



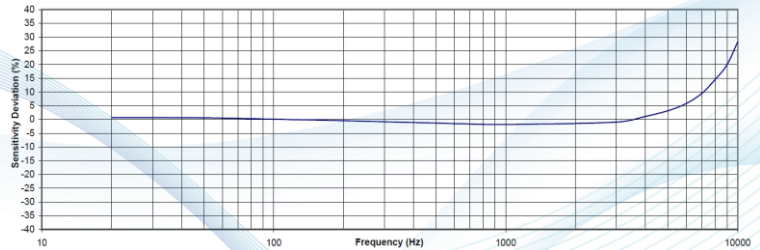
Features:

- Temperature signal output
- Ex-ATEX
- Corrosion resistant
- Hermetic seal
- Case isolated
- ESD protection
- Reverse wiring protection

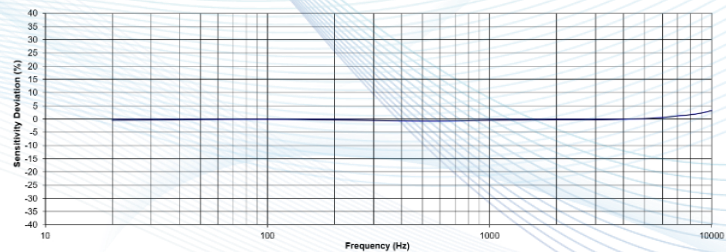
Application:

- Oil & gas machine
- Gear box monitoring
- Mining machine
- Bearing monitoring

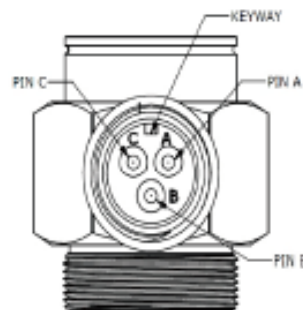
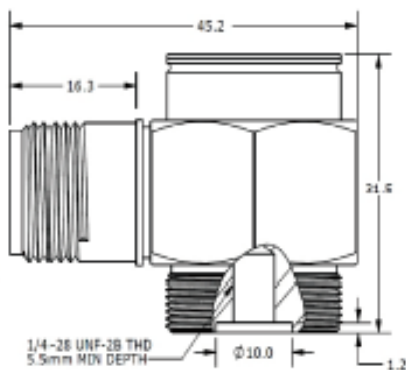
Model Y31AS is an intrinsic safety IEPE accelerometer permitting simultaneous vibration and temperature measurements. Y31AS features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Integrated thermal sensor transfer the temperature output by voltage signal. Signal ground is internal shielded and isolated from the outer case of the unit. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a hermetic housing. The standard MIL-C-5015 glass insulated connector provides long-term stability over the operating temperature range. Side outlet cable enable the compact installation and discretionary cable direction. In addition to adhesive mounting, Y31AS has 1/4 -28 threaded holes for stud mounting on the test object. The Y31AS provides wide frequency response and shock resistance, which is ideal for industrial vibration monitoring under incidental shock environment.



-LF Frequency Response



Typical Frequency Response



Specification:

| Dynamic Performance | Unit | | | | | |
|----------------------------------|-------|------------|-----|-------------|-------------|----------|
| Measurement Range | g | 5 | 10 | 20 | 80 | 500 |
| Sensitivity ($\pm 10\%$) | mV/g | 1000 | 500 | 250 | 100 | 10 |
| Frequency Range $\pm 5\%$ | Hz | 0.3 ~ 4000 | | 1 ~ 7000 | 0.7 ~ 8000 | 1 ~ 8000 |
| Frequency Range $\pm 3\text{dB}$ | Hz | 0.1 ~ 6000 | | 0.3 ~ 10000 | 0.4 ~ 15000 | |
| Resonant Frequency | kHz | 20 | | 32 | | |
| Transverse Sensitivity | % | <5 | | | | |
| Non-Linearity | % FSO | ± 1 | | | | |
| Shock Limit | g | 2000 | | 5000 | | |

Environmental Parameters

| | | | | | | |
|---|------------------|----------------|--|--|--|--|
| Temperature Sensitivity Coefficient $-55 \sim +125^\circ\text{C}$ | % | ± 10 | | | | |
| Operating And Storage Temperature | $^\circ\text{C}$ | $-55 \sim 125$ | | | | |
| Bias Voltage | Vdc | 10 ~ 14 | | | | |

Electrical Characteristics

| | | | | | | |
|---------------------------------|------------|---------|--|--|--|--|
| Output Impedance | Ω | < 100 | | | | |
| Insulation Resistance (@100Vdc) | M Ω | > 100 | | | | |
| Excitation Voltage | Vdc | 18 ~ 30 | | | | |
| Excitation Current | mA | 2 ~ 10 | | | | |

Physical Properties

| | | | | | | |
|-----------------------------|-------|-----|--|-----|--|--|
| Weight (Cable Not Included) | Grams | 111 | | 104 | | |
|-----------------------------|-------|-----|--|-----|--|--|

Temperature Sensor Specifications

| | | | | | | |
|-----------------------------------|----------------------|----------------|--|--|--|--|
| Sensitivity | mV/ $^\circ\text{C}$ | 10 | | | | |
| Output Voltage@ 0°C | mV | 500 | | | | |
| Accuracy | $^\circ\text{C}$ | ± 1 | | | | |
| Range | $^\circ\text{C}$ | $-40 \sim 125$ | | | | |

Composite Sensor Parameters

| | | | | | | |
|-----------------------|---|----------------|--|--|--|--|
| Operating Temperature | $^\circ\text{C}$ | $-40 \sim 125$ | | | | |
| Humidity | Hermetically Sealed | | | | | |
| Housing Material | Stainless Steel | | | | | |
| Sensing Element | Piezo Ceramic | | | | | |
| Connector | 3 Pin MIL-C-5015 | | | | | |
| Grounding | Internally Shielded, Shell Isolated Double Shielded | | | | | |
| Output Method | IEPE Output | | | | | |

Random Accessories

| | | |
|-------|---|--|
| HS004 | Mounting Stud $\frac{1}{4}$ -28 to $\frac{1}{4}$ -28 Thread | One Stud Included (Please Specify Before Ordering) |
| HS005 | Mounting Stud $\frac{1}{4}$ -28 to M6 Thread | |
| HS006 | Mounting Stud $\frac{1}{4}$ -28 to M10 Thread | Optional |

Optional Cables

| | | |
|-----------|---|----------|
| 20A Cable | Single Axis Acceleration Sensor Cable with 3-Pin MIL-C-5015 Connector | Optional |
|-----------|---|----------|

Ordering information:

Y31AS

GGGG

Range

0005=5g

0010=10g

0020=20g

0080=80g

0500=500g

E.G:

Y31AS-5

Model Y31AS, 0005, Connector, No Options

The data contained in this document is intended for the use of technical trainers only.

The customer's technical department is responsible for assessing the suitability of the product for the intended application and the completeness of the product information given in this document in relation to such application. For further information on products, technology, terms and conditions of delivery and prices, please contact our nearest office (www.senstechxyz.com).

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