Dakota NDT
an Elcometer company



PMX2-DL & PMX3-DL

Precision Thickness Gauge

HIGHLIGHTS:

- Powered by a 100MHz DSP platform using FPGA technology.
- Adjustable 200 volt pulser: 100, 150 & 200 volts.
- Up to 250Hz pulse repetition rate (PRF).
- Variable pulse width (spike, thin & wide).
- 110dB gain range. Manual and Automatic (AGC), depending on measure mode selected.
- Time dependent gain (TDG), with variable start and slope.
- Impedance damping options (35, 50, 75, 300, 600 & 1500).
- Display Options: Grayscale 1/8 VGA (PMX2-DL), or AMOLED color ¼ VGA (PMX3-DL).
- Screen refresh: B&W 25Hz, color 60Hz.
- Transducers: Single, Delay Line & Pencil options.
- Memory: 4Gb internal memory.
- USB-C connectivity.

DAKOTA PMX PRECISION THICKNESS GAUGE

The Dakota PMX Precision Thickness Gauge can display the thickness value with A and B-Scan displays, allowing users to accurately assess a wide range of materials.

SPECIFICATIONS

PHYSICAL

Size:
Width (2.5in/63.5mm)
Height (6.5 in/165mm)
Depth (1.24 in/31.5mm)
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:
USB-C port. Windows® PC interface software.
Display (Two Options):
PMX2-DL: 1/8in VGA grayscale display (240 x 160 pixels); viewable area 2.4 x 1.8in (62 x 5.7mm);EL backlit (on/off/auto invert).
PMX3-DL: 1/4 VGA AMOLED color display (320x240 pixels). Viewable area 1.7 x 2.27 in (43.2 x57.6mm). 60Hz screen refresh rate.

ULTRASONIC SPECIFICATIONS

Measurement Modes:
Pulse-Echo (P-E): Contact transducers.
Echo-Echo (E-E): Contact transducers.
Echo-Echo Verify (E-EV): Contact transducers.
Interface-Echo (I-E): Delay Line & Pencil transducers.
Interface-Echo-Echo (I-E-E): Delay Line & Pencil transducers.
Pulser: Square wave pulser with adjustable pulse width (spike, thin, wide).
Receiver: Manual or AGC gain control with 110dB range, varies with mode selected. Adjustable damping (35, 50, 75, 300, 600 & 1500 ohms).
Timing: Precision TCXO timing with single shot 100MHz 8 bit ultra low power digitizer.

POWER SOURCE

Line Power: USB-C to PC or power outlet.
Batteries: Three AA cells.
Alkaline - b&w 35 hrs, color 12 hrs.
Nicad - b&w 10 hrs, color 5 hrs.
NI-MH - b&w 35hrs, color 12 hrs.
Power saving DIM (color), 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).
Interface-Echo-Echo Mode: Steel .006–.500 inch (.152–12.7mm).
Pulse-Echo Contact: Steel .040 in. – 30.0 ft. (1mm – 9.14 M).
Echo-Echo Contact: Steel .100–3.0 ft. (2.54–91.44cm).
Echo-Echo Verify Contact: Steel .100–6.0 in. (2.54–152.4mm).
Resolution (selectable):
+/- .001 inch (0.01mm).
+/- .0001 inch (0.001mm).
Velocity Range:
0.0122 to 0.7300 inches/µs
309.88 to 18542 meters/sec.
Single and Two point calibration option, or selection of basic material types.
Units: English & Metric

DISPLAY

Display Views:
A-Scan: Rectified +/- (flaw view) RF (full waveform view). Refresh rate at 25Hz (b&w), 60Hz (color). Portrait & Landscape views (color only).
B-Scan: Time based cross section view. Display speed variable (10 to 200 readings per second).
Large Digits: Standard thickness view; Digit Height: 0.400in (10mm), color 0.565in (14.35mm).
Scan Bar: Speed 10 to 33Hz. Viewable in B-Scan and Large Digit views.
Bar Graph: Measurement stability.

MEMORY

Log Formats: Grid (Alpha Numeric), or Sequential (Auto Identifier).
Capacity: 4 Gb internal memory.
Screen Capture: Bitmap graphic capturefor quick documentation (.tif).
OBSTRUCT to indicate inaccessible locations.

TRANSDUCER

Transducer Types:
Single Contact, Delay Line & Pencil (1 to 25MHz).
Locking quick disconnect LEMO “00” connector.
Standard 4 foot cable, custom transducers and cable lengths available.

FEATURES

Setups:
64 custom user-defined setups.
Gates:
3 adjustable gates, depending on measure mode selected.
Alarm Mode:
Set Hi and Lo tolerances with audible beeper and visual LEDs.
Scan Mode:
Takes 250 readings per second and displays the minimum reading found when the transducer is removed.

CONNECTIONS

Output: Direct USB-C 1.1 PC connectivity.
Transducer Connector: LEMO 00

CERTIFICATION

Factory calibration traceable to NIST & MILSTD-45662A.

WARRANTY

2 year limited.

REPLACEMENT

PMX2-DL replaces PVX & PG70ABDL
PMX3-DL replaces PVX Colour

CE UKCA

MADE IN THE USA

Dakota NDT
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