# DAKOTA ULTRASONICS



# PVX-B (Basic)

# **Precision Digital Thickness Gauge**

- ▶ Powerful 150 volt square wave pulser to address a variety of common applications.
  - ▶ Viewing options: Large Digits & B-Scan with Scan Bar.
  - ▶ Time based B-Scan feature displays a cross section of the test material. Displays the profile of the opposite material surface.
  - ➤ Transducer options: Single element Delay Line (acrylic and graphite tips for metals and thin plastics), Pencil Delay Line (tough access areas on thin materials), and Contact transducers (variety of applications).
    - ► Hardware AGC gain control for multiple echo and thru-paint measurement.
    - ▶ Multiple calibration options: One-Point, Two-Point, or selection from a Material List.
      - ➤ 18 factory setups and 46 user-defined setups. User-defined setups can be edited for custom applications
        - ➤ Versatile alpha-numeric data logger for custom reporting requirements.
          - ▶ The High Speed Scan feature up to 32 readings a second.
          - Adjustable resolution settings: 0.001 or 0.0001 in (0.01 or 0.001 mm).
          - ▶ Windows® and Mac Os PC software with bidirectional transfer.
            - ➤ Visual and audible alarm with Hi/Lo limit settings.
            - ► Multiple language support.
            - ▶ 2 year limited warranty.

SOUND SOLUTIONS

## **PVX-B SPECIFICATIONS**

#### **Physical**

#### Size:

Width (2.5in/63.5 mm) Height (6.5 in/165 mm) Depth (1.24 in/31.5 mm)

#### Weight:

13.5 ounces (with batteries).

#### Keyboard:

Membrane switch pad with twelve tactile kevs.

#### **Operating Temperature:**

14 to 140F (-10C to 60C)

#### Case:

Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed).

#### **Data Output:**

Bi-directional RS232 serial port. Windows® PC interface software.

**Display(Two Options):** 1/8in VGA grayscale display (240 x 160 pixels). Viewable area 2.4 x 1.8in (62 x 45.7mm). EL backlit (on/off/auto). 25 Hz screen refresh rate.

#### **Ultrasonic Specifications**

#### **Measurement Modes:**

**Pulse-Echo** - (General Purpose - uncoated materials).

**Interface-Echo** - (Precision - thick materials).

**Echo-Echo** - (Precision—Thin materials & thru-paint).

#### Pulser:

150 volt square wave pulser.

#### Receiver:

Manual or AGC gain control with 40dB range, depending on mode selected.

#### Timing:

40 MHz ultra low power 10 bit digitizer.

#### Warranty

2 year limited.

#### **Power Source**

Three 1.5V alkaline or 1.2V NiCad AA cells.

Typically operates for 35 hours on alkaline and 10 hours on NiCad (charger not included).

Auto power off if idle 5 minutes.

Battery status icon.

#### Measuring

#### Range:

Interface-Echo Mode: Steel .050–1.0 inch (1.27–25.4mm); Plastics from .005 inch (.127mm).

**Echo-Echo Mode:** Steel .006–.500 inch (.152–12.7mm).

#### **Pulse-Echo Contact:**

Steel .040–10.0 inch (1–254mm); Plastics from .010" (.254mm).

#### **Echo-Echo Contact:**

Steel thru-paint .100–3.0 inches (2.54–76.2mm).

#### Resolution (selectable):

+/- .001 inch (0.01 mm).

+/-.0001 inch (0.001 mm).

#### Velocity Range:

.0492 to .3936 inches/μs. 1250 to 9999 meters/second.

One and Two Point calibration option, or selection of basic material types.

#### Units

**English & Metric** 

#### Display

#### **Display Views:**

**Large Digits** - Standard thickness view. Digit Height: 0.400 inch (10mm).

**B-Scan** - Time based cross section view. Display speed of 15 secs per screen.

Scan Bar Thickness - 6 readings per second; Viewable in B-Scan and Large Digit

**Repeatability Bar Graph** - Bar graph indicates stability of reading.

#### Memory

12,000 readings and waveforms (alpha numeric storage).

OBSTRUCT to indicate inaccessible locations.

#### Memory:

16 megabit non-volatile ram.

#### **Transducer**

#### **Transducer Types:**

Single Element (1 to 20 MHz).

Locking quick disconnect "00" LEMO connector.

Standard 4 foot cable.

Custom transducers and cable lengths available.

#### **Features**

#### Setups:

18 factory and 46 custom user-defined setups.

#### **Alarm Mode:**

Set Hi and Lo tolerances with audible beeper and visual LEDs.

#### Fast Scan Mode:

Takes 32 readings per second and displays the minimum reading found when the transducer is removed. Display continuously updates while scanning.

#### **Connections**

**Output:** RS232 serial interface. PC software & USB converter cable included.

**Transducer Connectors:** Two LEMO 00 connectors.

#### Certification

Factory calibration traceable to NIST & MIL-STD-45662A.



### MADE IN THE USA

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