

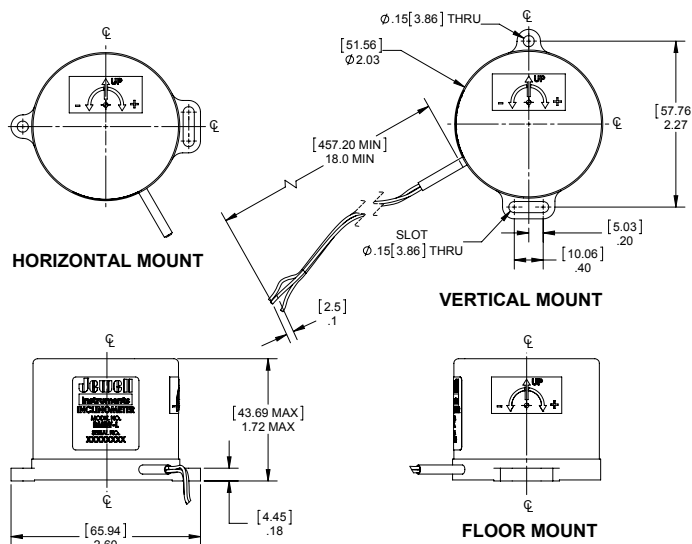
RMIW SERIES

Single-Axis Analog Inclinometer

The Jewell RMIW Series, RoHS compliant, flexure suspension, servo inclinometer is a precision internal grade sensing instrument. The RMIW is available in three different versions (D, L, or S), with customer-specified mounting options, and varying input and output specifications in order to meet your needs.

FEATURES:

- Mounts horizontally or vertically
- Rugged Design
- Lower Cost than traditional Force Balanced Inclinometers
- High Accuracy
- Greater Precision than MEMS Technologies
- Withstands up to 500g shock
- $\pm 5V$ DC, 0-5V DC, and 4-20mA Outputs Available
- Single-Ended and Dual Power Inputs Available
- RoHS Compliant

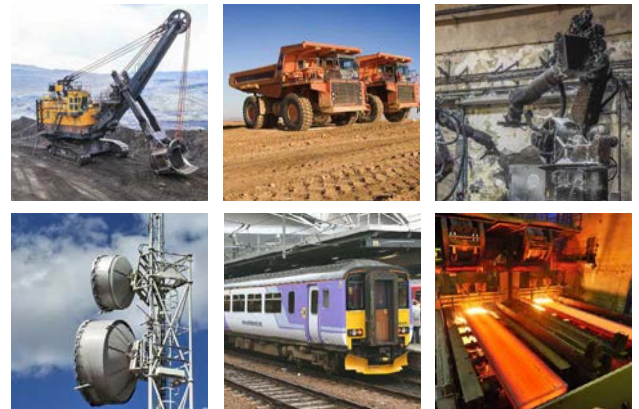


Dimensions: in [mm]



JEWELL EMERALD SERIES

The Jewell Emerald Series inclinometer is a low cost, inclinometer designed with higher precision than comparable MEMS devices.



APPLICATIONS:

- Wheel Alignment
- Construction Equipment
- Antenna Positioning
- Robotics
- Cross Rail Management
- Tilt Safety Systems
- Industrial and Machining Equipment

RMIW-L: 4-20mA

The Jewell RMIW series version L is a rugged, high precision **single-ended** power input inclinometer. This version is wired and features a **4-20mA output** and input ranges from $\pm 3^\circ$ to $\pm 90^\circ$.

APPLICATIONS:

- Wheel Alignment
- Construction Equipment
- Antenna Positioning
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PERFORMANCE SPECIFICATIONS

STATIC/DYNAMIC

| | | | | | | |
|---|--------------|------------|----------|----------|----------|----------|
| INPUT RANGE (°) | ± 3 | ± 14.5 | ± 30 | ± 45 | ± 60 | ± 90 |
| FULL RANGE OUTPUT (mA)¹ | 4-20 | | | | | |
| NONLINEARITY (% FRO)² max | 0.05 | 0.02 | 0.02 | 0.02 | 0.04 | 0.05 |
| SCALE FACTOR (mA/g) nominal | 152.9 | 32 | 16 | 11.3 | 9.2 | 8 |
| SCALE FACTOR TEMP. SENSITIVITY (SFTS) PPM/°C max | 100 | | | | | |
| BANDWIDTH (-3dB) Hz, nominal | 5.0 | | | | | |
| OUTPUT AXIS MISALIGNMENT, ° max | 0.25 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| PENDULOUS AXIS MISALIGNMENT, ° max | 0.50 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| 0° OUTPUT (mA) | 11.7 to 12.3 | | | | | |
| 0° OUTPUT TEMP. SENSITIVITY (mA/°C) max | 0.01 | 0.0030 | 0.002 | 0.0015 | 0.0015 | 0.0015 |
| RESOLUTION & THRESHOLD (µrad)³ | 3.5 | | | | | |
| WEIGHT (oz) | 4.2 | | | | | |

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
3. Full Resolution is achieved with noise reduction techniques

WIRING CODE

| | |
|--------------|----------------------|
| RED | POSITIVE INPUT POWER |
| BROWN | POWER/SIGNAL COMMON |
| GREEN | SIGNAL |

PRODUCT SPECIFICATIONS: RMIW-L

ELECTRICAL

| | |
|------------------------------|------------|
| NUMBER OF AXES | 1 |
| INPUT VOLTAGE RANGE (VDC) | +12 to +28 |
| INPUT CURRENT (mA, max) | 55 |
| OUTPUT IMPEDANCE (Ohms, nom) | 10 |
| NOISE (Vrms, max) | 0.006 |

ENCLOSURE

| | |
|------|------|
| SEAL | IP65 |
|------|------|

ENVIRONMENTAL

| | |
|-----------------------|----------------------|
| OPERATING TEMP. RANGE | -55° to +85° C |
| STORAGE TEMP. RANGE | -60° to +90° C |
| SHOCK | 500g, 1 msec, ½ sine |

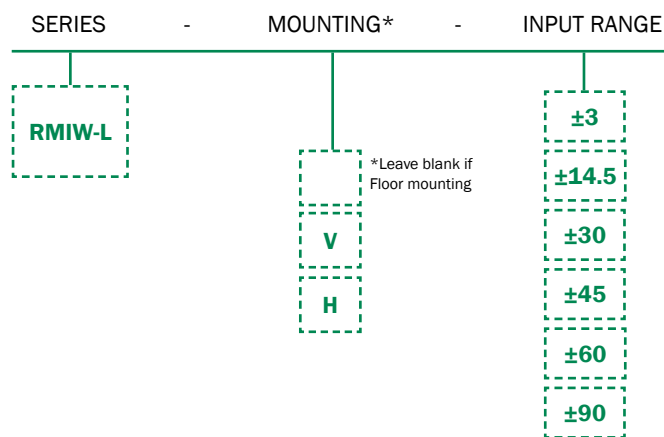
CUSTOM CAPABILITIES

- L-SERIES**
- Pigtail & Connector alternative options available
 - Custom ranges available

ORDERING INFORMATION

HOW TO ORDER

Model Numbers are comprised of the series, the series version, the mounting option, and the input range.



| | MOUNTING | MODEL # | PART # |
|-------|------------|---------------|--------------|
| ±3 | FLOOR | RMIW-L-3.0 | 02550332-001 |
| | VERTICAL | RMIW-L-V-3.0 | 02550332-101 |
| | HORIZONTAL | RMIW-L-H-3.0 | 02550332-201 |
| ±14.5 | FLOOR | RMIW-L-14.5 | 02550332-002 |
| | VERTICAL | RMIW-L-V-14.5 | 02550332-102 |
| | HORIZONTAL | RMIW-L-H-14.5 | 02550332-202 |
| ±30 | FLOOR | RMIW-L-30.0 | 02550332-003 |
| | VERTICAL | RMIW-L-V-30.0 | 02550332-103 |
| | HORIZONTAL | RMIW-L-H-30.0 | 02550332-203 |
| ±45 | FLOOR | RMIW-L-45.0 | 02550332-004 |
| | VERTICAL | RMIW-L-V-45.0 | 02550332-104 |
| | HORIZONTAL | RMIW-L-H-45.0 | 02550332-204 |
| ±60 | FLOOR | RMIW-L-60.0 | 02550332-005 |
| | VERTICAL | RMIW-L-V-60.0 | 02550332-105 |
| | HORIZONTAL | RMIW-L-H-60.0 | 02550332-205 |
| ±90 | FLOOR | RMIW-L-90.0 | 02550332-006 |
| | VERTICAL | RMIW-L-V-90.0 | 02550332-106 |
| | HORIZONTAL | RMIW-L-H-90.0 | 02550332-206 |