

## 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

SENTRAN, LLC  
California Commerce Center  
4355 Lowell Street  
Ontario, CA 91761-2225

Toll Free: 1(888) 545-8988  
Phone: 1(909) 605-1544  
Fax: 1(909) 605-6305  
Email: [mail@sentranllc.com](mailto:mail@sentranllc.com)  
URL: [www.sentranllc.com](http://www.sentranllc.com)



IP67

**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.



## 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	415 ± 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

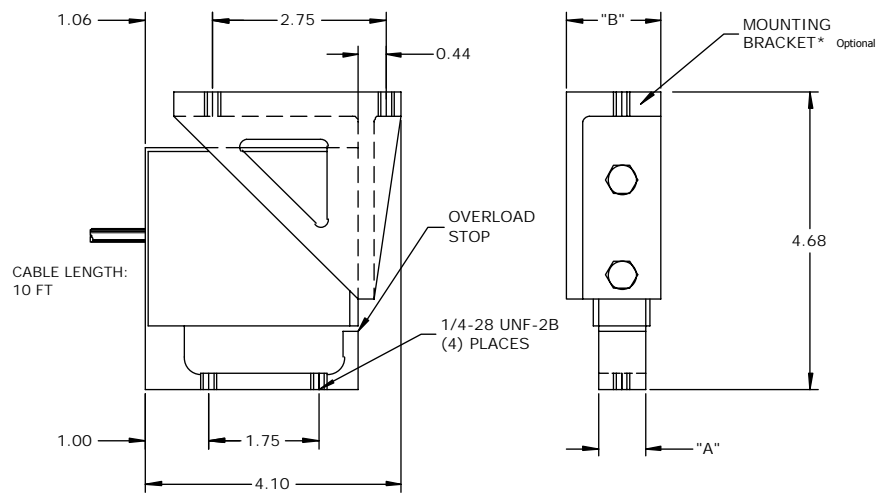


Temperature, operating	4 to +140 °F (-20 to +60°C)
Temperature, compensated	14 to +104 °F (-10 to +40°C)
Temperature effects:	Zero < 0.0015% FSO/°F < 0.0026% FSO/°C Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C
Sealing	IP65; Dust & Low pressure spray

## options

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

## dimensions



CAPACITY (LB)	"A"	"B"	DEFLECTION (IN)	MOMENT SENSITIVITY (% RD PER IN)	MAXIMUM MOMENT (IN-LB)	PLATFORM SIZE (IN)	WEIGHT (LB)
1 - 2	0.50	0.72	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	1.50	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

\*MOUNTING BRACKET BOLTED TO LOAD CELL FOR YJ1 (STEEL) MODEL.  
MOUNTING BRACKET AND LOAD CELL MACHINED AS ONE PIECE FOR YJ3 (STAINLESS) MODEL. ("B" = "A")