RMIW Analog Inclinometer

Features

- Mounts horizontally or vertically to match the AccuStar footprint
- Extremely Rugged
- Lower Cost than traditional Force Balanced Inclinometers
- High Accuracy
- Greater Precision than MEMS Technologies
- Withstands up to 500g shock
- ±5 V DC Output
- Single-Ended Power Input

Application

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

Introduction

Input ranges from ±3° to ±90° rugged, high Precision, low Cost, dual-ended power input inclinometer. The Emerald Series inclinometer is a low cost, high precision inclinometer designed with higher accuracy than comparable MEMS devices. Applications include robotics, construction equipment, industrial measurement and control, and precision machining.

Performance specifications

Static/dynamic

Input range (°)	±3	±14.5	±30	±45	±60	±90
Full Range Output (mA)	4 to 20	4 to 20	4 to 20	4 to 20	4 to 20	4 to 20
Nonlinearity % FRO maximum[2]	0.05	0.02	0.02	0.02	0.04	0.05
Scale Factor, Volts/g, nominal	152.9	32.0	16.0	11.3	9.2	8
Scale Factor Temp. Sensitivity (SFTS), PPM/°C max	100	100	100	100	100	100
Bandwidth (-3 dB), Hz nominal	5.0	5.0	5.0	5.0	5.0	5.0
Output Axis Misalignment, ° maximum	0.25	0.50	0.50	0.50	0.50	0.50
Pendulous Axis Misalignment, ° maximum	0.50	0.75	0.75	0.75	0.75	0.75
0° Output, Volts range (mA)	11.7-12.3	11.7-12.3	11.7-12.3	11.7-12.3	11.7-12.3	11.7-12.3
0° Output Temp. Sensitivity, Volts/°C maximum	0.01	0.0030	0.002	0.0015	0.0015	0.0015
Resolution and Threshold, μradians maximum[3]	3.5	3.5	3.5	3.5	3.5	3.5
Weight (oz.)	4.2	4.2	4.2	4.2	4.2	4.2

Electrical

Number of Axes	1
Input Voltage Range, (VDC)	+12 to +28
Input Current, mA, max	55
Output Impedance, Ohms, nom	10
Noise, Vrms, Maximum	0.006

Environmental

Operating Temp Range	-55°C to +85°C
Storage Temp Range	-60°C to +90°C
Shock	500g, 1 msec, ½ sine

Enclosure

Seal	IP65

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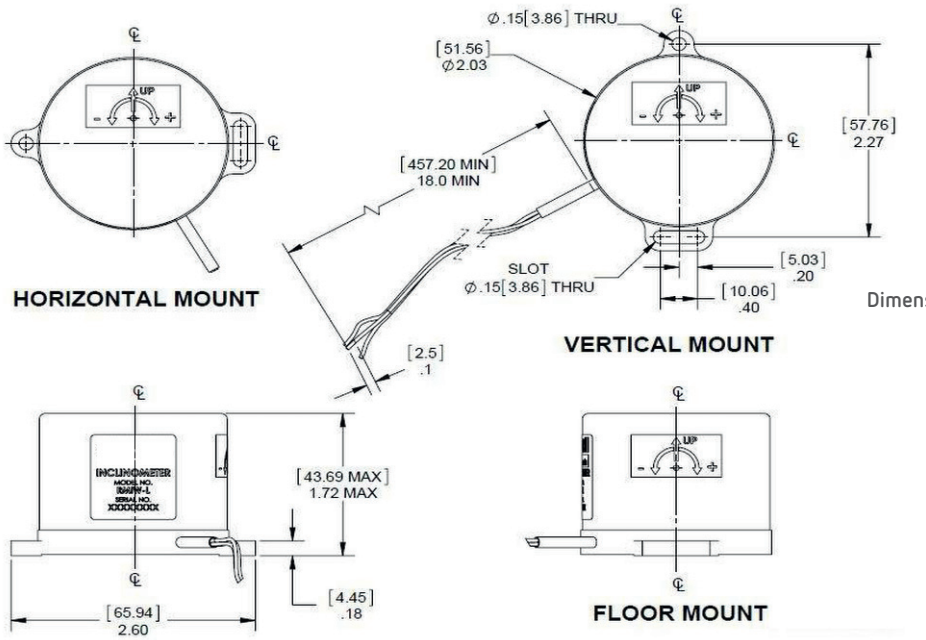
Notes

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.

Custom Capabilities

- +15 to +30 V single-ended input option available
- Pigtail and Connector alternative options available
- Custom ranges and bandwidths available

Outline Diagram



Dimensions in inches [mm]

Wire Description

Wire	Function
Red	Power (+12 to + 28 Vdc)
Brown	Power / signal common
Green	Outpunt signal

Ordering information

02550332 - 0 0 = 3

RMIW-L Series
Single-ended
Power with
4-20mA Output

Range Options
1 - ±3°
2 - ±14.5°
3 - ±30°
4 - ±45°
5 - ±60°
6 - ±90°

Mount Options
0 - Floor Mount
1 - Wall, Vertical Mount
2 - Wall, Horizontal Mount

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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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