

MEMSENSE

Customer Focused Inertial Solutions

MS-IMU3050



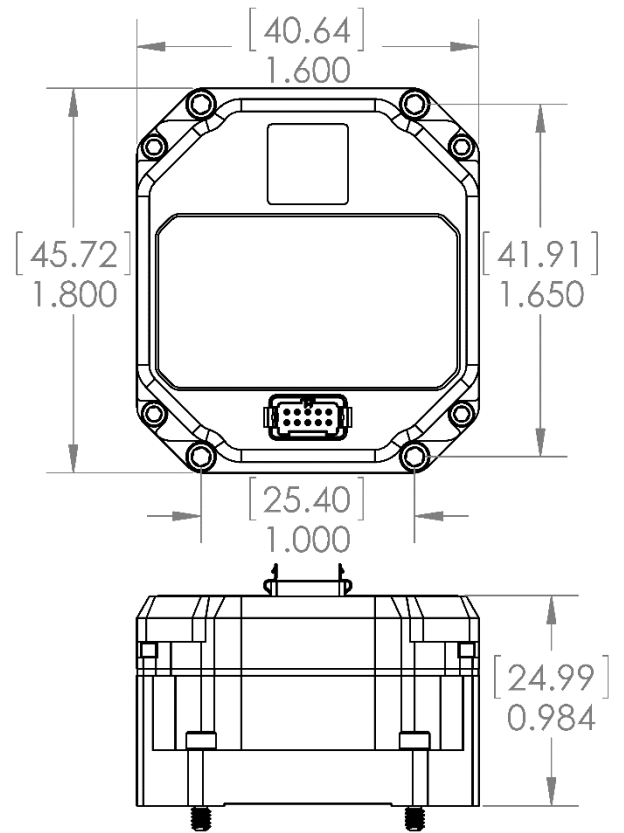
Extreme performance in the industry's most compact package, the MS-IMU3050 represents the next generation of cutting edge MEMS IMUs without export restrictions. With an ultra-durable and dimensionally stable MIC-6 alloy housing, MIL-A-8625 coating, and Mil-Standard interface connector, the MS-IMU3050 will endure the most demanding environments, giving long term stability and reliability in your application.

Key Features

Accel Dynamic Range	$\pm 10g$
Accel Bias Instability	$40 \mu g$
Accel Velocity Random Walk	$0.101 \text{ m/s/h}^{-1/2}$
Gyro Dynamic Range	$\pm 480 \text{ }^\circ/\text{s}$
Gyro Bias Instability	$0.40 \text{ }^\circ/\text{h}$
Gyro Angle Random Walk	$0.1 \text{ }^\circ/\text{h}^{-1/2}$
EAR99 Export Classification	

Applications

- Pipeline Inspection
- Bend Finding & Up Detection
- Survey & Mapping



Dimensions [mm] Inches

ACCELERATION		UNITS	NOTES
Dynamic Range	± 10	g	Minimum
Bias Instability	40	μg	Typical, Note 1
Offset	± 2.4	mg	Typical
Nonlinearity	± 0.3	% of FS	Typical
Velocity Random Walk	0.101	m/s/h ^{-1/2}	Typical
Noise Density	54	μg/Hz ^{-1/2}	Typical
Bandwidth	50	Hz	-3dB point
ANGULAR RATE		UNITS	NOTES
Dynamic Range	± 480	°/s	Minimum
Bias Instability	0.40	°/h	Typical, Note 1
Offset	± 10	°/h	Typical
Nonlinearity	± 0.05	% of FS	Typical
Angle Random Walk	0.10	°/h ^{-1/2}	Typical
Noise Density	0.0017	°/s/Hz ^{-1/2}	Typical
Bandwidth	50	Hz	-3dB point
PHYSICAL		UNITS	NOTES
Dimensions	1.8 x 1.6 x 0.9	in.	(L x W x H)
Mass	60	grams	
Supply Voltage	4.9 - 30	VDC	
Supply Current	600	mA	
Interface Connector	MIL-DTL-32139		9 pin

Note 1: Bias Instability is determined from a root Allan Variance analysis.