DIGITAL ULTRASONIC FLAW DETECTOR (ADVANCED TYPE)
CODE UFD-P710

single-element straight probe
(included)

single-element angle probe
(included)

Wireless phased array module
(**optional**)

phased array probe
(**optional**)

- With fast, accurate display and analysis of defective echo signals, a variety of weak signal changes and details can respond in a timely manner, the real-time echo signal and authenticity can be effectively guaranteed
- For the detection of high attenuation materials or thick workpiece has excellent penetration and letter ratio; sharp wave excitation technology and adjustable pulse width, pulse voltage, emission anisotropic square wave technology in the detection of thin workpiece and composite materials have a high resolution
- FIR digital filtering technology better signal-to-noise ratio; probe frequency harmonic analysis, can better analyze the probe performance information
- Automatic calibration of material speed of sound, probe delay, probe K value; convenient DAC, AVG curve creation and application
- USB HOST interface, can be connected to an external U disk to achieve data transfer; can be connected to an external WIFI module to achieve communication with other wireless devices
- HDMI video output for flaw detection and teaching presentations
- Ultra-large capacity storage space for continuous dynamic recording data storage
- Wireless phased array module can be connected, so that the conventional ultrasonic flaw detector has the same detection function as phased array instrument

external wireless phased array module

FUNCTIONS

Flaw detection standard	built-in common flaw detection standards, direct call, convenient and fast
Auto calibration	automatic calibration of probe zero offset, probe angle (K value) and material velocity
Peak hold	compare frozen peak waveforms to live A-Scans to easily interpret test results
Flaw locating	live display sound-path, projection (surface distance), depth, amplitude
Flaw discrimination	automatic flaw sizing using AVG or DAC, speeds reporting of defect acceptance or rejection
Flaw sizing	the equivalent dB value of defects or equivalent size of defects are displayed in real time
Curved surface correction	used for flaw detection of curved workpiece, it can display the circumferential position of defects in real time
DAC/AVG	the curve is automatically generated, and the sampling points can be compensated and corrected. The curve automatically floats with the gain, automatically expands with the detection distance, and automatically moves with the delay time. It can display the AVG curve of any aperture
AWS D1.1/1.5	choosing this standard can reduce manual calculations and improve detection efficiency
Automatic rating	select different AWS standards, automatically calculate the rating of defects and display
Crack height	the crack height is measured and calculated automatically by the diffracted wave at the end
Gate magnify	spreading of the gate range over the entire screen width
Continuous record	video recording and playback
Echo coding	display 1~9 echo display area in different colors, used to analyze the defect position
Scan freeze	display freeze holds waveform and test distance data
Peak mark	capture and mark the peak in real time
B scan	intuitively display the defect shape of the workpiece and the detection result is more intuitive

SPECIFICATION

Measuring range	0~10000mm
Working frequency	0.5~20MHz
Material velocity	1000~15000m/s, adjustable in continuity; 30 pre-set nominated velocities for common materials
Repetition frequency	25~1600Hz
Dynamic range	≥32dB
Gain range	0.0~110dB (steps: 0.1dB, 1.0dB, 2.0dB, 6.0dB)
Vertical linearity	≤3.0%
Horizontal linearity	≤0.4%
Resolving power	>26dB (2.5P20)
Sensitivity leavings	>62dB (200Ø2 flat bottom hole, narrow band)
Attenuator	12dB±1dB
Suppression	0~99%
Noise	≤10%
Display screen	5.7"TFT color LCD, resolution 640X480
Pulse type	sharp wave, negative square wave, bipolar square wave; transmit voltage 50~250V adjustable, step 50V
Pulse shift	-7.5~3000us
Probe zeroing	0~200us
Rectification	positive, negative, full-play, RF
Gates and alarms	two-way gate, optional: into the wave alarm, lost wave alarm, DAV curve alarm, alarm signal for sound and light alarms measurement mode: peak, frontal
Interface	Q9 (BNC), USB HOST, Mini HDMI
Damping	400Ω, 80Ω
Power	rechargeable lithium-ion battery, working time 6~8 h
Storage temperature	-30~50°C
Relative humidity	20~95%RH
Size	246×166×50mm
Weight	1.3kg

STANDARD DELIVERY

Main unit	1 pc
Single-element straight probe UFD-P70	1 pc
Single-element angle probe UFD-P71	1 pc
Probe connecting cable	2 pcs
Mainframe backpack	1 pc
USB disk	1 pc
Power adapter	1 pc

OPTIONAL ACCESSORY

Transducer	refer to specification of transducers
Wireless phased array module	**UFD-PA11**
Phased array probe	**UFD-PA06**

SPECIFICATION OF TRANSDUCERS

Code	Frenquency	Size	Probe type	Transducer sensor angle
UFD-P70 (included)	2.5MHz	Ø20mm	Single-element straight probe	90°
UFD-P71 (included)	2.5MHz	13x13mm	Single-element angle probe	45°
UFD-P72 (optional)	2.5MHz	Ø14mm	Dual-element straight probe	90°
UFD-P73 (optional)	5.0MHz	Ø20mm	Single-element straight probe	90°
UFD-P74 (optional)	2.5MHz	13x13mm	Single-element angle probe	63.4°
UFD-P75 (optional)	5.0MHz	8x12mm	Single-element angle probe	68.2°

Note: Other probes can be customized according to customer requirements

PHASED ARRAY SPECIFICATION OF TRANSDUCERS

Code	Frenquency	E-Nos	Pitch (mm)	Elev (mm)	Ptd. angle	Ptd. material
UFD-PA06 (optional)	2.5MHz	16	1.0	10	55°	plexiglass