



## Single Point Load Cell

# YM Series

**The YM Series is an ultra low profile, high performance, bonded foil strain gage load cell. It is designed to accurately measure compression loads for single cell applications in capacity ranges of 0-100 lbs. to 0-600 lbs.**



The YM Series is a high performance, bonded foil strain gage load cell constructed of stainless steel (YM3) or transducer-quality aluminum alloy (YM6). The YM Series is designed to accurately measure compression loads for single cell applications in the capacities of 0-100 lbs. to 0-600 lbs. It is particularly well-suited to Gas Bottle Scale weighing applications in water treatment & waste water, semi-conductor manufacturing, inventory management and CO2 fire prevention system applications. The field proven dual-guided cantilever beam design readily tolerates high moments induced by angular, eccentric and off-center loading, with minimal sensitivity to these anomalies. A unique optional feature is the 0-5 VDC, 0-10 VDC or 4-20 mA high signal level Analog Output. If the application requires excellent noise immunity in electrically noisy environments and/or a direct interface to a PLC/DCS, the analog output feature provides a simple, elegant solution. This load cell is Harsh Environment Sealed (IP67-Limited Immersion) by virtue of proprietary, multi-redundant barriers uniquely integrated to protect all internal components. The cable is a durable polyurethane-jacketed cable, with a tinned-copper braided shield for mechanical protection and to minimize the effects of RFI and EMI. The attributes of the YM Series makes it an ideal choice for applications involving high moments and off-center loading requiring a low profile, compact load cell.



### APPLICATIONS

- Ultra Low Profile/High Capacity Platforms
- In-Process Gas Bottle Weighing
- Force Measurements In Presses
- High Moment/Off-Center Loads
- OEM and VAR Solutions

### FEATURES

- 100 to 600 Lbs. Capacities
- Very Low Profile/Compact Size
- Amplified Output Option
- 0.05 Accuracy Class
- Application Versatility
- Aluminum or Stainless Steel Element
- IP67 Environmental Sealing
- Low Price/Performance Ratio
- Two Year Warranty

For more information call **1-888-545-8988**

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# YM Series Specifications

Innovative Measurement Solutions



## PERFORMANCE

Rated capacities (lbs.)	150, 300, 600
Rated Output (FSO)	2 mV/V
Output Tolerance	±25/-10 % R.O
Combined Error Band	≤ 0.02 % FSO
Non-Linearity	≤ 0.02 % FSO
Hysteresis	≤ 0.02 % FSO
Non-Repeatability	≤ 0.01 % FSO
Zero Balance	± 3 % FSO
Creep (30 Minutes)	≤ 0.03 % of load
Zero Return (30 Minutes)	0.01 % of load
Moment Sensitivity	0.010 % FSO/Inch
Maximum Moment	See Dimensions Page
Ultimate Moment	175 % of Maximum Moment

## MECHANICAL

Material	Aluminum Alloy (YM6) Stainless Steel (YM3)
Finish	Anodized (YM6) Natural (YM3)
Safe overload	Compression 150% FSO Side Load 30% FSO
Ultimate overload	Compression 300% FSO Side Load: 100% FSO
Deflection	See Dimensions Table
Weight	See Dimensions Table
Mounting Bolt Torque	<a href="#">Torque Table</a>

## ELECTRICAL

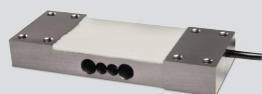
Input Impedance	405 ± 20 ohms
Output Impedance	350 ± 3 ohms
Insulation Resistance	>5000 Megohms @ 50VDC
Excitation Voltage	10 V AC/DC (15 V maximum)
Cable Color Code	+ Excitation (red) - Excitation (black) + Signal (green) - Signal (white) Shield (natural)
Cable Type	4-conductor, 22 AWG, PUR jacket, Tinned Copper Braid, Diameter: 0.220"
Cable Length	See Dimensions Table
Cable Termination	Finished Conductors
Cable Seal	Epoxy; Conformal

## ENVIRONMENTAL

Temperature, Operating	0 to +150 °F (-18 to +66°C)
Temperature, Compensated	14 to +104 °F (-10 to +40°C)
Temperature Effects	Zero < 0.015% FSO/°F < 0.0026% FSO/°C
Temperature Effects	Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C
Temperature, Storage	-40 to +170 °F (-40 to +77°C)
Sealing	IP67, Multi-redundant; Limited Immersion Tolerance

# YM Typical System Configuration

## SENSING LOAD CELL(S)



## SIGNAL CONDITIONING

Analog Transmitters



Serial Transmitters



Digital Indication



Process Control



Batch Control

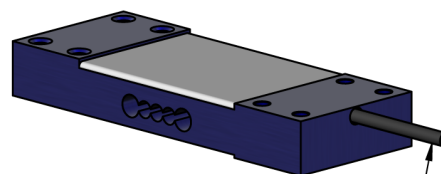
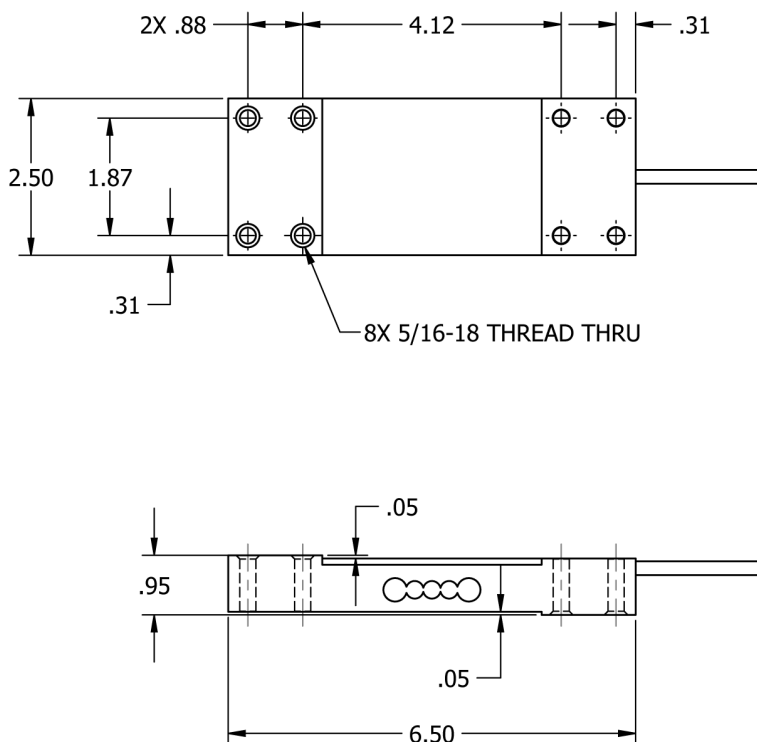


Data Acquisition



## OUTPUT OPTIONS

0-5 VDC  
0-10VDC  
±5 VDC  
±10 VDC  
4-20 mA  
0-20 mA  
RS-232  
RS-422  
RS-485  
20 mA Serial Loop  
Ethernet  
Profibus DP  
DeviceNet  
CANOpen  
ControlNet  
Modbus RTU  
Wireless

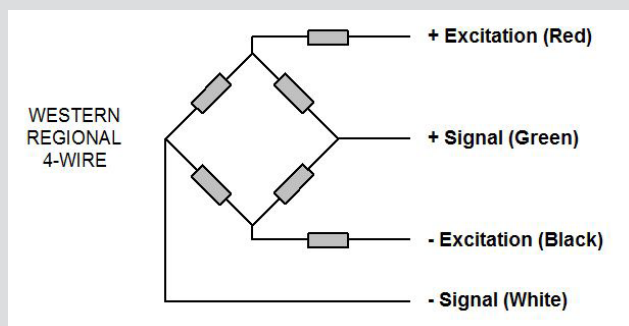


STANDARD CABLE:  
0.220 NOM DIA. SHIELDED  
10 FT LENGTH

Dimensions in Inches

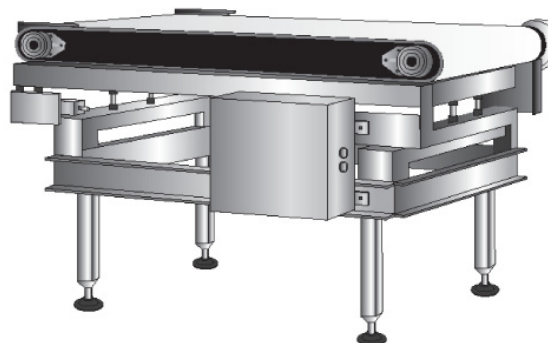
Capacity (LBS)	Maximum Moment (Inches X Capacity)	Deflect	Weight
100	5	0.020"	2.0 LBS
300	3	0.020"	2.0 LBS
600	2	0.020"	2.0 LBS

## YM Wiring Diagram

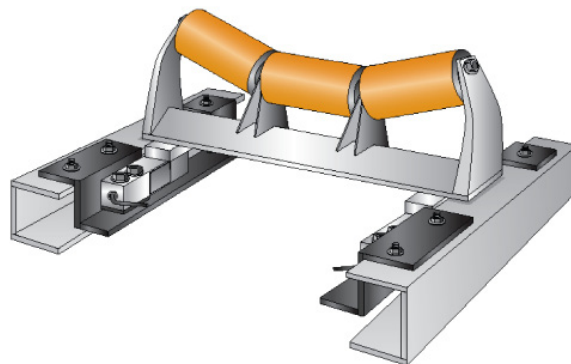




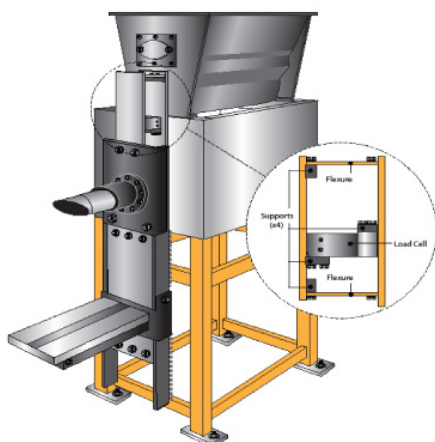
Check Weighing



Belt Conveyor Scale



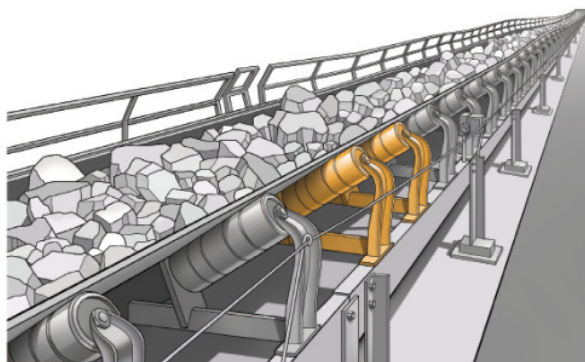
Automated Bagging



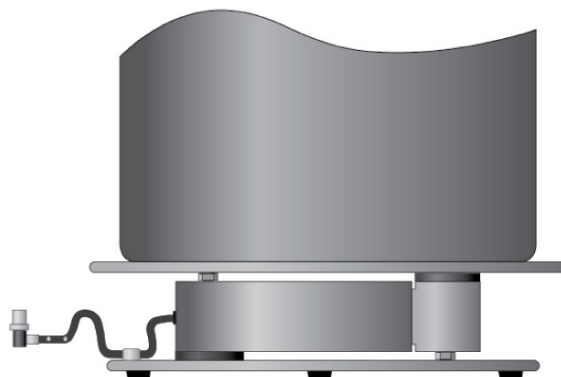
Precious Gas Scale



Volume and Rate Control



Bottle/Tank Platform Weighing



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