

Piezoelectric Accelerometer

PV-90T



- With built-in amplifier, compact and lightweight
- Suitable for vibration measurement and mode analysis of lightweight structures.
- Available for reading sensor parameters by connecting to TEDS applicable instruments

TEDS TEDS is a format to describe transducer information regulated by IEEE 1451, PV-90T will be calibrated automatically when connected to TEDS applicable instruments as PV-90T has the following recorded parameters inside

TEDS Parameters Manufacturer ID, Model Number, Serial Number, Sensitivity, Sensitivity Direction, Weight, Polarity, Reference Frequency, Reference Temperature, Calibration Date, etc.

**Piezoelectric Accelerometers
With built-in amplifier**



| | Compact, lightweight, TEDS applicable | Compact, tri-axial | High-Temperature Resistance CCLD Type | General-purpose |
|--|--|---|--|-----------------------------|
| | | | | |
| Model | PV-90T | PV-97I | PV-91C | PV-41 |
| Specifications | | | | |
| Principle | Shear | Shear | Shear | Shear |
| Mass g | 2 | 8 | 1.8 | 23 |
| Voltage sensitivity mV/(m/s ²) ^{※1} | 0.5 | 1.1 | 1 | 1.02 |
| Vibration frequency range Hz ^{※2} | 1 to 12 000 (±10 %) | 1 to 7 000 (Z) ^{※4} 1 to 5 000 (X·Y) (±10 %) | 1 to 20 000 (±10 %) ^{※5} | 3 to 10 000 (±1 dB) |
| Mounting resonance frequency kHz ^{※2} | 50 | — | 55 | 50 |
| Transverse sensitivity | 5 % or less | 5 % or less | 5 % or less | 4 % or less |
| Standard mounting method, ^{※3} Screw torque N·m | VP-53K M3 screws · 0.5 | Bond | VP-53K M3 screws · 0.5 | VP-53A M6 screws · 3.5 |
| Maximum measurable acceleration m/s ² (peak) | 7 000 | 5 000 | 5 000 ^{※6} | 2 000 |
| Base distortion sensitivity (m/s ²)/μstrain | 0.05 | 0.1 | 0.006 ^{※7} | 0.03 |
| Thermal transient response (m/s ²) / °C | 1.0 | 1.0 | 0.04 ^{※7} | 0.01 |
| Ambient temperature range for operation / °C | -20 to +100 (TEDS: -20 to +85) | -20 to +125 | -50 to +170 | -20 to +100 |
| Case material | Titanium | Titanium | Titanium | Stainless steel |
| Connecting equipment | 2 mA to 4 mA regulated power supply | 2 mA to 4 mA regulated power supply | 2 mA to 4 mA regulated power supply | 2 mA regulated power supply |
| External dimensions mm | | | | |
| Dimensions mm | 7 (Hex) ×11.4 (H) | 12 (H)×12 (W)×12 (D) | 7 (Hex)×12.5 (H) | 17 (Hex)×18.5 (H) |
| Supplied accessories | Cable Screw, Attachment, Adapter | Cable Attachment | Cable Attachment | Cable Attachment |
| | VP-51LC VP-53K×2, VP-53W×1 Single-head spanner (7 mm), Hex wrench 1.5 | VP-51W VP-57ES (Option) | VP-51LC VP-53K×2, VP-53W×1 Single-head spanner (7 mm), Hex wrench 1.5 | VP-51A VP-53A |

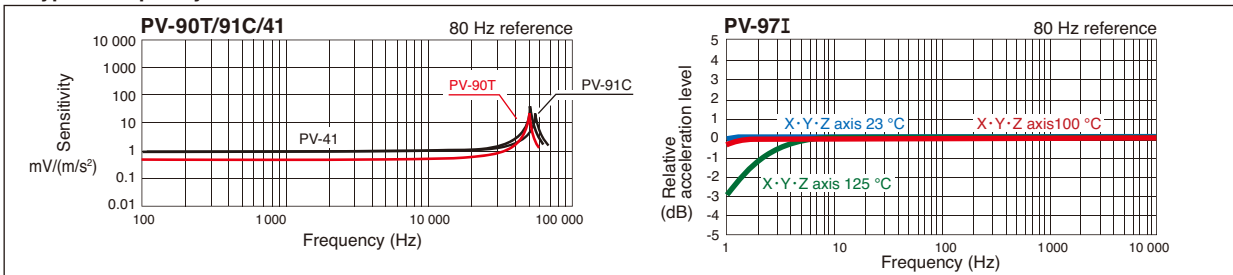
Notes ※1 Representative value; actual value is noted on calibration sheet supplied with accelerometer. ※2 Representative value when mounted on flat surface according to standard mounting method (※3). ※4 100 °C or less 1 000 m/s² or less ※5 150 °C to 170 °C from 1 Hz to 2 Hz (±15 %) ※6 The maximum measurable acceleration differs, depending on temperature, voltage sensitivity, and power supply voltage. ※7 Representative value, PV-90T/97I/41 denotes maximum value.

● Please take care not to drop accelerometers and carefully handle them with attachments.
There is likely to be trouble of piezoelectric accelerometers by (giving) excessive shock. The excessive shock carries some damages onto piezoelectric ceramic element.

■ Noiselevel of acceleration (m/s²)

| | | | | | |
|---------------------------------|--------------|-----|------|-----|-------|
| General-Purpose Vibration Meter | VM-83 | 0.2 | 0.04 | 0.1 | 0.025 |
| Vibration Level Meter Unit | UV-15 | 0.2 | 0.04 | 0.1 | 0.025 |
| 2-channel Charge Amplifier | UV-16 | 0.2 | 0.04 | 0.1 | 0.025 |

■ Typical frequency characteristics



* Specifications subject to change without notice.



Distributed by:



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