



# MJ

## HIGH CAPACITY WEIGH MODULE

### *applications*

- Tank, Bin and Silo Weighing
- Bulk Material Inventory/Processing
- Level Monitoring and Control
- Very High Capacity Weighing

### *features*

- 50,000 to 1,000,000 lbs. Capacities
- Excellent Overall Performance
- Multi-Column Load Cell Technology
- 0.1% Accuracy Class
- Steel or Stainless Steel
- Accommodates Vessel Movement
- Self-Checking/Including Uplift
- Easy Installation and Start Up
- IP67 Environmental Sealing
- Two Year Warranty

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IP67

#### *application tip:*

The Models QD Series load cells feature Multi-Column Load Cell Technology, an excellent solution for High Capacity Vessel Weighing.

The MJ Series is an extremely rugged, high capacity weigh module constructed of steel (MJ1) or stainless steel (MJ3). The MJ Series modules are designed to accurately measure compression loads in capacities ranging from 50,000 lbs. to 1,000,000 lbs. The robust, multi-column load cell design integrated into the articulated MJ mount, readily accommodates angular, eccentric and side loading effects, with minimal sensitivity to these anomalies. To facilitate easy installation, a symmetrical mounting bolt pattern is provided and rubber alignment pads are fitted to the keeper plates to keep the load plate centered on the load cell. The load plate can rotate 360° and articulates approximately 3° in any direction to compensate for misalignment with mating support surfaces during installation. Provisions for thermal expansion and contraction are built-in. The MJ exceeds the structural requirements of the UBC standards for Seismic Zones 1 and 2, which makes it an excellent solution where wind loading is anticipated. To achieve a sealing rating of IP67 proprietary, composite environmental barriers are integrated to protect the load cell.



QD1 LOAD CELL

The integral cable is durable PE/PVC DuoWrap® jacketed and features a braided, tinned-copper shield for mechanical protection and to minimize the effects of RFI and EMI. The attributes of the MJ Series make it ideal for inventory monitoring, bulk material handling, tank and silo weighing, or for any application where a versatile, high capacity weighing solution is needed.

*Innovative Measurement Solutions*



## PERFORMANCE

Featuring Model *QD Series*  
Multi-Column Load Cells

Rated capacities <sup>(1)</sup> (lbs.):	50K, 75K, 100K, 200K, 300K, 500K, 750K & 1M
Rated output (FSO)	2 mV/V ± 0.25%
Combined error	≤ 0.10 % FSO
Non-linearity	≤ 0.10 % FSO
Hysteresis	≤ 0.05 % FSO
Non-repeatability	≤ 0.01 % FSO
Side Load Rejection Ratio	≤ 500:1
Creep (20 minutes)	≤ 0.03 % of load
Zero balance	≤ 1 % FSO
Zero return (20 minutes)	Better than 0.03 % FSO

<sup>(1)</sup> ("K" = thousand; "M" = million)

## MECHANICAL

Load Cell Material:	Alloy tool steel (MJ1) 17-4ph Stainless steel (MJ3)
Load Cell Finish:	Electroless nickel plated (MJ1) Electro-polished (MJ3)
Mount Material:	Mild steel (MJ1) Stainless steel (MJ3)
Mount Finish:	Epoxy Painted (MJ1) Bead Blasted (MJ3)
Safe overload	Compression: 150% FSO Side load: 30% FSO
Ultimate overload	Compression: 300% FSO Side load: 60% FSO
Weight	See table below

## ELECTRICAL

Input impedance	450 (nominal)
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) + Output (green) - Output (white) Shield (bare)
Cable type	4-conductor, 22 AWG, PE/PVC DuoWrap <sup>®</sup> jacket; tinned-copper shield; 25 feet; Finished conductors

## ENVIRONMENTAL

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Temperature, operating	0 to +150 °F (-18 to +65°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	IP67

## OPTIONS

Special Cable Lengths, High Temperature Operation, Load Receiver Pads, Conduit Adapters, Unique Mounting and Control Instrumentation.

## dimensions

100%  
CUSTOMER  
SATISFACTION  
GUARANTEED

