



Heavy Duty Weigh Module

MC Series

The MC Series is a rugged, high performance weigh module constructed of alloy tool steel or hermetically sealed stainless steel. The MC Series is designed to accurately measure compression loads in capacities ranging from 0-1,000 lbs. to 0-100,000 lbs.

The MC Series is a complete weigh module available in mild steel (MC1) or hermetically sealed stainless steel (MC4). The MC Series possesses a robust, dual shear beam design that readily tolerates angular, eccentric and side loading effects, with minimal sensitivity to these anomalies. The optional neoprene LRP (load receiver pad) reduces the effects of shock loading and vibration. The MC Series is available as Harsh Environment Sealed (IP67-Limited Immersion), Hostile Environment Sealed (IP66-High Pressure Jets) or Hermetically Sealed (IP68-Continuous Immersion) by virtue of proprietary, multi-redundant barriers uniquely integrated to protect all internal components. The output signal is calibrated to a close tolerance to facilitate in situ interchangeability and multiple load cell summing applications. The integral premium, instrumentation grade cable features a durable polyurethane-jacket over a tinned-copper braided shield for superior mechanical protection and to minimize the unwanted electrical effects of RFI and EMI. The attributes of the MC Series make it ideal for inventory monitoring, tank, bin and hopper weighing, bulk material handling, specialty applications such as web tension and steel coil weighing, as well as for O.E.M. situations where a versatile, high performance solution is needed.



APPLICATIONS

- Compression Measurements
- Level and Inventory Monitoring
- Tank, Bin and Hopper Weighing
- Mixer and Blender Weighing
- Silo/Large Vessel Weighing
- Seismic/High-Wind Loading

FEATURES

- 1000 to 100,000 lbs. Capacities
- 0.03% Accuracy Class
- Steel or Stainless Steel
- Accommodates Vessel Expansion/Contraction
- Self Checking/Integrated Design
- IP66/IP67/IP68 Environmental Sealing
- Output Matched for Multiple Load Cell Applications
- Two Year Warranty



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

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MC Series Specifications

Innovative Measurement Solutions



PERFORMANCE

Rated Capacities ⁽¹⁾ (lbs.)	1K, 1.5K, 2K, 3K, 5K, 10K, 15K, 25K, 35K, 50K, 75K, 100K, (MC1) 1K, 1.5K, 2.5K, 5K, 10K, 15K, 25K, 35K, 50K, 60K, 75K, 80K, 100K, (MC4)
Rated Output (FSO)	3 mV/V
Output Tolerance	± .25 % R.O.
Combined Error Band	≤ 0.03 % FSO (MC1) / ≤ 0.07 % FSO (MC4)
Non-Linearity	≤ 0.03 % FSO (MC1) / ≤ 0.07 % FSO (MC4)
Hysteresis	≤ 0.03 % FSO (MC1) / ≤ 0.07 % FSO (MC4)
Non-Repeatability	≤ 0.02 % FSO (MC1) / ≤ 0.01 % FSO (MC4)
Side Load Rejection Ratio	500:1
Zero balance	± 1 % FSO
Creep (20 minutes)	0.03 % of Load

⁽¹⁾ ("K"=Thousand)

MECHANICAL

Load Cell Material	Alloy Tool Steel (MC1) 17-4ph Stainless Steel (MC4)
Load Cell Finish	Electroless Nickel Plated (MC1) Bead Blasted (MC4)
Mount Material	Steel (MC1) Stainless Steel (MC4)
Mount Finish	Epoxy Paint (MC1) Natural (MC4)
Safe Overload	Compression: 150% Side Load: 100%
Ultimate Overload	Compression: 300% Side Load: 200%
Deflection	See Dimensions Page
Weight	See Dimensions Page

ELECTRICAL

Input Impedance	770 ± 10 ohms (MC1) 700 ± 14 ohms (MC4)
Output Impedance	700 ± 5 ohms (MC1), 703 ± 4 ohms (MC4)
Insulation Resistance	>5000 Megohms @ 50VDC
Excitation Voltage	10 V AC/DC (15 V maximum) (MC1) 10 V AC/DC (25 V maximum) (MC4)
Cable Color Code	+ Excitation (red) - Excitation (black) + Signal (green) - Signal (white) Shield (natural)
Cable Type	4-conductor, 26 AWG, Polyurethane Jacket, Tinned Copper Braid, Diameter: 0.187"
Cable Length	See Dimensions Table
Cable Termination	Finished Conductors
Cable Seal	Compression Gland Fitting

ENVIRONMENTAL

Temperature, Operating	-4 to +140 °F (-20 to +60°C)
Temperature, Compensated	14 to +104 °F (-10 to +40°C)
Temperature, Storage	-60 to +185 °F (-50 to +85°C)
Temperature Effects	Zero < 0.0015% FSO/°F < 0.0026% FSO/°C
Temperature Effects	Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C
Sealing	IP67, Dust and Limited submersion (MC1) IP66; Multi-redundant; High Pressure Resistant, IP68; Multi-redundant; Continuous Immersion Tolerance (MC4)
FM Approval	
Intrinsically Safe:	Class I, II, III; Div.1 Groups A-G
Non-Incendive:	Class 1; Div.2 Groups A-D

MC Typical System Configuration

SENSING LOAD CELL(S)



SIGNAL CONDITIONING

Analog Transmitters



Serial Transmitters



Digital Indication



Process Control



Batch Control



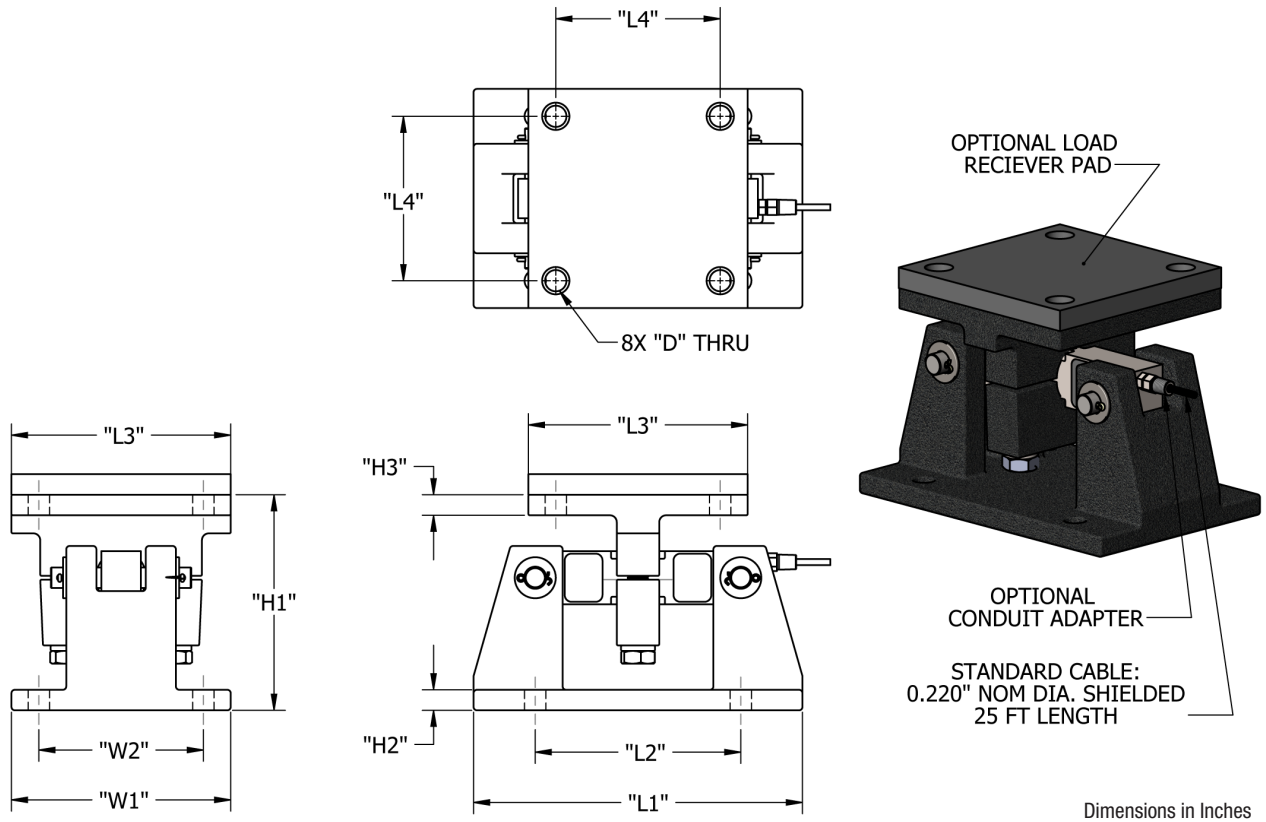
Data Acquisition



OUTPUT OPTIONS

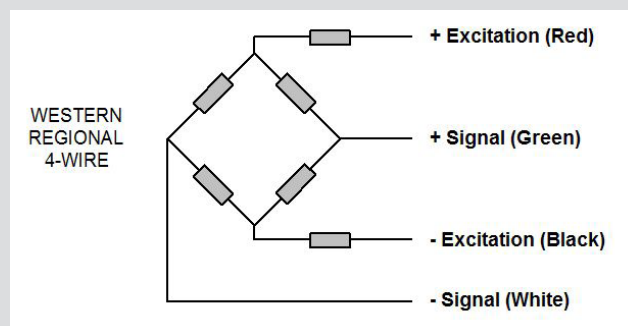
0-5 VDC
0-10VDC
±5 VDC
±10 VDC
4-20 mA
0-20 mA
RS-232
RS-422
RS-485
20 mA Serial Loop
Ethernet
Profibus DP
DeviceNet
CANOpen
ControlNet
Modbus RTU
Wireless

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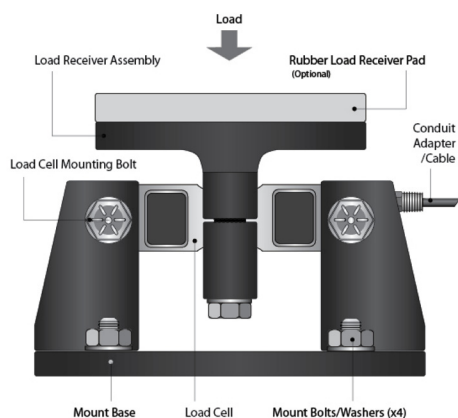
Capacity (LBS)	H1	H2	H3	W1	W2	L1	L2	L3	L4	D	Deflect	Weight
DIMENSIONS (INCHES)												
1K, 1.5K, 2.5K, 5K	5.13	0.90	0.50	5.00	3.75	9.35	6.25	4.00	2.75	0.56	0.025"	22.0 LBS
10K, 15K, 20K, 25K, 35K	7.89	0.75	0.75	8.00	6.00	12.00	7.50	8.00	6.00	0.78	0.030"	73.0 LBS
50K, 75K	9.31	1.00	1.00	12.00	9.50	16.25	11.50	9.00	6.50	0.78	0.035"	172.0 LBS
100K, 125K	9.51	1.25	1.25	12.00	10.00	19.00	16.00	10.00	8.00	1.12	0.040"	215.0 LBS

MC Wiring Diagram

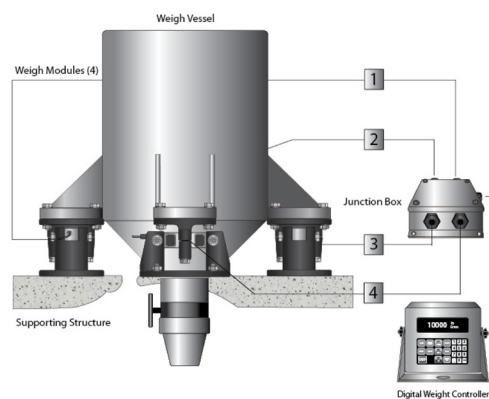




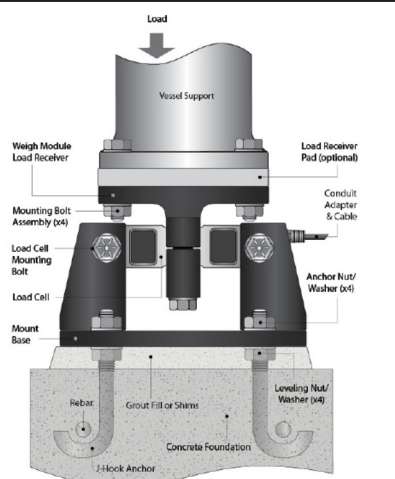
Weigh Module Components



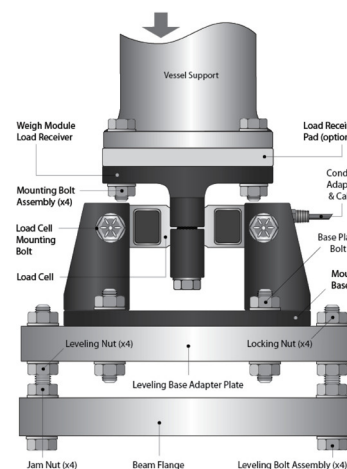
Weighing System Components



Floor/Footer Installation Components



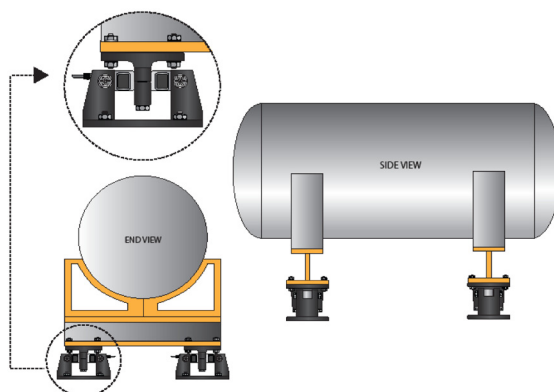
I-Beam Installation Components



Level Monitoring



Horizontal Tank



Legal Disclaimer



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