

## Model MBL

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### Minigram Beam Load Cell



#### DESCRIPTION

Models MBL Minigram Beam Load Cells are engineered to measure very low bending forces and still achieve an impressive 0.1 % full scale non-linearity and hysteresis. Built-in overload stops are incorporated to provide additional reliability. Miniature

dimensions allow easy unit integration into existing systems. Model MBL uses semiconductor gages and is available for load ranges from 25 to 1000 grams.

#### FEATURES

- 25 g to 1000 g
- Miniature size
- 0.1 % linearity
- Small diameter
- Integral cable
- Calibrated in compression only

# Model MBL

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Load ranges <sup>4</sup>	25, 50, 100, 150, 250, 500, 1000 g
Linearity (max.)	±0.1 % full scale
Hysteresis (max.)	±0.1 % full scale
Non-repeatability (max.)	±0.03 % full scale
Output (tolerance)	20 mV/V (nominal)
Operation	Tension/compression <sup>1</sup>
Resolution	Infinite

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-18 °C to 93 °C [0 °F to 200 °F]
Temperature, compensated	15 °C to 71 °C [60 °F to 160 °F]
Temperature, storage	-73 °C to 93 °C [-100 °F to 200 °F]
Temperature effect, zero	0.015 % full scale/°F
Temperature effect, span	0.02 % full scale/°F

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded semiconductor
Excitation (calibration)	5 Vdc
Insulation resistance	5000 mOhm @ 50 Vdc
Bridge resistance	500 ohm
Zero balance	±5 % full scale
Electrical termination (std)	Cable 1,83 m [5 ft]

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Maximum allowable load	400 % FS <sup>2</sup>
Weight	50 g
Material	Aluminum

## WIRING CODES

Cable	Unamplified
Red	(+) excitation
Black	(-) excitation
Green	(-) output
White	(+) output

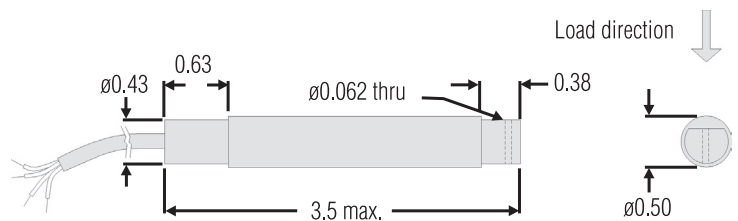
## RANGE CODES

Range Codes	Range
AH	25 g
AJ	50 g
AK	100 g
AL	150 g
AN	250 g
AP	500 g
AR	1000 g

## OPTION CODES

	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.
Load range	25, 50, 100, 150, 250, 500, 1000 g
Temperature compensation	1a. 60 °F to 160 °F 1b. 30 °F to 130 °F 1c. 0 °F to 185 °F
Internal amplifiers	2u. Unamplified, mV/V output
Electrical termination	6e. Integral cable: Teflon 6d. Microtec DR-4S-4H four-pin
Special calibration	9a. 10 point (5 up/5 down) 20 % increments @ 70 °F

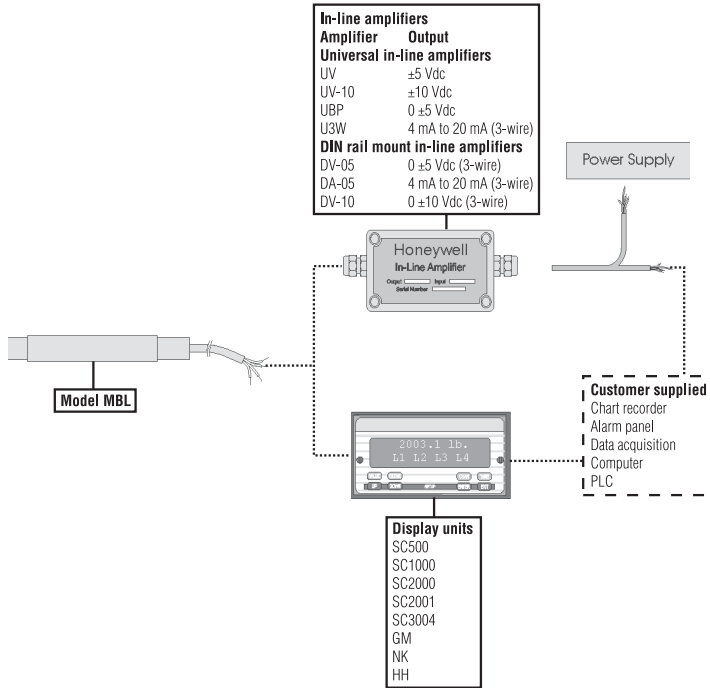
## MOUNTING DIMENSIONS



## NOTES

1. Positive in compression; calibrated in compression only.
2. Allowable maximum loads – maximum load to be applied without damage.<sup>3</sup>
3. Without damage - loading to this level will not cause excessive zero shift or performance degradation. The user must consider fatigue life for long term use and structural integrity. All structurally critical applications (overhead loading, etc.) should always be designed with safety redundant load paths.
4. This unit calibrated to Imperial (non-Metric) units.

## TYPICAL SYSTEM DIAGRAM



**Warranty.** Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847

Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

### **WARNING** **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARNING** **MISUSE OF DOCUMENTATION**

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**