



SENTRAN

Low Capacity Weigh Module

MQ1-B Series

The MQ1-B Series is a high performance weigh module constructed of stainless steel. The MQ1-B Series is designed to accurately measure compression forces for applications ranging from 0-10 KG to 0-200 KG.



The MQ1-B Series is a high performance weigh module constructed of stainless steel. The MQ1-B utilizes the VE4-C Series dual-guided cantilever beam load cell that readily tolerates angular, eccentric, and side loading effects, with minimal sensitivity to these anomalies. The MQ1-B Series is designed to accurately measure compression forces for applications ranging from 0-10 KG to 0-200 KG. The Neoprene vibration mount load receiver promotes equal load distribution between adjacent weigh modules and reduces the effects of shock loading and vibration. This easy-to-install weigh module mounts directly to the floor or structural supports, and is completely self-checking, including uplift constraint with accurate (tension) measurement. The MQ1-B Series weigh module is Harsh Environment Sealed to IP68, incorporating a welded bellows seal to protect all internal components. The integral premium, instrumentation grade cable features a durable PVC 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 MQ1-B Series make it an ideal choice for measurement for Industrial, material handling, and weighing situations where a versatile high performance, low capacity weigh module solution is required.

APPLICATIONS

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

FEATURES

- 10 KG to 200 KG Capacities
- 0.02% Accuracy Class
- 2 mV/V Full Scale Output
- 10 FT PVC Cable
- FM Approved, Intrinsically Safe
- Compact Size
- IP68 Environmental Sealing
- Plated Steel Construction
- Dual Guided Beam Design
- Vibration Mount Load Receiver



This Weigh Module uses
the model VE4-C FM
Approved load cell

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

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MQ1-B Series Specifications

Innovative Measurement Solutions



PERFORMANCE

Rated Capacities (KG)	10, 20, 30, 50, 100, 200
Rated Output (FSO)	2 mV/V
Output Tolerance	±0.25 % R.O.
Combined Error Band	≤ 0.03 % FSO
Non-Linearity	≤ 0.02 % FSO
Hysteresis	≤ 0.02 % FSO
Non-Repeatability	≤ 0.02 % FSO
Zero Balance	< 2.5 % FSO
Creep (30 Minutes)	≤ 0.03 % of Load

MECHANICAL

Load Cell Material	17-4 Stainless Steel
Load Cell Finish	Natural Bright
Mount Material	Steel
Mount Finish	Zinc Plated
Safe Overload	Compression: 150% FSO Side Load: 50%
Ultimate Overload	Compression: 300% FSO Side Load: 100%
Deflection	Rubber Compression Mount Deflects 0 -0.2 Inch Dependent on Load

ELECTRICAL

Input Impedance	400 ± 20 ohms
Output Impedance	350 ± 3 ohms
Insulation Resistance	>2000 Megohms @ 50 VDC
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, 24 AWG, PVC, Tinned Copper Braid, Diameter: 0.200"
Cable Length	See Dimensions Table
Cable Termination	Finished Conductors
Cable Seal	Epoxy Gland Seal

ENVIRONMENTAL

Temperature, Operating	-20 to +160 °F (-30 to +70°C)
Temperature, Compensated	14 to +122 °F (-10 to +50°C)
Temperature, Storage	-58 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	IP68; Continual Immersion Tolerance
FM Approval	Per Sentran: FM Certificate of Conformity: FM24US00012X and FM24CA0005X

FM approved versions carry a "-FM" suffix to the part number. Every Sentran unit of an FM APPROVED product will bear an FM compliant label indicating the application level (e.g., Class 1, Division 1, Groups) corresponding to the type of protection required.

MQ1-B Typical System Configuration

SENSING LOAD CELL(S)

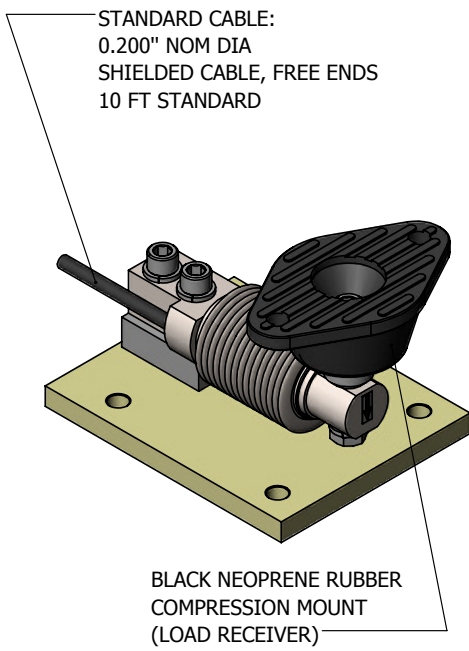
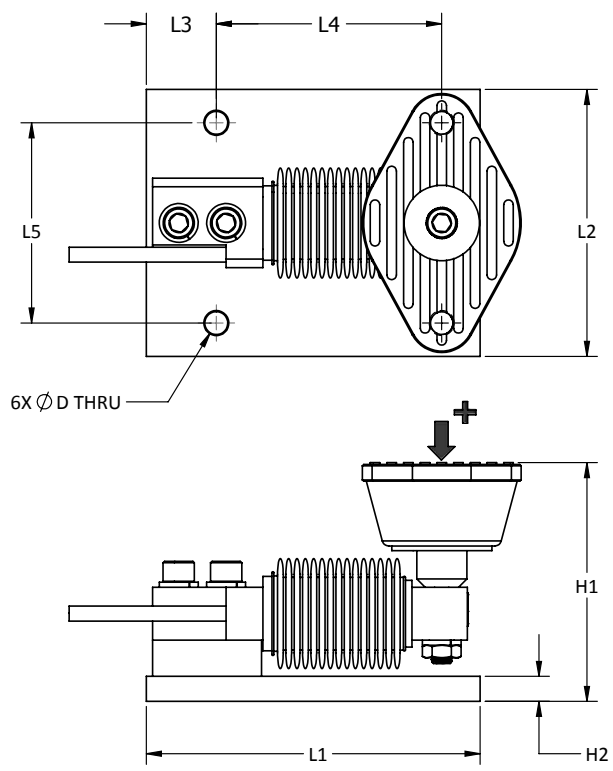


SIGNAL CONDITIONING

Amplifier/Transmitter JF Series	
Amplifier/Transmitter JA Series	
Digital Indicator 250 Series	
Digital Indicator 250SS Series	
Digital Indicator/Controller KD3 Series	
Digital Indicator/Controller KD4 Series	

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

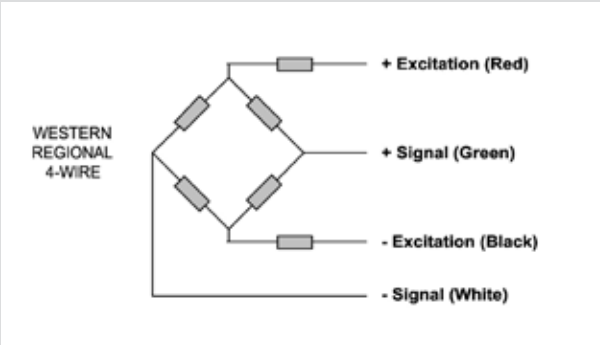


STANDARD CABLE:
0.200" NOM DIA
SHIELDED CABLE, FREE ENDS
10 FT STANDARD

DIMENSIONS IN INCHES

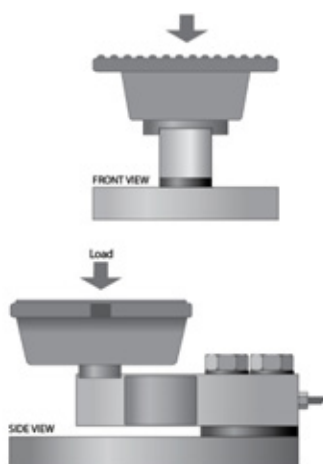
Capacity (LB)	D	H1 (nom)	H2	L1	L2	L3	L4	L5	Recommended Bolt Torque	Deflect	Weight
10, 20, 30, 50, 100, 200	0.34	3.58	0.38	5.00	4.00	1.05	3.38	3.00	17 FT-LB	See Spec	4.0 LB

MQ1-B Wiring Diagram





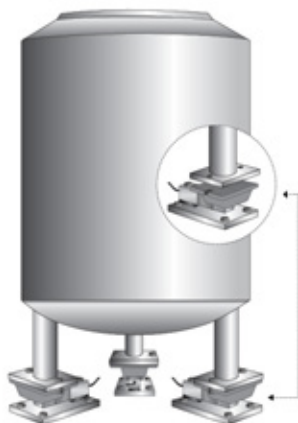
Compression Weigh Module



In-Line Check Weighing



Free Standing Tank Weighing



Legal Disclaimer



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