

# TA284 Series

Dual Output Sensor, Temperature & Acceleration, M8x1.25 Captive Bolt, Side Exit 3 Pin Connector, 100 mV/g, 10 mV/°C, ±10%



VIBRATION ANALYSIS HARDWARE



## Product Features

High Performance in a Low-Cost Sensor

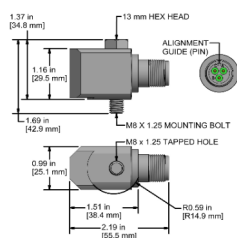
Helps to Detect Bearing Defects and Temperature Changes

- ▶ Temperature (10 mV/°C) and Acceleration (100 mV/g) Outputs in One Sensor via a Standard 3 Pin MIL Connection
- ▶ Popularly Sold with SC300 Series Signal Conditioners with Built-In Temperature Output
- ▶ -6N Integral Cable Option Features Food Safe FDA Compliant 21 CFR 177.1330 Polyolefin Heat Shrink

### TA284-1A

3 Pin Connector

| Connector Pin | Polarity                |
|---------------|-------------------------|
| A             | (+) Signal/Power        |
| B             | (-) Common              |
| C             | (+) Temperature Voltage |

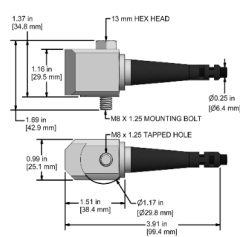


Stock Product

### TA284-2A

CB105 Integral Cable

| Conductor | Polarity                |
|-----------|-------------------------|
| Red       | (+) Signal/Power        |
| Black     | (-) Common              |
| White     | (+) Temperature Voltage |
| Shield    | Cable Drain Wire        |

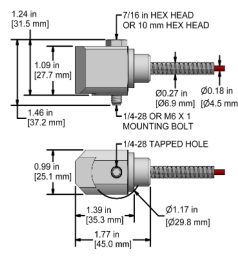


Built To Order

### TA284-3A

CB218 Armored Integral Cable

| Conductor | Polarity                |
|-----------|-------------------------|
| Red       | (+) Signal/Power        |
| Black     | (-) Common              |
| White     | (+) Temperature Voltage |
| Shield    | Cable Drain Wire        |

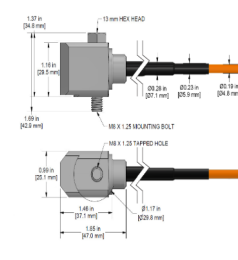


Built To Order

### TA284-6N

CB119 FEP Jacketed Integral Cable

| Conductor | Polarity                |
|-----------|-------------------------|
| Red       | (+) Signal/Power        |
| Black     | (-) Common              |
| White     | (+) Temperature Voltage |
| Shield    | Cable Drain Wire        |



Built To Order

| Specifications                | Standard                | Metric        | Specifications              | Standard             | Metric        |
|-------------------------------|-------------------------|---------------|-----------------------------|----------------------|---------------|
| Part Number                   | TA284                   |               | Environmental               |                      |               |
| Sensitivity (±10%)            | 100 mV/g                |               | Operating Temperature Range | -40 to 250 °F        | -40 to 121 °C |
| Frequency Response (±3dB)     | 30-600,000 CPM          | 0.5-10000 Hz  | Maximum Shock Protection    | 5,000 g, peak        |               |
| Dynamic Range                 | ± 50 g, peak            |               | Electromagnetic Sensitivity | CE                   |               |
|                               | *Vsource ≥ 22V, 12Vbias |               | Sealing                     | IP68                 |               |
| Temperature Measurement Range | -40 to 250 °F           | -40 to 121 °C | Submersible Depth           | 200 ft.              | 60 m          |
| Temperature Output            | 10 mV/°C                |               | SIL Rating                  | SIL 2                |               |
| Temperature Sensor            | 750 mV = 25 °C (±1)     |               | Physical                    |                      |               |
| Transverse Sensitivity        | ≤5%                     |               | Sensing Element             | PZT Ceramic          |               |
| Electrical                    |                         |               | Sensing Structure           | Shear Mode           |               |
| Settling Time                 | <2.5 seconds            |               | Weight                      | 6.3 oz               | 180 grams     |
| Voltage Source                | 18-30 VDC               |               | Case Material               | 316L Stainless Steel |               |
| Constant Current Excitation   | 2-10 mA                 |               | Connector (Non-Integral)    | 3 Pin MIL-C-5015     |               |
| Spectral Noise @ 10 Hz        | 14 µg/√Hz               |               | Resonant Frequency          | 1,380,000 CPM        | 23000 Hz      |
| Spectral Noise @ 100 Hz       | 2.3 µg/√Hz              |               | Mounting Torque             | 2 to 5 ft. lbs.      | 2.7 to 6.8 Nm |
| Spectral Noise @ 1000 Hz      | 2 µg/√Hz                |               | Mounting Hardware Supplied  | M8x1.25 Captive Bolt |               |
| Output Impedance              | <100 ohm                |               | Calibration Certificate     | CA10                 |               |
| Bias Output Voltage           | 10-14 VDC               |               |                             |                      |               |
| Case Isolation                | >10 <sup>8</sup> ohm    |               |                             |                      |               |

## Typical Frequency Response

