

The CMX2-DL & CMX3-DL

A/B Scan Material & Coating Thickness Gauges
The Finest in Portable Inspection



Highlights:

- Powered by a 100MHz DSP platform using FPGA technology
- Display Options: Grayscale 1/8 VGA, or AMOLED color 1/4 VGA
- Two Channels—Dual pulsers and receivers
- Up to 250 Hz pulse repetition rate
- Screen refresh: B&W 25 Hz, Color 60 Hz. Switchable A-Scan portrait & landscape views (color only)
- Adjustable gain: 110 dB range
- Automatic gain control (AGC)
- Linear time dependent gain (TDG) with adjustable slope
- Probes: Single, Dual, Delay line, Pencil
- Memory: 4 gigabyte internal SD card

CMX2-DL & CMX3-DL Material & Coating Thickness Gauge



CMX2-DL is possibly the highest capability material & coating thickness in the industry serving the providing the capability of material & coating thickness measurement , A/B Scan scope capability for cross section & RF waveform views , resolution of 0.001mm and capability to use all transducers types: Dual element, single element & pencil type for use in a variety of industry & applications from heavy engineering, automotive to precision engineering

SPECIFICATIONS

PHYSICAL

Weight: 13.5 ounces (with batteries).

Size:

Width (2.5 in / 63.5 mm)

Height (6.5 in / 165 mm)

Depth (1.24 in / 31.5 mm)

Operating Temperature:

14 to 140°F (-10 to 60°C).

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

Keypad: Membrane switch pad with twelve tactile-feedback keys.

Data Output: USB-C port. Windows PC interface software.

Display (Two Options):

CMX2-DL: 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). 25Hz screen refresh rate.

CMX3-DL: 1/4 VGA AMOLED color display (320 x 240 pixels). Viewable area 1.7 x 2.27in (43.2 x 57.6mm). 60Hz screen refresh rate.

TRANSDUCER

Transducer Types:

Dual/Single Element (1 to 20MHz). Contact, matching layer, delay line, and pencil configurations.

Locking quick disconnect "00" LEMO connectors.

Standard 4 foot cable.

Custom transducers & cables lengths available for special applications.

POWER SOURCE

Batteries: Three AA cells

Alkaline - Grayscale 35 hours. Color 12 hours.

Nicad - Grayscale 10 hours. Color 5 hours.

NI-MH - Grayscale 35 hours. Color 12 hours. Power saving DIM (color), auto off 5 minutes. Battery status icon.

Line power: USB-C connected to PC or power outlet

ULTRASONIC SPECIFICATIONS

Measurement Modes:

Coating Off: Pulse-Echo (P-E)

Coating On: Pulse-Echo Coating (PECT)

Temp Comp: Pulse-Echo Temperature Compensation (PETP)

Thru-Paint: Echo-Echo (E-E)

Thru-Paint Verify: Echo-Echo Verify (E-EV)

Coating Only: Coating (CT)

Pulser: Dual square wave pulsers.

Receiver: Dual receivers - manual or AGC gain control with 110dB range (limited). Adjustable damping (50-1500 ohms).

Timing: Precision TCXO timing with single shot 100MHz 8 bit ultra low power digitizer.

DISPLAY

Large Digits - Standard thickness view.

Digit Height: 0.700 inches (17.78mm).

Color 0.565 in (14.35mm).

A-Scan - Rectified +/- (flaw view), RF (full waveform view). Portrait & landscape views (CMX3-DL only).

Pulse Repetition Frequency - 250Hz

A-Scan Refresh Rate - B&W 25Hz, color 60Hz.

B-Scan - Time based cross section view. Display speed variable (10 to 200 readings per second).

Scan Bar Thickness - Speed 33Hz.

Viewable in B-Scan and Large Digit views.

Repeatability Bar Graph - Bar graph indicates stability of reading.

Feature Status Bar - Indicates features currently active.

MEMORY

Log Formats: Grid (Alpha Numeric), or Sequential (Auto Identifier).

Capacity: 4Gb internal memory.

Screen Capture: Bitmap graphic capture for quick documentation (.tif).

OBSTRUCT to indicate inaccessible locations.

REPLACEMENT

CMX2-DL replaces CMXDL+ & CG100ABDL

CMX3-DL replaces CMXDL+ Color &

CG100ABDL+

MEASURING

Pulse-Echo Mode (P-E): (Pit & Flaw Detection) measures from 0.025 to 100ft. (0.63 to 30.48M).

Pulse-Echo Coating Mode (PECT): (Material, Coating, Pit & Flaw Detection)

Material: 0.025 to 100ft. (0.63 to 30.48M).

Coating: 0.001 to 0.100in (0.01 to 2.54mm).

Pulse-Echo Temp Comp Mode (PETP): (Pit & Flaw Detection) Auto temperature compensation - measures from 0.025 to 100ft. (0.63 to 30.48M)

Echo-Echo Mode (E-E): (Thru Paint & Coatings) measures from 0.100 to 6.0in (2.54 to 152.4mm). Range will vary +/- depending on the coating.

Echo-Echo Verify Mode (E-EV): (Thru Paint & Coatings) measures from 0.100 to 1.0in (2.54 to 102mm). Range will vary +/- depending on the coating.

Coating Only Mode (CT): (Coating Thickness) measures from 0.0005 to 0.100in (0.0127 to 2.54mm). Range will vary +/- depending on the coating. Resolution: +/- 0.001 in (0.01mm).

+/- 0.0001 in (0.001mm)

Velocity Range:

0.0122 to 0.7300 in/ μ s

(309.88 to 18542 m/sec)

Single and Two point calibration option for material & coating, or selection of basic material types.

Units: English & Metric

CONNECTIONS

Output: Direct USB-C 1.1 PC connectivity. Transducer Connectors: Two LEMO 00 connectors.

CERTIFICATION

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

WARRANTY

2 year limited.



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