Universal Ultrasonic Flaw Detector DLD100

Rugged DLD100 durability, 10 hours of battery use, easy keys operation, outstanding ultrasonic performance, and now “square wave pulser” and “color leg” combine to form a powerful portable ultrasonic inspection tool with powerful Lithium Ion battery pack.

The DLD100 combines the powerful advantages of digital design with the detailed dynamic echo information that was previously only possible with an analog display. The high resolution color LCD display, 160 Hz update rate, and “single shot” measurement technique produce a fast, smooth response for immersion and critical weld testing.

The quality, durability, dependability and ease of use remain on the DLD100. From rugged field inspections to high resolution thin measurements, long acoustically clean materials, and immersion systems work, the DLD100 extends the range of applications that a portable instrument can perform.

Features

Parameter Setups Files	Up to500 files stored instrument parameter setups.
A-Scan Files	Up to 500files including operation parameters plus A-scan, the stored datasets can be easily previewed, recalled and exported to a computer for edit and printing.
Thickness Files	Up to 10,000 thickness values stored in single thickness file.
PC Communication	Bi-directional RS232-USB adaptor connected with PC.
DAC/ TCG	DAC or TCG with a maximum of 16 reference echoes, 4 other curves can be displayed with variable dB intervals. DAC curves can be varied with variable dB or variable range.
AVG/DGS	DGS curves can be displayed automatically; DGS curves can be varied with variable dB or variable range.
Readings	Up to selectable 26 readings (Sound path, projection distance, depth, echo height, and ERS.)
B-Scan	Selectable corrosion-featured B-scan and full-featured B-scan

Square Wave Pulser	Square wave pulsers allow optimum probe matching by adjusting pulse width and voltage. Difficult to penetrate metallic applications and especially non- metals inspection like composite materials are optimized. Pulse width is tunable up to 1000 ns in 10 ns steps. Pulser voltage is adjustable from 20 to 500 V in 10 V steps.
Rectification	Positive half-wave, negative half-wave, full-wave, RF
Reject (suppression)	0 to 90% linear
Units	Inch, millimeter, or microsecond selectable
Languages	Selectable English, Chinese
Gate Monitors	Two independent flaw gates controllable over entire sweep range
Measurement Modes	Zero-to-first, multi-echo with selectable flank or peak detection
TTL Output	Three independently assignable outputs, instantaneous, timed, latched with visual LED and audible horn alarms
Alarm	Selectable positive logic, negative logic, upper limit thickness or lower limit thickness alarm mode
Curved surface correction	Corrects sound path information when using an angle beam transducer to circumferentially inspect a curved surface for either tubular or bar inspections.
Auto Calibration	Measurement and setting of sound velocity and probe delay using two known calibration echoes (2-point calibration)
Auto Gain	Adjust automatically the system sensitivity to bring (increase or decrease) the measured echo to the suitable echo height. Echo height setting value from 10 % to 90 % of the screen height.
Display Screen	5.7 inch LED backlight TFT_LCD, display resolution 320 x 240 pixels, selectable 4 scheme colors and 8 A Scan colors.
A-Scan Resolution	Standard 200 x 220 pixels, or 100 x 220 pixels
Display Update Rate	160Hz

Specifications

Range	1 to 10,000 mm at steel velocity, range selectable in fixed steps or continuously variable
Material Velocity	Continuously adjustable from 100 to 20,000 m/s, 33 selectable material velocities
Display Delay	-5 to 3400 μs in steel (dependent on range)
Probe Delay(Zero Offset)	0 to 100 μs
Damping	50, 75, 150, 500 ohms
Gain	0 to 110 dB adjustable in selectable steps 0.2, 0.5,1, 2, 6, 12dB, user definable, and locked
Pulse Repetition Frequency	20 to 1K Hz
Bandwidth	0.2 to 20 MHz with 3 selectable broad bands

A/D Sample Rate	100MHz (Hardware Rate)
Probe Connections	BNC
Power adapter	9VDC, 110-220VAC
Battery Power	7.4V, 6600Ahr Lithium Ion Battery Pack
Battery Life	12 hours on Li-Ion Battery Pack
Operating temperature	-10～60℃
Stored temperature	-25～70℃
Size	230mm×150mm×45mm
Weight	1.0kg with Li-ion battery pack
Horizontal Linearity Error	≤0.1%
Vertical Linearity Error	≤3%
Echoes Resolution	＞30dB
Sensitivity Margin	＞60dB (200mm,Φ2,flat bottom hole)
Dynamic Range	＞30dB

Standard Delivery

Portable ultrasonic flaw detector	1
Straight-beam probe	1
Angle-beam probe	1
Probe cable	2 (Connected with straight-beam probe and angle-beam probe)
AC adapter/charger	1 (Include AC power cable)

Recommended Accessories

USB adapter	1 (Include CD for driver and USB cable)
Battery Pack	5400mAh Li-ion battery pack
Calibration Block	Supply according to customer requirements
Probe	Supply according to customer requirements
PC software	1(Include CD for Data Pro software and RS232 serial PC cable)