



Wilcoxon Research model 786-500 General purpose low frequency accelerometer

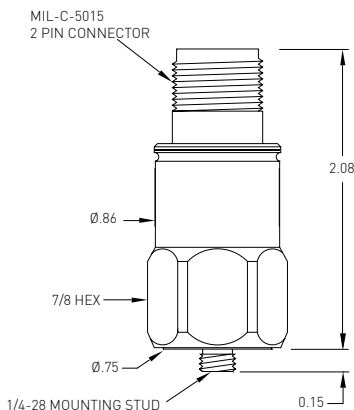


Features

- Rugged design
- High sensitivity
- Hermetic seal
- ESD protection
- Reverse wiring protection

Benefits

- Clear signals at low vibration levels
- Extended low end frequency response
- Improved signal to noise ratio versus other general purpose accelerometers
- A single sensor can detect both low and high speed vibrations
- Optimized to detect vibration on slow turning machinery like cooling tower fans and slow speed gearboxes



Dynamic

| | |
|-------------------------------------|-----------------|
| Sensitivity, $\pm 5\%$, 25° C..... | 500 mV/g |
| Acceleration range, VDC >22V | 10 g peak |
| Amplitude nonlinearity..... | 1% |
| Frequency response ¹ : | |
| $\pm 5\%$ | 0.7 - 5,000 Hz |
| $\pm 10\%$ | 0.5 - 9,000 Hz |
| ± 3 dB | 0.2 - 14,000 Hz |
| Resonance frequency..... | 30 kHz |
| Transverse sensitivity, max..... | 5% of axial |
| Temperature response: | |
| -50° C..... | -5% |
| +120° C..... | +5% |

Electrical

| | |
|--|---------------------------------------|
| Power requirement: | |
| Voltage source | 18 - 30 VDC |
| Current regulating diode | 2 - 10 mA |
| Electrical noise, equiv g ¹ : | |
| Broadband 2.5 Hz to 25 kHz | 250 μ g |
| Spectral | |
| 10 Hz | 2.5 μ g/√Hz |
| 100 Hz | 1.5 μ g/√Hz |
| 1000 Hz | 1.5 μ g/√Hz |
| Output impedance, max | 100 Ω |
| Bias output voltage | 12 VDC |
| Grounding | case isolated, internally shielded |

Environmental

| | |
|---|------------------------|
| Temperature range | -50 to 120° C |
| Vibration limit..... | 500 g peak |
| Shock limit | 5,000 g peak |
| Electromagnetic sensitivity, equiv g, max | 70 μ g/gauss |
| Sealing | hermetic |
| Base strain sensitivity, max | 0.0002 g/ μ strain |

Physical

| | |
|-----------------------------|------------------------|
| Sensing element design..... | PZT, shear |
| Weight..... | 90 g |
| Case material | 316L stainless steel |
| Mounting | 1/4-28 UNF tapped hole |
| Mating connector | R6 type |
| Recommended cabling | J10 / J9T2A |

Connections

| Function | Connector pin |
|----------------|---------------|
| ground | shell |
| power / signal | A |
| common | B |

Accessories supplied: SF6 mounting stud (metric mounting available); calibration data (level 2)
Note: ¹Frequency response limits and spectral noise values are typical

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98960 Rev.A.5 08/12

