

## Model MAT53

### Accelerometer



#### DESCRIPTION

The Model MAT53 amplified piezoelectric accelerometers combined with integrated temperature sensors are designed to be used in Industrial test and automation environments; including laboratory test, modal studies and testing cells where simultaneous temperature and velocity vibration are required to be measured. The constant current low output impedance for the velocity vibration combined with the current output for the temperature output provide the ability to drive high load capacitance allows long runs of low cost cable without degradation of data. The seismic element is mechanically isolated from the mounting

base, resulting in a low base strain sensitivity. The stainless steel materials are non-magnetic resulting in very low magnetic field susceptibility. These features, together with a sealed body, assure accurate and reliable data. The Model MAT53 is available in a number of configurations and options that includes connector or integral stainless steel armored cable (specify length at time of ordering), The Model MAT53 can be supplied in a number of different dynamic ranges to suit the expected temperature and vibration levels.

#### FEATURES

- Temperature and vibration dual output
- 2 Hz to 10 kHz usable frequency range
- IEPE output
- Low base strain sensitivity
- Current O/P for temperature
- Stainless steel overbraided PTFE cable
- Stainless steel armored cable or three-pin connector electrical options

# Model MAT53

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Dynamic range	±80 G
Sensitivity	100 mV/G ±10 %
Temperature range	-18 °C to 93 °C [0 °F to 200 °F]
Transverse sensitivity	Less than 5 %
Temperature sensitivity	10 mV/°F
Frequency range	2 Hz to 10 kHz ±5 %
Amplitude linearity	Better than 1 % linearity
Mounted base resonance	18 kHz

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-12 °C to 138 °C [-10 °F to 280 °F]
Sealing	IP67/NEMA 4

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Input	Constant current
Current range	0.5 mA to 8 mA
Bias voltage	12 Vdc
Cable <sup>1</sup>	Stainless steel overbraided PTFE
Standard cable length <sup>1</sup>	4,9 m [16 ft]
Electrical noise	0.3 mG max.
Isolation	Base isolated
Mating connector <sup>2</sup>	MH008

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Weight	0,11 kg [3.8 oz]
Material	Stainless steel
Mounting torque	6 ft-lb

## SENSITIVITY CODES

Sensitivity Code	Sensitivity
<b>GU</b>	10 mV/G
<b>GB</b>	30 mV/G
<b>GH</b>	100 mV/G
<b>GG</b>	1000 mV/G

## WIRING CODES

<b>AG930</b>	
Pin A	(+) Supply (+) Output
Pin B	Supply return
Pin C	(+) Temperature

<b>AG931</b>	
White	(+) Supply (+) Output
Black	(+) Temperature
Shield	Supply return

## OPTION CODES

	<b>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.</b>
<b>Sensitivity</b>	10 mV/G, 30 mV/G, 100 mV/G , 1000 mV/G
<b>Electrical termination</b>	3-pin 62 GB connector <sup>2</sup> Cable <sup>1</sup> (specify cable length at time or order)
<b>Mounting arrangement</b>	17b. 1/4-28 UNF 17c. Quickfit female

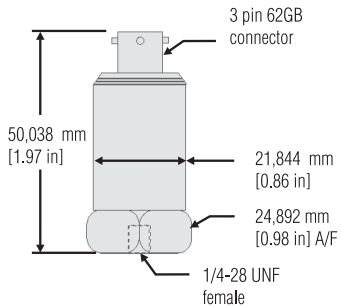
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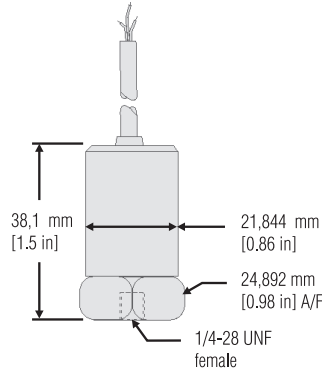
## NOTES

1. Not applicable for AG930.
2. Not applicable for AG931.

## MOUNTING DIMENSIONS



Model MAT53 (order code AG930)



Model MAT53 (order code AG931)

**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.**