



## The **HAVPro**

The HAVPro personal human vibration monitor performs tri-axial vibration measurements of hand-arm and whole body vibration exposure from power tools, machinery and other occupational vibration sources.

### **Typical Applications Include:**

- Hand-Arm & Whole Body Vibration
- Compliance Monitoring
- Risk Assessment
- Workers Compensation
- Health Insurance
- Product Liability
- Engineering Controls Evaluation
- Administrative Controls Evaluation
- Exposure Profiling
- Cause/Effect Analysis
- Regulatory Enforcement
- Machine Fault Detection

HAVPro personal human vibration monitors can be easily configured for your specific applications. For advanced flexibility, support is included for voltage mode, charge mode or direct input sensors.

For the complete "System Solution", use HAVPro personal human vibration monitors with QuestSuite® Professional software. QuestSuite® Professional can be used to program the HAVPro plus it can upload all the logged vibration exposure data for analysis, reporting, archiving and electronic distribution.

## HAVPro Technical Specifications:

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### Input Types:

- Voltage mode
- Charge mode
- Direct

### Standard Sensor:

#### *Hand Arm:*

- Voltage mode, 3 axis accelerometer, 10mV/g sensitivity
- RMS Range:  
0.01 m/s<sup>2</sup> to 5,000 m/s<sup>2</sup> dependent upon gain setting
- Peak Range:  
0.2 m/s<sup>2</sup> to 7,000 m/s<sup>2</sup> dependent upon gain setting

#### *Whole Body:*

- Voltage mode, 3 axis accelerometer, 100mV/g sensitivity
- RMS Range:  
0.001 m/s<sup>2</sup> to 500 m/s<sup>2</sup> dependent upon gain setting
- Peak Range:  
0.02 m/s<sup>2</sup> to 700 m/s<sup>2</sup> dependent upon gain setting

### Measurements:

- *Units:*  
m/s<sup>2</sup>, cm/s<sup>2</sup>, ft/s<sup>2</sup>, in/s<sup>2</sup>, g, dB
- *Vibration:*  
Arms, Amin, Amax, Aeq, Amp, PEAK
- *Whole Body:*  
Arms, Amin, Amax, Aeq, Amp, PEAK, CFmp, CF, VDV

## **Frequency Weightings**

- *Vibration:*  
W<sub>x</sub> (Severity)  
F<sub>a</sub> (0.4 - 100 Hz)  
F<sub>b</sub> (0.4 - 1250 Hz)  
F<sub>c</sub> (6.3 - 1250)
- *Hand Arm:*  
W<sub>h</sub>
- *Whole Body:*  
W<sub>c</sub>, W<sub>d</sub>, W<sub>e</sub>, W<sub>g</sub>, W<sub>k</sub>, W<sub>B</sub>

## **Memory Storage:**

- Up to 10 User defined setups
- Up to 100 data files, 1 min to 99 hours
- Up to 120 samples of Arms and PEAK for periods of: 1, 2, 5, 10, 20, 30, & 60 sec.

## **Communications:**

- RS 2323 Serial Interface, 8 pin DIN, to 115kbps
- Direct Printout with 3 line Header, Data & Time History
- *Channel Outputs:*  
AC Weighted or Band Limited  
DC rms, min, max, peak, sum rms, sum max, sum min, sum peak

## **Standards:**

- CE Compliant
- ISO 8041 Type 1
- ISO 5349 Hand Arm Vibration
- ISO 2631 Whole Body Vibration
- ANSI S3.34
- ANSI S3.18
- ACGIH 2004 WBV & HAV TLV's
- NIOSH
- European Vibration Directive 2002/44/EC dated June 2002

**Power:**

- (2) "AA" (IEC Type LR6)  
12 hours with Charge/Direct modes  
4 hours with voltage mode

**Size:**

- 1.1" x 3.3 " x 6.0"

**Weight:**

- 10oz. (279g)
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