

Dakota NDT

an Elcometer company



CMX1-DL

Coatings Thickness Gauge

HIGHLIGHTS:

- ▶ Measurement modes: Pulse-Echo, Pulse Echo w/Coating, Pulse-Echo w/Temperature Compensation, Echo-Echo, Echo-Echo Verify & Coating Only.
- ▶ Automatic: probe zero, probe recognition, and temperature compensation.
- ▶ Stores up to 64 custom setups for specific applications.
- ▶ High Speed Scan of up to 250 readings per second.
- ▶ 250 Pulse Repetition Rate (PRF)
- ▶ Adjustable gain (40 to 53dB) vlow, low, med. hi, vhi
- ▶ Time dependent Gain – (TDG)
- ▶ Automatic Gain Control – (AGC)
- ▶ Audible/visual alarm with hi and lo limit settings.
- ▶ Built-in differential mode for QC inspections.
- ▶ Time based B-Scan feature for cross section material scans.
- ▶ Data storage formats: Alpha numeric grid and sequential w/auto identifier.
- ▶ Windows PC software included.

DAKOTA CMX1-DL CORROSION THICKNESS

Top of the range and easy to use, the Dakota CMX1-DL Corrosion Thickness Gauge provides inspectors with all the features necessary to measure the material and coating thickness at the same time.

Industries: Aerospace, Automotive, Energy, Infrastructure, Mining, Oil & Gas, Pipelines, Railway

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: 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).

ULTRASONIC SPECIFICATION

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).

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

POWER SOURCE

Line power: USB to PC or power outlet.

Batteries: Three AA cells.

Alkaline - grayscale 35 hrs.

Nicad - grayscale 10 hrs.

NI-MH - grayscale 35hrs.

Power saving DIM, auto off 5 minutes.
Battery status icon.

TRANSDUCER

Transducer Types:

Dual Element (1 to 10MHz).

Locking quick disconnect "00" LEMO connectors.

Standard 4 foot cable.

Custom transducers and cable lengths available for special applications.

MEASURING

Pulse-Echo Mode (P-E) - (Pit & Flaw Detection) measures from 0.025 to 48.0 inches (0.63 to 1219.2mm).

Pulse-Echo Coating Mode (PECT) - (Material, Coating, Pit & Flaw Detection); Material: 0.025 to 48.0 inches (0.63 to 1219.2mm). Coating: 0.001 to 0.100 inches (0.01 to 2.54mm).

Pulse-Echo Temp Comp Mode (PETP) - (Pit & Flaw Detection) Auto temperature compensation - measures from 0.025 to 48.0 inches (0.63 to 1219.2mm).

Echo-Echo Mode (E-E) - (Thru Paint & Coatings) measures from 0.100 to 6.0 inches (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 1.0 inches (2.54 to 25.4mm). Range will vary +/- depending on the coating.

Coating Only Mode (CT) - (Coating Thickness) Measures from 0.0005 to 0.100 inches (0.0127 to 2.54mm). Range will vary +/- depending on the coating.

Resolution: +/- 0.001 inches (0.01mm)

Velocity Range:

0.0122 to 0.7300 inches/ μ s

309.88 to 18542 meters/sec

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

Units: English & Metric

DISPLAY

Large Digits - Standard thickness view. Digit Height: 0.700 inches (17.78mm).

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 (CMX1-DL)

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

Capacity: 4 Gb internal memory.

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

OBSTRUCT to indicate inaccessible locations.

CONNECTIONS

Output: Direct USB-C 1.1 PC connectivity.

Transducer Connectors: Two LEMO 00 connectors.

CERTIFICATION

Factory calibration traceable to NIST & MILSTD- 45662A.

WARRANTY

2 year limited

REPLACEMENT

CMX1-DL replaces CMX DL & CG100BDL



MADE IN THE USA

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an Elcometer company