

## Miniature PE accelerometer

### Description

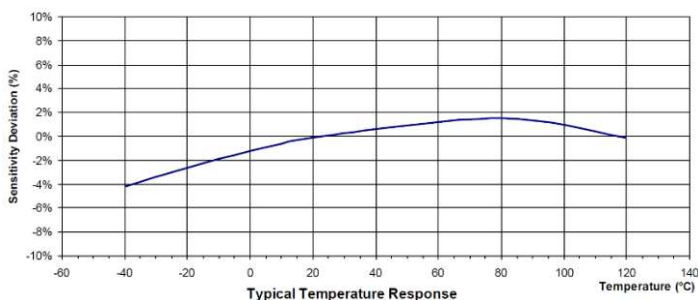
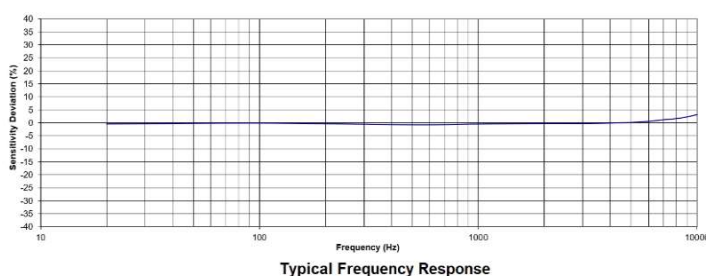
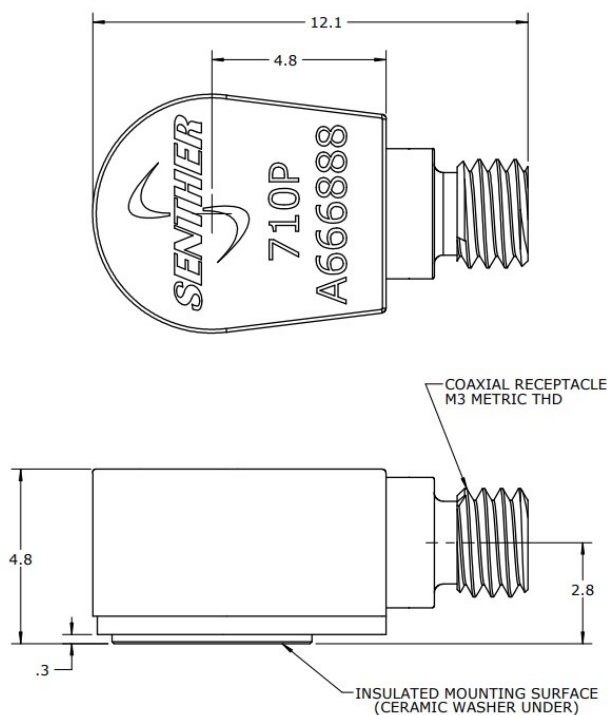
The model 710P is a miniature piezoelectric accelerometer designed specifically for measuring high temperature vibration on compact structures and light weight test purpose. The unit is hermetically sealed and ideal for use in extreme environments. This sensor is the industry standard for vibration/shock accelerometers. The model 710P features a rain drop configuration. The accelerometer is a self-generating device that requires no external power source for operation. Model 710P operating in annular shear mode. These specially designed crystals exhibit low base strain sensitivity, high resonance frequency, and excellent output stability over time. Signal ground is connected to the outer case of the unit, an insulation washer is available for field application. The accelerometer features a M3 side connector and requires a low-noise coaxial cable for error-free operation. Senter's model 12P-L is a M3 to BNC breakout low noise cable for the sensor.

### Features

- Miniature size
- Adhesive mounting
- Hermetic seal
- Annular shear mode
- Wide frequency response
- Shock duration

### Application

- Vibration monitoring
- Shock testing
- Satellite testing
- Modal analysis
- Aircraft testing



## Specification

All values are typical at +24°C (+75°F) and 100Hz unless otherwise stated

<b>SENSITIVITY, TYPICAL</b>	<b>1.8</b>	<b>pC/g</b>
<b>SENSITIVITY, MINIMUM</b>	<b>1.3</b>	<b>pC/g</b>
<b>FREQUENCY RESPONSE ±10%</b>	<b>1-10000</b>	<b>Hz</b>
<b>FREQUENCY RESPONSE ±3dB</b>	<b>0.2-14000</b>	<b>Hz</b>
<b>RESONANT FREQUENCY</b>	<b>48</b>	<b>kHz</b>
<b>TRANSVERSE SENSITIVITY</b>	<b>&lt;5</b>	<b>%</b>
<b>TEMPERATURE RESPONSE, -70 to +260°C</b>	<b>±10</b>	<b>%</b>
<b>LINEARITY</b>	<b>±1/1000g</b>	<b>%FSO</b>
<b>DYNAMIC RANGE</b>	<b>±5000</b>	<b>g</b>
<b>SHOCK LIMIT</b>	<b>±10000</b>	<b>g</b>

PARAMETERS	VALUE	UNITS
<b>INTERNAL RESISTANCE (@100Vdc)</b>	<b>&gt;100</b>	<b>MΩ</b>
<b>INTERNAL RESISTANCE @ +260°C (+500°F)</b>	<b>&gt;10</b>	<b>MΩ</b>
<b>CAPACITANCE (NOMINAL)</b>	<b>240</b>	<b>pF</b>
<b>GROUNDING</b>	<b>Case Grounded</b>	
<b>INSULATION RESISTANCE (@100Vdc)</b>	<b>&gt;100</b>	<b>MΩ</b>
<b>OPERATING TEMPERATURE</b>	<b>-73 to +175</b>	<b>°C</b>
<b>HUMIDITY</b>	<b>Hermetically Sealed</b>	
<b>MATERIAL (Casing)</b>	<b>Titanium Alloy</b>	
<b>SENSING ELEMENT</b>	<b>Piezo Ceramic</b>	
<b>WEIGHT</b>	<b>0.9</b>	<b>Grams</b>
<b>MOUNTING</b>	<b>Adhesive</b>	

## Accessories

Calibration certificate included.

Part Number	Description	Availability
<b>PF0033</b>	Double adhesive tape-3M® #300SLE	Optional
<b>PF0095</b>	Adhesive epoxy-Loctite® #401	Optional
<b>12P-3</b>	3 meter low noise mating cable with M3(male) to BNC(male) connector	Optional
<b>14P-3</b>	3 meter low noise mating cable with M3(male) to 10-32(male) connector	Optional
<b>IN-06</b>	3 channels charge converter	Optional
<b>IN-07</b>	1 channel inline charge converter	Optional
<b>IN-3062</b>	8 channels data acquisition system	Optional

## Measurement configuration

Sensor	Mating cable	Charge converter	BNC cable	Data acquisition	Computer
					

## Ordering information

<b>710</b>	<b>P</b>
<b>Model</b>	Output signal
<b>710</b>	P=Charge output

