The PVX
Precision A-Scan Thickness Gauge

Highlights:
▶ Adjustable square wave pulser provides the flexibility necessary for both high resolution and penetration requirements.
▶ Selectable viewing options provide the user with additional flexibility during operation: RF waveform, +/- Rectified waveform, and Large Digits with Scan Bar.
▶ Time based B-Scan feature displays a cross section of the test material. Displays the profile of the opposite surface of the material.
▶ Ability to use a variety of single element transducers for specific applications: Standard 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 through-paint measurement.
▶ Multiple calibration options: One-Point, Two-Point, or selection from a Material List.
▶ 16 factory setups and 48 user-defined setups. User-defined setups can be edited for custom applications.
▶ PVX is equipped with an alpha-numeric data logger to provide increased versatility for those custom reporting needs.
▶ The High Speed Scan feature speeds up the inspection process by taking 32 measurements per second. Remove transducer from the test material and display the minimum measurement scanned.
▶ Adjustable resolution settings add to the PVX’s flexibility.
▶ PVX comes complete with our Windows® PC software for transferring data to and from a PC.
▶ Auto Find feature locates the detection point(s) and adjusts the display settings to bring the waveform into view.
▶ Visual and audible alarm with Hi and Lo limit settings for specific application tolerances.
▶ Multiple language support.
▶ 2 year limited warranty.
**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 keys.

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.

**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 (.152–12.7 mm).
- 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:
- A-Scan - Rectified +/- (half wave view) RF (full waveform view).
- B-Scan - Time based cross section view. Display speed of 15 secs per screen.
- Large Digits - Standard thickness view. Digit Height: 0.400 inch (10mm).
- Scan Bar Thickness - 6 readings per second; Viewable in B-Scan and Large Digit views.
- Repeatability Bar Graph - Bar graph indicates stability of reading.

**Memory**

12,000 readings and waveforms (alpha numeric storage).
- OBSTRUCT to indicate inaccessible locations.

**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:
- 16 factory and 48 custom user-defined setups.

Gates:
- Single gate in contact mode; Single gate with holdoff in inter-face-echo, echo-echo, and plastics mode; Adjustable threshold. Multiple Measurement Modes: Selectable modes for use with a variety of applications.

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.

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