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Model NDT-815 MVX for A-Scan/B-Scan Thickness Measurement with “Prove-Up” Flaw Detection Feature*

Ultrasonic Thickness Gauge is equipped with multiple viewing options to provide users with a complete set of inspection tools: LCD thickness, A-Scan (RF waveform, +/- Rectified waveform) and time-based B-Scan displays.

The A-scan rectified mode is commonly used to detect flaws and pits in pulse-echo mode and for measuring thru-paint and coatings in the multi-mode operation.

The time-based B-Scan feature displays a cross section of the test material. It is commonly used to display the profile of the bottom or inside surface of the material being inspected.

The adjustable square wave pulser provides flexibility necessary for both high resolution and penetration requirements.

*Optional Quick Change angle beam transducers, wedges and dual to single adapter cable required for this feature.

Features include Field Calibration of all materials, “Prove-Up” Flaw Detection Mode, High Speed Scanning, visual Alarm Mode, Differential Mode, built-in Automatic Gain Control (AGC) for thru-paint measurements in multi-mode operation, backlit display and On-Board Alpha-Numeric Data Logger to store up to 12,000 readings & waveforms and Data Output port.

2-year limited warranty on gauge. 30-day warranty on transducers, cables and batteries

Specifications:

Physical:

Weight: 13.5 ounces (with batteries).
Size: 2.5 W x 6.5 H x 1.24 D inches (63.5 W x 165 H x 31.5 D mm)
Keyboard: Membrane switch with twelve tactile keys
Case: Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed)
Operating Temperature: -14° to 140°F (-10° to 60°C)

Ultrasonic:

Measurement Modes: Pulse-Echo (flaws, pits) and Echo-Echo (thru-paint)
Pulser: Square wave pulser with adjustable pulse width (spike, thin, wide)
Receiver: Manual or AGC with 40 dB range depending on mode selected
Timing: 20 MHz with ultra low power 8 bit digitizer

Power Source:

Three 1.5V alkaline or optional 1.2V NiMH AA cells
Typically operates for 150 hours on alkaline and 100 hours on NiMH batteries
Auto power off if idle 5 min
Battery status icon

NDT-815 MVX Specifications (continued)

Measuring:

Pulse-Echo Mode Range: (Pit & Flaw Detection) from 0.025 to 9.999 inches (0.63 to 254 mm)

Echo-Echo Mode Range: (Thru Paint & Coatings) from 0.010 to 4.0 inches (2.54 to 102 mm)
Range will vary depending on the thickness of coating

Resolution: +/- .001 inches (0.01 mm)

Velocity Range: 0.0492 to 0.3936 in/Microsecond (1250 to 9999 Meters/Sec)

Calibration: Single and Two point calibration option, or selection of basic material types

Units: English & Metric

Display:

1/8 in. VGA grayscale display (240 x 160 pixels)

Viewable area 2.4 x 1.8 in. (62 x 45.7mm)

EL backlight (On/Off/Auto)

Display Views: A-Scan: Rectified +/- (flaw view) RF (full waveform view)
B-Scan: Time-based cross sectional view. Display speed of 15 seconds/screen
Flaw "Prove Up" capability using the single to dual adapter cable with a single element contact or angle beam transducer

Large Digits in Standard thickness view. Digit Height: 0.400 in (10mm)

Scan Bar 6 readings per second; viewable in B-Scan and Large Digit views

Repeatability Bar Graph indicates stability of reading

Data Logger (Internal):

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

12,000 pages of memory (alpha numeric storage)

Page contents: 1 reading and 1 waveform per page

OBSTRUCT to indicate inaccessible locations

Memory: 16 megabit non-volatile ram

Transducer:

Transducer Types: Dual Element (1 to 10 MHz)

Single element angle beam (1 to 10 MHz) using optional adapter cable

Locking quick disconnect "00" LEMO connectors. Standard 4 foot cable

Custom transducers and cable lengths available for special applications

Features:

Setups: 64 custom user-definable setups. Factory setups can also be edited by the user

Gates: Single gate in pulse-echo mode, or single gate with hold off in echo-echo mode
Adjustable threshold

Selectable transducer types with built-in dual path error correction for improved linearity

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

Prove-Up for basic flaw detection

Certification:

Factory calibration: Traceable to national standards

Standard Kit Contents:

NDT-815 MVX Instrument, 1/4" diameter x 5.0 MHz Dual Element Transducer on 4 foot long cable, (3) size AA Alkaline Batteries, 4 oz. plastic bottle of Ultrasonic Couplant, Operation Manual, Serial Interface Cable, Windows® based Data Management Software, Hard-shell Carrying Case and Certificate of Calibration.

Options: ¼" and ½" diameter dual element (including high temperature up to max of +650F / +340 C) and quick change angle beam transducers, lucite quick change wedges (45, 60 and 70 degree), 4 foot long dual Lemo "00" plug to single Microdot transducer adapter cable, Nylon instrument case with neck and wrist straps,

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