

Model 4655 Accelerometer



SMT Mount Accelerometer
Silicon MEMS
Temperature Calibrated
Hermetically Sealed



The **Model 4655** is a signal conditioned board mountable MEMS accelerometer. The accelerometer incorporates integral temperature compensation and a frequency response from DC to 2000Hz. The gas damped accelerometer incorporates integral over-range stops making it ideal for measurements of static and dynamic vibrations after shock impacts. The model 4655 is packaged in a true hermetically sealed envelope with a ceramic board and a metal shielding for smt or adhesive mounting.

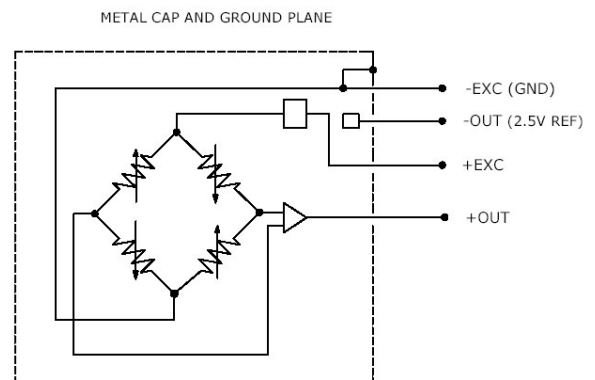
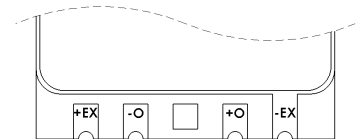
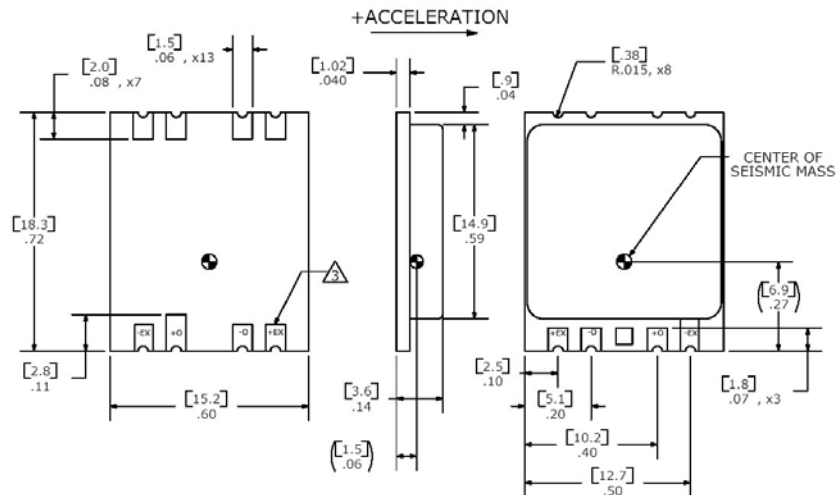
FEATURES

- Board Mountable Accelerometer
- 8 to 32Vdc Excitation Voltage
- Hermetically Sealed
- $\pm 2g$ to $\pm 200g$ Dynamic Ranges
- DC Response
- Advanced Temperature Compensation
- High Over-Range Protection

APPLICATIONS

- Impact Testing
- Vibration & Shock Monitoring
- Embedded Applications
- Inertial Navigation
- Low Frequency Applications

dimensions



Model 4655 Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1002 for Embedded DC Accelerometers.

Parameters

DYNAMIC

	±2	±5	±10	±20	±50	±100	±200	±500	Notes
Range (g)									
Sensitivity (mV/g)	1000	400	200	100	40	20	10	4	
Frequency Response (Hz)	0-200	0-300	0-350	0-600	0-800	0-1300	0-1500	0-1500	±5%
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	10000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	
Shock Limit (g)	10000	10000	10000	10000	10000	10000	10000	10000	

ELECTRICAL

Zero Acceleration Output (mV)	±50	±50	±50	±50	±50	±50	±50	±50	Differential
Excitation Voltage (Vdc)	8 to 32	8 to 32	8 to 32	8 to 32	8 to 32	8 to 32	8 to 32	8 to 32	
Excitation Current (mA)	<5	<5	<5	<5	<5	<5	<5	<5	
Bias Voltage (Vdc)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Output Resistance (Ω)	<100	<100	<100	<100	<100	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	>100	>100	>100	@100Vdc
Turn On Time (msec)	<100	<100	<100	<100	<100	<100	<100	<100	
Residual Noise (μV RMS)	500	300	300	350	400	400	400	400	Passband
Ground Isolation	Isolated from Mounting Surface								

ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.008	±0.008	±0.008	±0.008	±0.008	±0.008	±0.008	±0.008	Typical
Thermal Sensitivity Shift (%/°C)	±0.010	±0.010	±0.010	±0.010	±0.010	±0.010	±0.010	±0.010	Typical
Operating Temperature (°C)	-55 to 125								
Compensated Temperature (°C)	-40 to 100								
Storage Temperature (°C)	-55 to 125								

PHYSICAL

Case Material	Ceramic Base, Nickel Silver Cover
Cable	Not applicable
Weight (grams)	2.2
Mounting	Not applicable
Mounting Torque	Not applicable
AWG	Not applicable

Wiring color code: Not applicable

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

ordering info

PART NUMBERING Model Number+Range

4655-GGG

|
| _____ Range (020 is 20g)

Example: 4655-020
Model 4655, 20g