

MV60 ACCELEROMETER

Cost-effective, high-performance MEMS inertial sensor

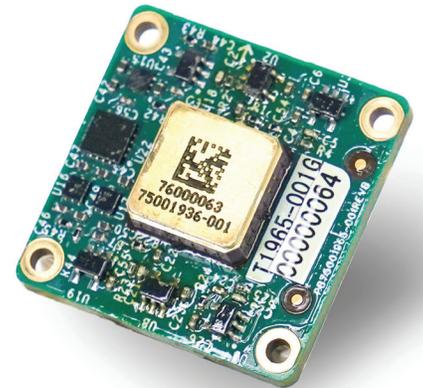
The MV60 utilizes silicon-based Micro-Electro-Mechanical Systems (MEMS) technology in this high-performance accelerometer offering. Until now, MEMS technology has not crossed the threshold of high performance and has been reserved for lower-performing markets. Leveraging over 50 years of inertial sensor and MEMS experience, Honeywell's new MV60 breaks through this performance constraint to give the user the ability to address the most demanding trade-offs between size, weight, power (SWaP), cost and performance.

Honeywell's MV60 is a single-axis, in-plane acceleration sensor, housed on a 1.085 inch square circuit board. The MV60 operates on less than 45 mW power, is rugged to 5000 g's of shock, and features a high bandwidth > 300 Hz. This accelerometer outputs two frequencies, which change proportional to acceleration; each frequency is a TTL compatible 3.3 V digital square-wave. MV60 operates over a wide temperature range from -55°C to 95°C. To aid in accurate compensation, an onboard digital temperature sensor and EEPROM for modeling coefficients storage are accessible via an I2C bus.

Designed for high performance inertial system applications that service commercial aerospace, defense, industrial, or commercial marine markets, Honeywell's MV60 inertial sensor will significantly increase the value of your next product offering.

FEATURES

- Precision at an affordable price
- Robust design and quality assurance provide superior reliability
- Digital square-wave output
- Excellent shock survivability
- Low power consumption
- High bandwidth
- Simple, compact design for seamless system integration



MV60 - Sensor Side



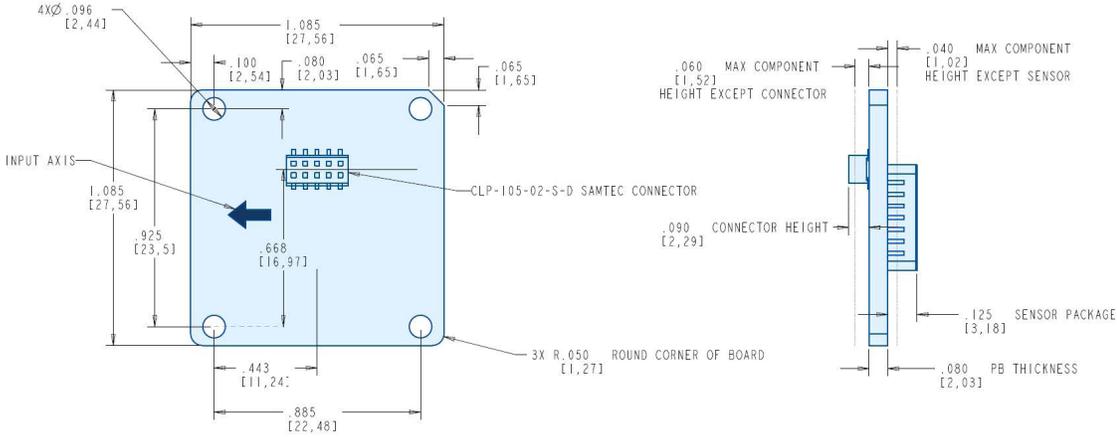
MV60 - Connector Side



MV60 - Size Comparison

MV60 ACCELEROMETER

SPECIFICATION / DIMENSIONS



PERFORMANCE CHARACTERISTICS

PARAMETER	MV60-001	MV60-002	MV60-003	UNITS
Operating Range	60	60	60	g, min
Bias Repeatability, 1 year	1000	500	200	μg
Scale Factor Repeatability, 1 year	75	50	30	ppm
Vibration Rectification Coefficient, 100 – 500 Hz	10	7	5	$\mu\text{g}/\text{g}^2$
Noise (Allan Deviation)				
$\tau = 1 \text{ sec}$	50	40	40	μg
$\tau = 10 \text{ sec}$	20	14	10	μg

ENVIRONMENTAL

Operating Temperature Range	-55°C to 95°C
Bandwidth	> 300 Hz
Survivable Acceleration	> 5,000 g

ELECTRICAL

Input Voltage	+5 V +20 V (bias voltage, < 1 mA)
Power	45 mW
Frequency Output (F1, F2)	26 - 29 kHz (nominal) square wave (0 to +3.3 V)
Differential Frequency Scale Factor (F2 – F1)	90 Hz/g

PHYSICAL

Weight	6.5 gm
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ISO-9001 certification since 1995

DISCLAIMER: Specifications are subject to change without notice. Honeywell reserves the right to make changes to any product or technology herein to improve reliability, function or design. Honeywell does not assume any liability arising out of the application or use of the product.

Accelerometers exported from the United States must be done in accordance with the Export Administration Regulations (EAR) and/or the International Traffic in Arms Regulations (ITAR) as applicable.

For more information

Visit us at: <https://aerospace.honeywell.com/en/learn/products/sensors/accelerometers-high-performance-accelerometers>
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