

Ultrasonic Testing



MFD 510

Ultrasonic Flaw Detector



KEY FEATURES

- Master-slave menu, shortcut key and digital swiftly knob.
- High brightness EL LCD display, reading under outside strong light conditions.
- Designed with high performance security-guarantee battery module, easy assembly.
- Independent with off-line possibility.
- Large capacity and high performance Lithium-ion battery, working above 8 hours.
- Small size and light weight instrument.
Can be hold by one hand, durable in use and leading industrial trend.



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General Features:

RANGE:

0~ 9999mm (at steel velocity); range selectable in fixed steps or continuously variable.

PULSER:

Spike excitation with low, middle and high choices of the pulse energy.

Pulse Repetition Rate: manually adjustable from 10 to 1000 Hz.

Pulse width: Adjustable in a certain range to match different probes.

Damping: 100Ω, 200Ω, 400Ω selectable to meet different resolution and sensitivity.

Working modes: Single element, dual element and through transmission.

RECEIVER:

Real-time sampling at 160MHz high speed enough to record the defect information.

Rectification: Positive half wave, negative halfwave, full wave and RF.

DB Step: 0dB, 0.1 dB, 2dB, 6dB step value and auto-gain mode.

ALARM:

With buzzer and sound.

MERMORY:

Total 100 configuration channels store all instrument operating parameters plus DAC/AVG curve; stored configuration data can be easily previewed and recalled for quick, repeatable instrument setup.

Total 1000 datasets store all instrument operating parameters plus A-scan.

All the configuration channels and datasets can be transferred to PC via USB port.

FUNCTIONS:

Peak Hold:

Automatically searching the peak wave inside the gate and hold it on the display.

Equivalent diameter calculation: find out the peak echo and calculate its equivalent diameter.

Continuous Record: Record the display continuously and save it to the memory inside the instrument.



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Functions:

- Defect Localization: Localize the defect position, including distance, depth and plane projection distance.
- Defect Sizing : Calculates the defect size.
- Defect Evaluation : Evaluates the defect by echo envelope.
- DAC : Distance Amplitude Correction.
- AVG : Distance Gain Size curve function.
- Crack measure : Measure and calculates the crack depth.
- B-SCAN : Displays the cross-section of the test block.

REAL-TIME CLOCK:

Real time clock for tracking the time.

COMMUNICATION:

USB2.0 high-speed communication port.

SPECIFICATIONS:

- Range: (0 ~ 9999) mm
- Bandwidth: (0.5 ~ 15) MHz
- Material Velocity: (1000 ~ 9999) m / s
- Dynamic Range: ≥ 32 dB
- Vertical linear error: $\leq 3\%$
- Horizontal linear error: $\leq 0.2\%$
- Resolution: > 40 dB (5P14)
- Sensitivity Leavings: 60dB (flat-bottomed deep hole 200mm Φ 2)
- Rejection: (0 to 80)% Linear
- Noise level: $\leq 10\%$
- Power supply: DC 9V; lithium batteries work for 4 to 8 hours or more
- Ambient temperature: (-20 ~ 50) $^{\circ}$ C
- Relative Humidity: (20 ~ 95)% RH
- Overall dimensions: 263 \times 170 \times 61 (mm).



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MFD 510 Standard Configuration

Including:

- 1 Main Body
- 2 Straight Beam Probe
- 3 Angle Probe
- 4 Machine-probe Cable (Q9-Q9)
- 5 Battery Module
- 6 Power Adapter (Charger)
- 7 Support Pillar
- 8 Manual
- 9 Instrument Case
- 10 Datapro Software
- 11 USB communication Cable.



Information:

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