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MODEL 4030 TRIAXIAL MEMS DC ACCELEROMETER

Specifications

- Triaxial Capacitive MEMS Accelerometer
- ±2g & ±6g Dynamic Ranges
- Low Cost, Great Value
- Rugged Molded Housing
- Self-Test Enabled

The TE Connectivity model 4030 is a low noise, signal conditioned DC accelerometer packaged in a durable molded housing with brass mounting inserts. The accelerometer is offered in ±2g & ±6g dynamic ranges with a nominal 0-200Hz bandwidth. The capacitive silicon MEMS sensing element offers high resolution and long term stability with minimal non-linearity.

The model 4030 accelerometer incorporates a rugged integral cable assembly with braided shield and PVC jacket. The sensor is fully encapsulated in potting for environmental sealing in critical measurement applications. The accelerometer also includes a self-test feature for remote verification of sensor integrity.

Features

- Capacitive Silicon MEMS Sensor
- Low Pass Filtered Output
- Linearity <0.5%
- 5-30Vdc Excitation Voltage
- IP65 Environmentally Sealed
- Integral Rugged Cable

Applications

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

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Performance Specifications

All values are typical at +24°C, 80Hz and 5Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC			NOTES
Range (g)	±2	±6	
Sensitivity (mV/g)	1000	333	±10%
Frequency Response (Hz)	0-200	0-200	±5%, All Axes
Frequency Response (Hz)	0-600	0-600	±1dB, All Axes
Transverse Sensitivity (%)	<3	<3	
Non-Linearity (%FSO)	±0.5	±0.5	BFSL
Shock Limit (g)	2000	2000	
Residual Noise (µV rms)	600	240	Passband
Spectral Noise (µg/√Hz rms)	42	51	
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

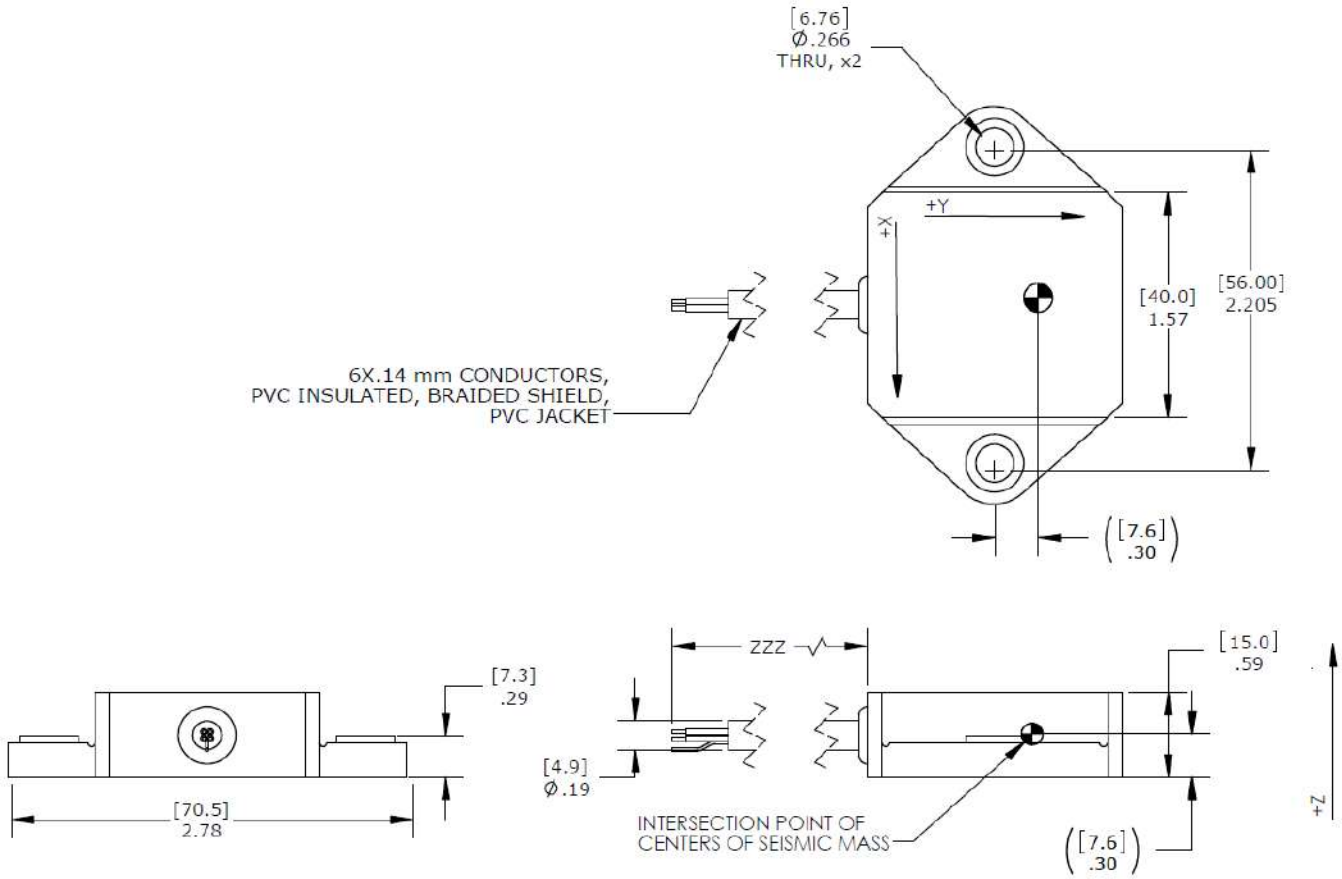
ELECTRICAL	
Zero Acceleration Output (V)	2.5 ±0.1
Excitation Voltage (Vdc)	5 to 30
Excitation Current (mA)	4
Full Scale Output Voltage (Vdc)	±2
Ground Isolation	Isolated from mounting surface

ENVIRONMENTAL		
Thermal Zero Shift (%FSO)	±4	From -40 to +85°C
Thermal Sensitivity Shift (%)	±5	From -40 to +85°C
Operating Temperature	-40 to +85°C (-40 to +185°F)	
Humidity	Epoxy Sealed, IP65	

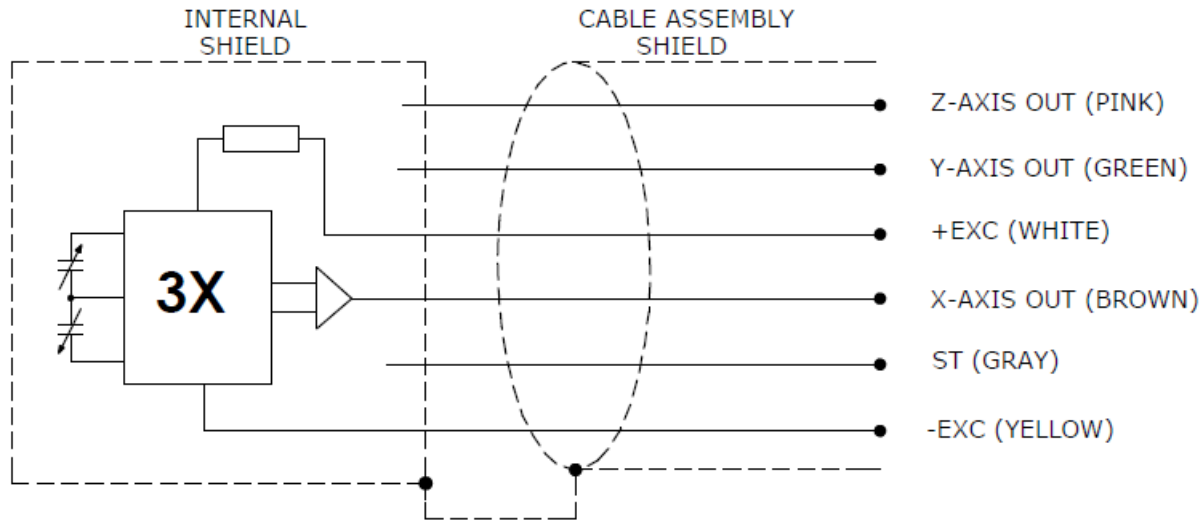
PHYSICAL		
Housing Material	Nylon 6-6, 30% GF Molded Housing, Brass Inserts at Mounting Holes	
Cable	6 x 0.14mm Conductors PVC Insulated, Braided Shield, PVC Jacket	
Weight (grams)	50	Cable not included
Mounting	2x 1/4inch or M6 Metric Screws	
Mounting Torque	18 lb-in (2.0 N-m)	

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

Dimensions



Schematic



Ordering Information

4030	GGG	ZZZ
Range 002 = 2g 006 = 6g		
Cable length 120 = 120 inches, 10ft		

Example;4030-002-120
Model 4030, 2g range, 120inch (10ft) cable length

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Version # 10/2020