

MODEL 4030 TRIAXIAL MEMS DC ACCELEROMETER

Specifications

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

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

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 $\pm 2g$ & $\pm 6g$ 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.

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MODEL 4030 ACCELEROMETER

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 | |

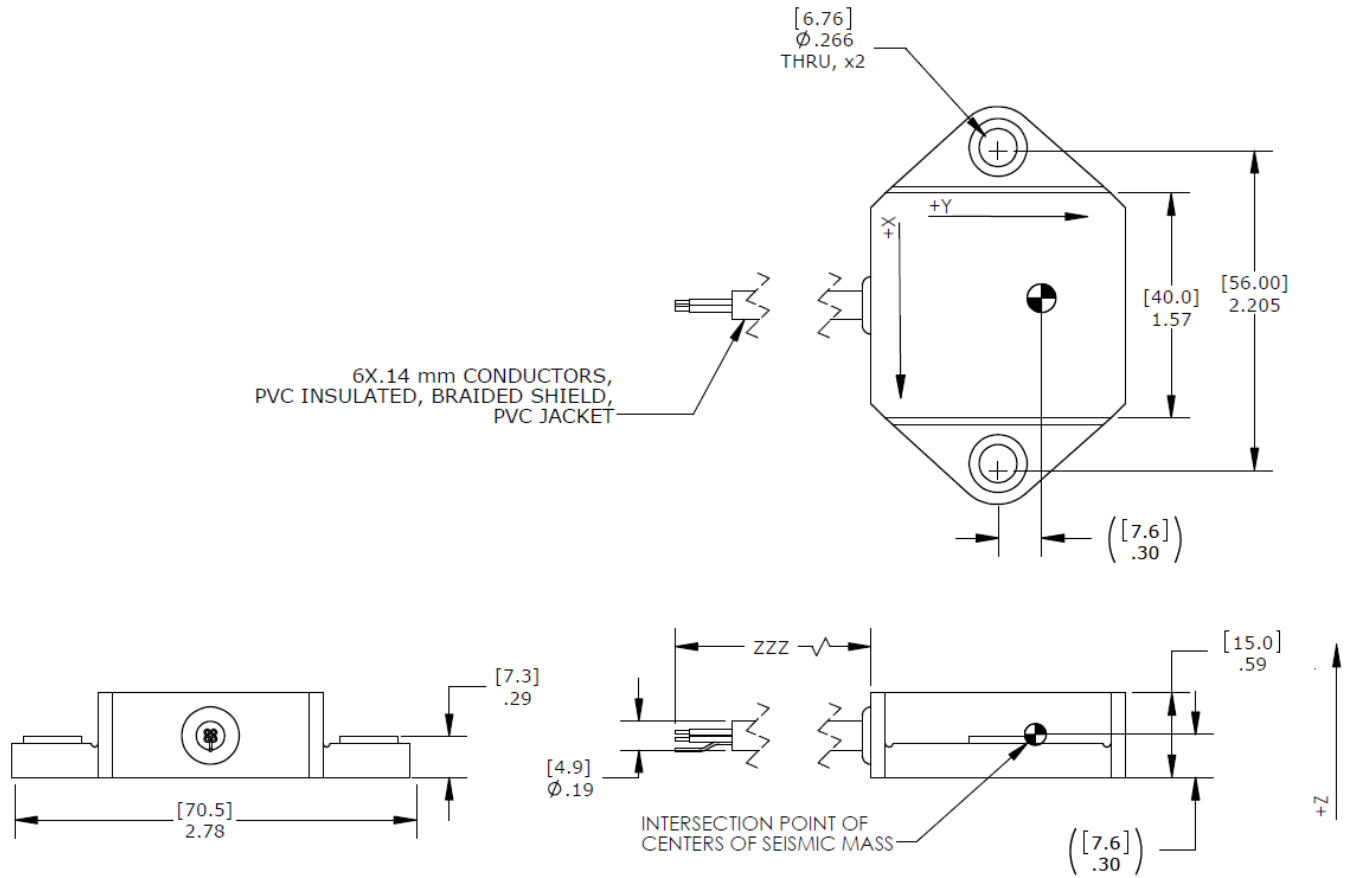
PHYSICAL

| | | |
|------------------|---|--------------------|
| 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) | |

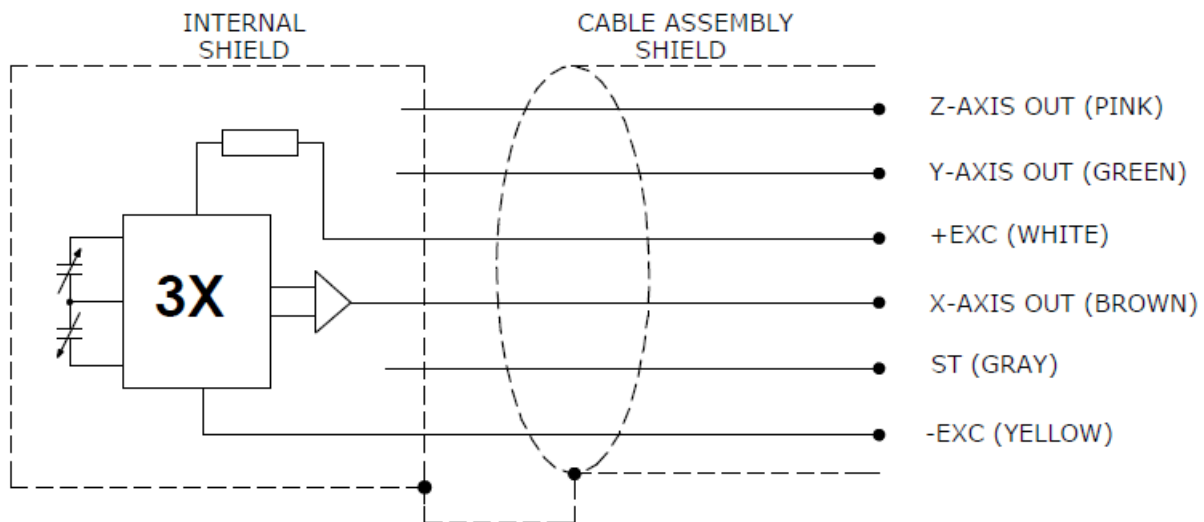
Optional accessories: 121 3-Channel Precision Low Noise DC Amplifier

MODEL 4030 ACCELEROMETER

Dimensions



Schematic



MODEL 4030 ACCELEROMETER

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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