature, compensated | 14 to +104 °F (-10 to +40°C) |
| Temperature effects: | Zero < 0.0015% FSO/°F < 0.0026% FSO/°C |
| | Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C |
| Sealing | IP65; Dust & Low pressure spray |

options

Special cable lengths, MS connectors, Custom configurations, High temperature operation and Companion instrumentation.

dimensions



| CAPACITY (LB) | "A" | DEFLECTION (IN) | MOMENT SENSITIVITY (% RD PER IN) | MAXIMUM MOMENT (IN-LB) | PLATFORM SIZE (IN) | WEIGHT (LB) |
|---------------|------|-----------------|----------------------------------|------------------------|--------------------|-------------|
| 1 - 2 | 0.50 | 0.023 | 0.010 | 6x CAPACITY | 6 x 6 | 1.5 |
| 5 - 10 | 0.50 | 0.020 | 0.010 | 6x CAPACITY | 6 x 6 | 1.7 |
| 20 - 50 | 0.75 | 0.020 | 0.050 | 6x CAPACITY | 12 x 12 | 2.0 |
| 100 | 1.00 | 0.020 | 0.070 | 6x CAPACITY | 12 x 12 | 2.8 |