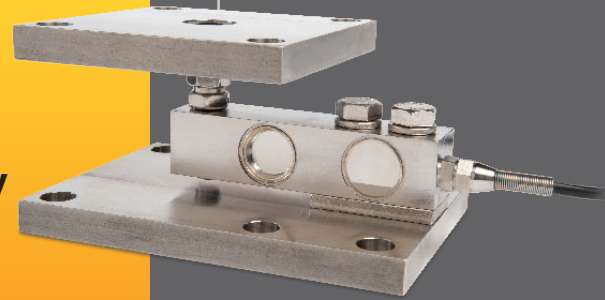




Mid Range Weigh Module

MF4 Series

The MF4 Series is a high performance, low profile weigh module constructed of hermetically sealed stainless steel. The MF4 Series withstands the rigors of harsh environmental conditions, accurately measuring compression loads in capacities ranging from 0-1000 lbs. to 0-20,000 lbs.



The MF4 Series possesses a robust, rectangular shear beam design that readily tolerates angular, eccentric and side loading effects, with minimal sensitivity to these anomalies. The MF4 Series weigh modules are designed to accurately measure compression loads in capacities ranging from 0-1,000 lbs. to 0-20,000 lbs. The optional neoprene LRP (load receiver pad) reduces the effects of shock loading and vibration, in conjunction with load plate articulation of 4° in all directions. Intrinsic planar misalignment compensation accommodates vessel support alignment, sloped flooring, thermal expansion/contraction, and similar application variables. This easy-to-install weigh module mounts directly to the floor or structural supports, and is completely self-checking. The MF4 Series is available as Hostile Environment Sealed (IP66-High Pressure Jets) and Hermetically Sealed (IP68-Continuous Immersion) by virtue of proprietary, multi-redundant barriers uniquely integrated to protect all internal components. 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 MF4 is an ideal choice for measurement in C-I-P process, heavy washdown and corrosive applications, reactor, mixer and blender weighing and OEM weighing situations where a well sealed, high performance weigh module solution is needed.



APPLICATIONS

- Tank, Bin and Hopper Weighing
- Reactor, Mixer and Blender Weighing
- Clean-In-Place (CIP) Washdown
- In-Motion/Conveyor Weighing
- Process Weighing
- OEM and VAR Solutions

FEATURES

- 1000 to 20,000 lbs. Capacities
- 0.02% Accuracy Class - NTEP Grade
- Stainless Steel Construction
- Load Plate Omni-Articulation
- Planar Alignment Compensation
- Shock/Vibration Isolation Mount
- Self-Checking
- IP66/IP68 Environmental Sealing
- Matched Output Sensitivities
- Two Year Warranty

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

SENTRAN, LLC 4355 LOWELL STREET, ONTARIO, CA 91761, U.S.A.
888-545-8988 T: 909-605-1544 FAX: 909-605-6305 www.sentrانllc.com

MF4 Series Specifications

Innovative Measurement Solutions



PERFORMANCE

Rated Capacities ⁽¹⁾ (lbs.)	1K, 1.5K, 2K, 2.5K, 3K, 4K, 5K, 10K, 15K, 20K
Rated Output (FSO)	3 mV/V
Output Tolerance	± .25 % R.O.
Combined Error Band	≤ 0.03 % FSO
Non-Linearity	≤ 0.03 % FSO
Hysteresis	≤ 0.03 % FSO
Non-Repeatability	≤ 0.02 % FSO
Side Load Rejection Ratio	500:1
Zero Balance	± 1.0 % FSO
Creep (20 Minutes)	0.03 % of Load

⁽¹⁾ ("K"=Thousand)

MECHANICAL

Load Cell Material	17-4ph Stainless Steel
Load Cell Finish	Bead Blasted
Mount Material	Stainless Steel
Mount Finish	Natural
Safe Overload	Compression: 150% FSO Side Load: 100% FSO
Ultimate Overload	Compression: 300% FSO Side Load: 200% FSO
Deflection	See Dimensions Page
Weight	See Dimensions Page

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) + Signal (green) - Signal (white) Shield (natural)
Cable Type	4-conductor, 22 AWG, Polyurethane Jacket, Tinned Copper Braid, Diameter: 0.187"
Cable Length	See Dimensions Table
Cable Termination	Finished Conductors
Cable Seal	Conduit adapter; 1/4-18 NPT; Stainless

ENVIRONMENTAL

Temperature, Operating	0 to +150 °F (-18 to +65°C)
Temperature, Compensated	14 to +104 °F (-10 to +40°C)
Temperature, Storage	-40 to +170 °F (-40 to +77°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 (Multi-Redundant)	IP66; High Pressure Resistant IP68; Continuous Immersion Tolerance
FM Approval	
Intrinsically Safe:	Class I, II, III; Div.1 Groups A-G
Non-Incendive:	Class 1; Div.2 Groups A-D

MF4 Typical System Configuration

SENSING LOAD CELL(S)



SIGNAL CONDITIONING

Analog Transmitters



Serial Transmitters



Digital Indication



Process Control



Batch Control



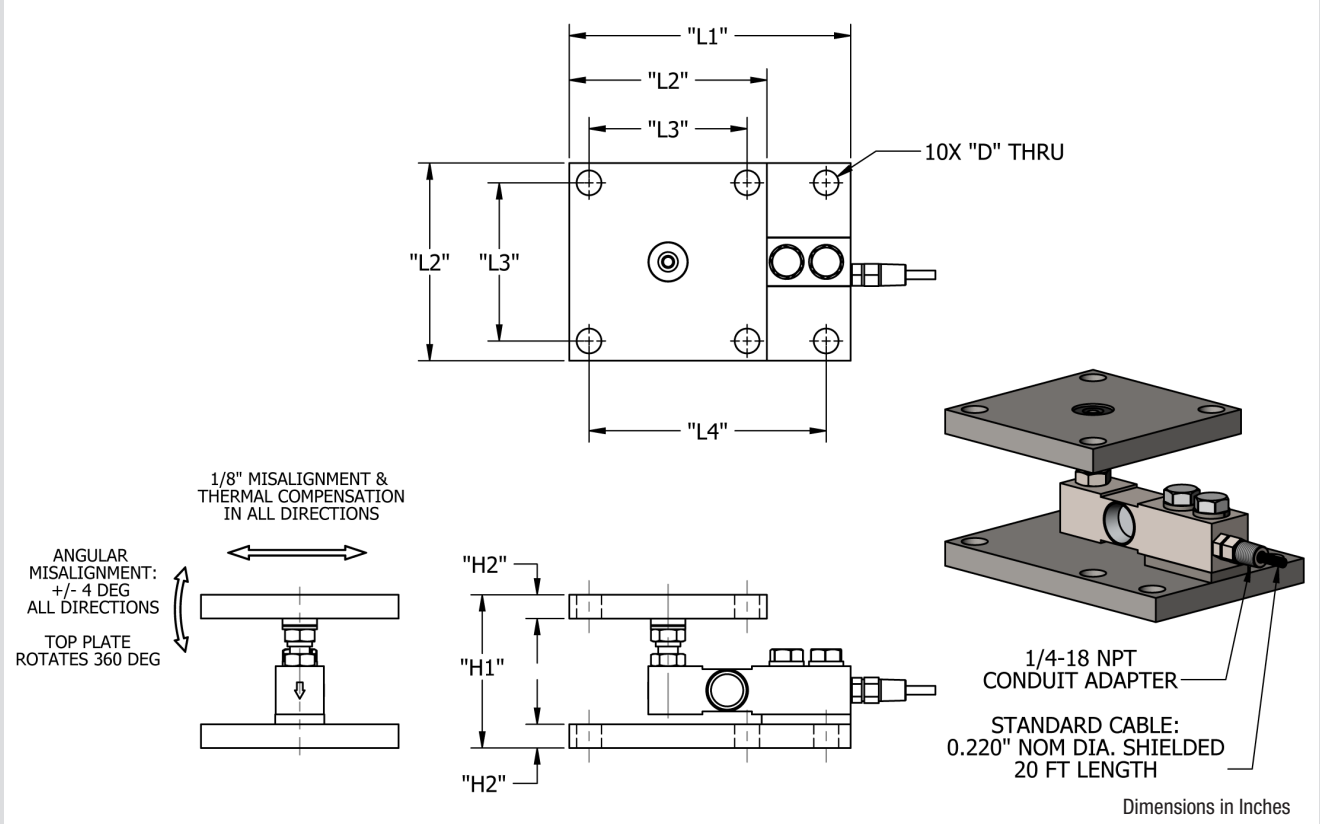
Data Acquisition



OUTPUT OPTIONS

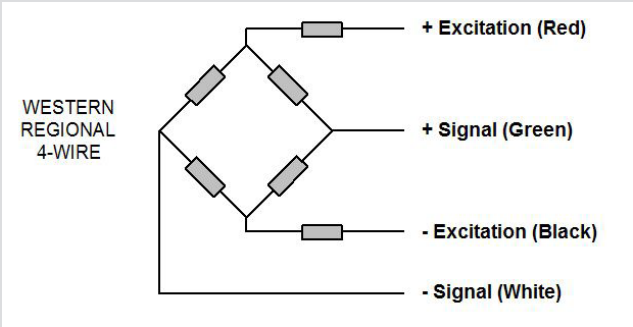
0-5 VDC
0-10VDC
±5 VDC
±10 VDC
4-20 mA
0-20 mA
RS-232
RS-422
RS-485
20 mA Serial Loop
Ethernet
Profibus DP
DeviceNet
CANOpen
ControlNet
Modbus RTU
Wireless

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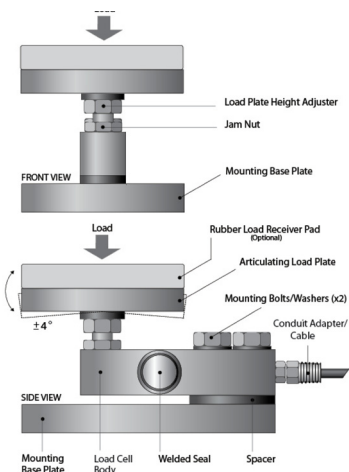
Capacity (LB)	H1 Adjustable	H2	L1	L2	L3	L4	D	Deflect	Weight
DIMENSIONS (INCHES)									
1K, 1.5K, 2, 2.5K, 4K	4.00 - 4.50	0.60	7.12	5.00	4.00	6.00	0.63	0.014" - 0.022"	15.0 LBS
5K, 10K	5.00 - 5.50	0.94	8.50	5.00	4.00	7.00	0.63	0.020" - 0.027"	26.0 LBS

MF4 Wiring Diagram

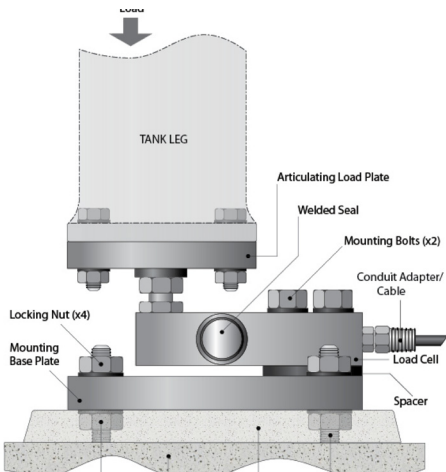




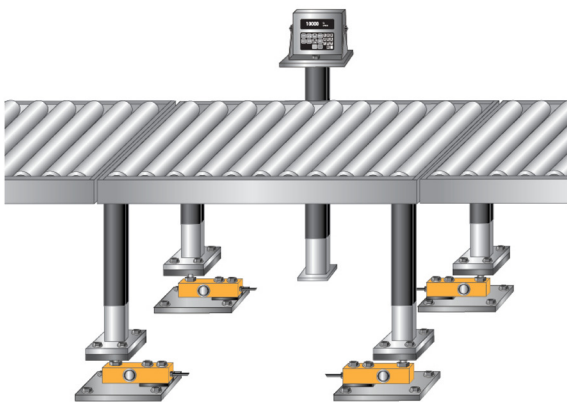
Articulating Load Receiver Components



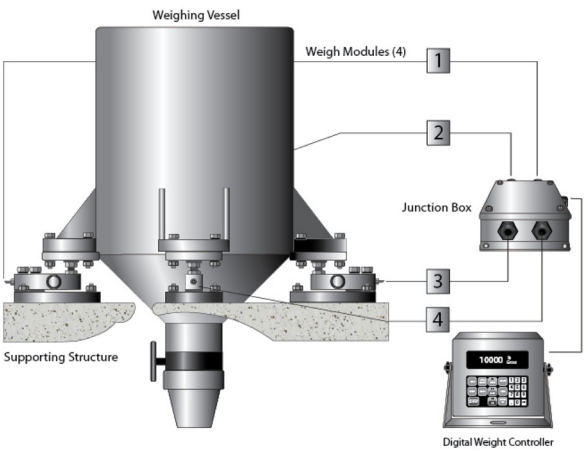
Floor/Footer Installation Components



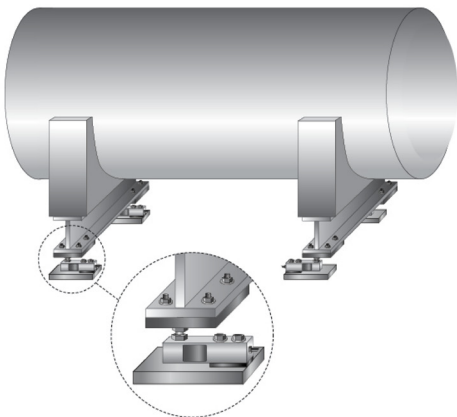
In-Line Check Weighing



Weighing System Components



Horizontal Tank



Legal Disclaimer



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