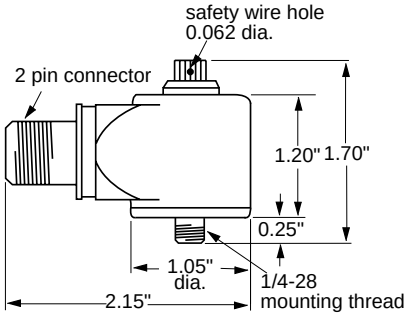
w i l c o x o n

# Model 797T-1

## General Purpose Accelerometer with Internal Temperature Sensor

### FEATURES:

- Senses both acceleration and temperature
- Rugged design
- Hermetic seal
- Ground isolated
- ESD protection
- Miswiring protection
- Mounts in any orientation




**DYNAMIC**

| | | |
|---|---|---|
| Sensitivity, ±5%, 25°C | | 100 mV/g |
| Acceleration Range | | 80 g peak |
| Amplitude Nonlinearity | | 1% |
| Frequency Response: | | |
| | ±5% | 3 - 5,000 Hz |
| | ±10% | 2 - 7,000 Hz |
| | ±3 dB | 1 - 12,000 Hz |
| Resonance Frequency | | 26 kHz |
| Transverse Sensitivity, max | | 5 % of axial |
| Temperature Response | | –50°C –5%<br>+120°C +5% |
| Temperature Output Sensitivity, ±5% | | 10 mV/K |
| Temperature Measurement Range | | 223 to 390 K (–50 to 120°C) |

**ELECTRICAL**

**Temperature Sensor**

| | | |
|---|---|---|
| Power Requirement: | voltage source | 18 - 30 VDC |
| | current regulating diode | 2 - 4 mA |
| Grounding | | case isolated, internally shielded |

**Accelerometer**

| | | |
|---|---|---|
| Power Requirement: | voltage source | 18 - 30 VDC |
| | current regulating diode | 2 - 10 mA |
| Electrical Noise, equiv. g: | | |
| Broadband | 2.5 Hz to 25 kHz | 600 µg |
| Spectral | 10 Hz | 8 µg/√Hz |
| | 100 Hz | 5 µg/√Hz |
| | 1000 Hz | 5 µg/√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 | 30 µg/gauss |
| Seal | Hermetic |
| Base Strain Sensitivity | 0.002 g/µstrain |

**PHYSICAL**

| | |
|---|---|
| SensingElement Design | PZT ceramic / shear |
| Weight | 135 grams |
| Case Material | 316L stainless steel |
| Mounting | 1/4-28 captive socket head screw |
| Output Connector | 3 pin, MIL-C-5015 style |
| Mating Connector | R6G type |
| Recommended Cabling | J9T3A |

| CONNECTOR PIN | FUNCTION | CABLE CONDUCTOR COLOR |
|---|---|---|
| SHELL | ground | Shield |
| A | accelerometer, power / signal | Red |
| B | accelerometer / temperature common | Black |
| C | temperature sensor, power / signal | White |

**ACCESSORIES SUPPLIED:** #12105-01 captive screw (International customers specify mounting requirements); Calibration data (level 3).

ISO 9001

98264 Rev.4.1 6/99

Due to continued research and development, Wilcoxon Research reserves the right to amend this specification without notice.

WR WILCOXON RESEARCH

21 Firstfield Road, Gaithersburg, MD 20878 • Tel 301-330-8811 • Fax 301-330-8873 •1-800-WILCOXON • Email sensors@wilcoxon.com • Web www.wilcoxon.com