

Digital Ultrasonic Flaw Detector



I. Introduction

Digital ultrasonic flaw detector is advanced type, can quickly, easily and without damage, accurately detect, locate, evaluate and diagnose various defects inside the work-piece such as cracks, welds, pores, sand holes, inclusions, folding, etc. It has been applied for electric power, petrochemical, boiler and pressure vessel, steel structure, military, aerospace, railway transportation, automobile, machinery and other fields. It is an essential instrument for the non-destructive testing industry.

II. Features

- Measurement display mode: positive wave, negative wave, full wave and wave ;
- It has a linear suppression function, the maximum inhibition is 80% of the screen height;
- It can switch between single crystal probe, double crystal probe and two inspection modes;
- It has a gate setting and alarm function. The position and width of the gate can be arbitrarily set on the screen, and an incoming wave alarm can be set;
- 500 independent detection channels, each channel set a separate set of testing parameters, DAC curve;
- Two display modes with angle and K value;
- The DAC curve is generated automatically, and up to 10 points can be recorded, with four additional adjustable offset curves;
- AVG curve is generated automatically, and two types of defects can be customized;
- Automatic probe calibration function;

- With storage function, it can store 100 A sweep patterns, parameters and DAC curve;
 - Has a storage graphics playback function, the stored A-scan graphics from the storage area and displayed on the screen;
 - Has a delete function to delete the specified content (represented by the storage group number) from the storage area;
 - Peak memory function;
 - Freeze and thaw functions with waveform and inspection parameters;
 - With sound path measurement and echo frequency analysis function;
 - Real-time power status indication function;
 - Support USB communication interface;
 - Li-battery, low power consumption, can continuous working more than ten hours
 - Can set up buzzer alarm during operation
- Light, convenient, easy to operate

III. Technical Specification

Name	Technical data
Scan range (mm)	Scan range (mm):0~10000 Grades: 2.5,5,10,20, 30,40,50,60,70,80,90, 100,150,200, 250, 300, 350, 400, 450,500,600,700,800,900,1000,2000,3000,4000,5000,6000,7000,8000,9000, 10000. Adjusting step distance: 1mm
Pulse shift (μs)	Pulse shift (μs): -7to +9984 Grades: -20, -10, 0.0, 10, 20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700,800,900,1000,1500,2000,2500,3000,3400. Adjustment step:1 (-7μs~9984μs)
Probe zero point(μs)	Probe zero point: 0.0~99.99 Adjust the step: 0.01
Material sound speed(m/s)	Material sound speed:1000~15000 7 fixed sound speeds:2260,2730,3080,3230,4700,5900,6300 Adjust the step:1
Working methods	Single probe (receive and send), dual probes (one for receiving one for sending)
Frequency Range(MHz)	0.5~20
Gain adjustment(dB)	0~120 Adjust the step:0.2,1,2,4,6,8,10,20,50
Linear inhibition	Screen height 0% to 80%, step size: 1%
Vertical linearity error	Vertical linear error, not more than 3%
Horizontal linear error	Within the scan range, not more than 0.2%

Flaw detection sensitivity margin	≥62dB
Dynamic Range	≥32dB
Alarm	Incoming wave alarm
Display screen	Display: High-brightness color 5.7 in display
A-Scan display area	Full screen or local A-Scan shows freeze and thaw A-Scan fills
Flaw detection channel	300
Data storage	500 A-Scan graphics
PC communication interface standard	USB
Units of measurement	Mm
Power Adapter	enter 100V~240V/50Hz~60Hz Output 9V/1.5A
Battery	Lithium (Li) Battery 5000mAh
Working temperature (° C)	-10~50° C
Working humidity (RH)	20%~90%
Interface Type	BNC
Dimensions (mm)	220*140*50
Weight(kg)	1.0

IV. Standard Configuration

	Name	QTY
1	Main unit	1
2	Straight probe	1
3	Angle probe	1
4	Probe connecting cable	2
5	Power adaptor	1
6	Warranty card	1
7	Product Certificate	1
8	Instruction manual	1
9	Software	1
10	Instrument case	1