

# Model 4020 & 4030 Accelerometer



DC Response, Silicon MEMS  
Dual & Triaxial Output Options  
Low Cost, Great Value  
 $\pm 2g$  &  $\pm 6g$  Measurement Range  
Rugged Construction



The **Model 4020 & 4030** are low noise, signal conditioned DC accelerometers packaged in a durable molded housing. The accelerometers are offered in  $\pm 2g$  &  $\pm 6g$  ranges with a nominal 0-200Hz bandwidth. The model 4020 is a dual axis configuration (X&Y axes) while model 4030 is a triaxial configuration. The capacitive silicon MEMS sensing element offers high resolution and long term stability for critical measurement applications.

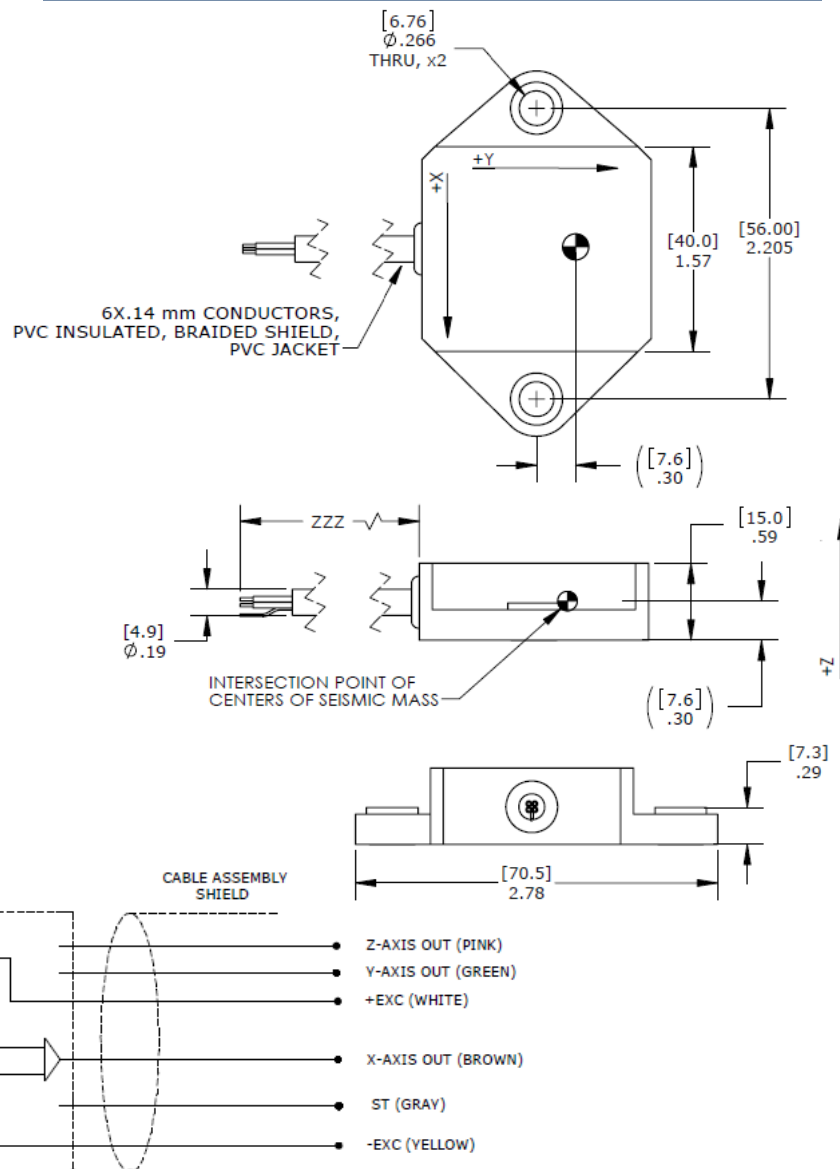
## FEATURES

- 5-30Vdc Excitation Voltage
- Environmentally Sealed
- Low Pass Filtered Output
- Capacitive Silicon MEMS Element
- Integral #24 AWG Cable
- Self-Test Enabled

## APPLICATIONS

- Low Frequency Vibration Monitoring
- Tilt & Inclination Measurement
- Motion Measurements
- Structural Monitoring

## dimensions



# Model 4020 & 4030 Accelerometer

## performance specifications

All values are typical at +24°C, 10Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1004 for Plug & Play DC Accelerometers.

### Parameters

#### DYNAMIC

			Notes
Range (g)	±2	±6	
Sensitivity (mV/g)	1000	333	±10%
Frequency Response (Hz)	0-200	0-200	±5%
Non-Linearity (%FSO)	±1	±1	
Transverse Sensitivity (%)	<3	<3	
Shock Limit (g)	2000	2000	
Residual Noise (µV RMS)	600	240	Passband
Residual Noise (µg/√Hz RMS)	50	42	
Self Test Output Change (mV)	X = +210 ±90 Y = -210 ±90 Z = -340 ±190	X = +70 ±30 Y = -70 ±30 Z = -110 ±65	Ground ST Lead

#### ELECTRICAL

Zero Acceleration Output (V)	2.5 ±0.1
Excitation Voltage (Vdc)	5 to 30
Excitation Current (mA)	4
Full Scale Output Voltage (Vdc)	±2
Ground Isolation	Isolated from Mounting Surface

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO)	±4	-40° to +85°C
Thermal Sensitivity Shift (%)	±5	-40° to +85°C
Operating Temperature (°C)	-40 to 85	
Humidity	Epoxy Sealed, IP65	

#### PHYSICAL

Housing Material	Nylon 6-6, 30% GF, Brass Inserts at Mounting Holes
Weight (grams)	50
Mounting	2x ¼ or M6 Screws
Mounting Torque	18 lb-in (2.0 N-m)

**Optional accessories:** 121 3-Channel Precision Low Noise DC Amplifier

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+Cable Length

40XX-GGG-CCC

| | | Cable Length (120 is 120 inches)  
 | | | Range (002 is ±2g)  
 | | | Dual or Triaxial Configuration (4020; Dual Axis, 4030; Triaxial)

Example: 4030-002-120

Model 4030 (triaxial), ±2g range, 120 inch cable length