



# MB

## LOW PROFILE WEIGH MODULE

### *applications*

- Compression Measurements
- Tank, Bin and Hopper Weighing
- Mixer and Blender Weighing
- In-Motion/Conveyor Weighing
- OEM and VAR Solutions

### *features*

- 500 to 2,500 lbs. Capacities
- Excellent Performance
- 0.02% Accuracy Class-NTEP
- Steel, Stainless or SS Hermetic
- Shock/Vibration Isolation Mount
- Self-Checking
- Easy Installation
- IP66/IP67 Environmental Sealing
- Matched Output Sensitivities
- Two Year Warranty

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NIST H-44 NTEP CERTIFIED "LEGAL-FOR-TRADE" XA1 and XA3 LOAD CELLS

- CLASS III: 3,000D/Single and 5,000D/Multiple
- 1,000 Through 2,500 lbs. in Steel or Stainless Steel

The MB Series is a high performance, low profile weigh module constructed of steel (MB1), stainless steel (MB3), or hermetically sealed stainless steel (MB4). The MB Series is designed to accurately measure compression loads in capacities ranging from 500 lbs. to 2,500 lbs. The robust, rectangular shear beam design readily tolerates angular, eccentric and side loading effects, with minimal sensitivity to these anomalies. The neoprene load receiver reduces the effects of shock loading, vibration and thermal expansion, and accommodates minor misalignment with vessel supports. To achieve a sealing rating of IP67 (thoroughly sealed against airborne particles and the effects of immersion up to 1 meter.) proprietary, multi-redundant environmental barriers are integrated to protect the load cell. The hermetically sealed version is rated IP66 (thoroughly sealed against airborne particles and the effects of strong jets of water.) The cable is a durable PE/PVC DuoWrap® jacketed cable, with a tinned-copper braided shield for mechanical protection and to minimize the effects of RFI and EMI. The attributes of the MB Series make it ideal for reactor, mixer and blender weighing, material handling, and O.E.M. weighing situations where a versatile, high performance solution is needed.



XA1 Steel



XA3 Stainless Steel



XA4 Stainless Hermetic

*Innovative Measurement Solutions*





## performance



• CLASS III: 3,000D/Single and 5,000D/Multiple  
• 1,000 Through 2,500 lbs. XA1/XA3 Load Cells

Rated capacities <sup>(1)</sup> (lbs.):	500, 1K, 2K, 2.5K,
Rated output (FSO)	3 mV/V ± 0.25%
Combined error	≤ 0.03 % FSO
Non-linearity	≤ 0.03 % FSO
Hysteresis	≤ 0.02 % 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 0.01 % FSO

<sup>(1)</sup> ("K" = thousand)

## mechanical

Load Cell Material:	Alloy tool steel (MB1) 17-4ph Stainless steel (MB3 & MB4)
Load Cell Finish:	Electroless nickel plated (MB1) Electro-polished (MB3 & MB4)
Mount Material:	Mild steel (MB1) Stainless steel (MB3 & MB4)
Mount Finish:	Plated (MB1) Bead Blasted (MB3 & MB4)
Safe overload	Compression/Tension: 150% FSO Side load: 50% FSO
Ultimate overload	Compression/Tension: 300% FSO Side load: 100% FSO
Weight	9 lbs.

## electrical

Input impedance	385 ± 5 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) + Output (green) - Output (white) Shield (bare)
Cable type	4-conductor, 22 AWG, tin-copper shielded, 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	IP67 (MB1/MB3); IP66 (MB4)

## options

Special cable lengths, MS connectors, Conduit Adapters, Hi-Temperature operation, control instrumentation and unique mount

## dimensions

100%  
CUSTOMER  
SATISFACTION  
GUARANTEED

