U910
Digital Ultrasonic Flaw Detector

Standard Configuration

Main unit	1	Warranty card	1
Straight probe	1	Product Certificate	1
Angle probe	1	Instruction manual	1
probe connecting cable	2	Software	1
Power adaptor	1	Instrument case	1

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.

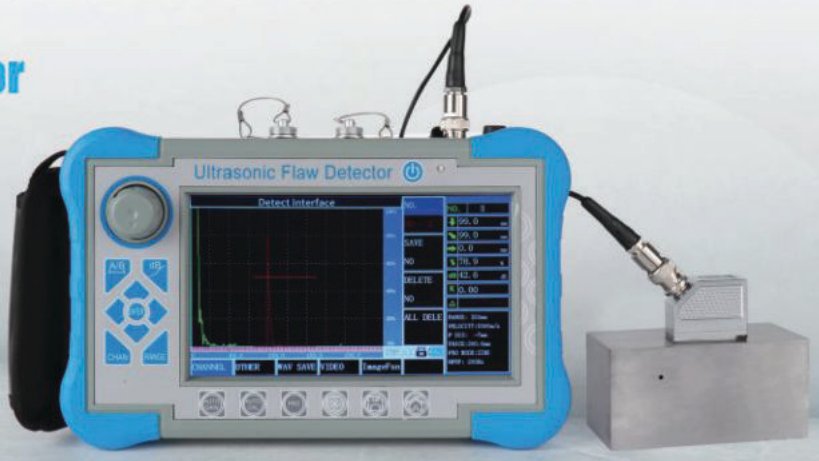
Features

- Measurement display mode: positive wave,negative wave,full wave and RF 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.
- 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 scan graphic, 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.

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): -7 to + 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 (-7s~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, no more than 3%
Horizontal linear error	Within the scan range, no 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	500
Data storage	500 A-Scan graphics
PC communication interface standard	USB
Units of measurement	Mm
Power Adapter	enter 100V~240V/50Hz~60Hz / 13.5V/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

U920
Digital Ultrasonic Flaw Detector



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Power adaptor	1	Instrument case	1

Introduction

Digital ultrasonic flaw detector is advanced type, which is touch screen, 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.

Features

- High-precision quantification and positioning to meet the requirements of near and far distance detection.
- The near-field blind zone is small, can meet the detecting requirements for small-diameter and thin-walled pipe.
- Auto calibration function:one-button auto calibration,easy to operate, automatic test probe “P Delay”,”K value”,”X value” and the velocity.
- Automatic display the defect echo position(Depth:d, Horizontal:p,Distance:s, Amplitude,dB,ϕ)
- Auto gain, peak envelope, peak memory functions, which can improve the detection efficiency.
- Automatically record the flaw detection process and dynamic playback.
- φ value calculation: Forging flaw detection by straight probe, can find the highest wave to conversion φ value automatically.
- 500 independent channels(can be expandable), which can input and store the detection standards of any industries freely, do not need to carry the standard blocks for on-site inspection.
- Store, playback 500 A-scan waves and data freely.
- The DAC, AVG, and TCG curves (depth compensation) are automatically generated and can be segmented. The sampling points are unrestricted and can be corrected and compensated.
- Pulse width and strength can adjustable.
- B scan and B color scan function.
- Can communicate with the computer, and export word
- File, also the detection report.
- IP65 ABS plastic case, sturdy and durable,water-proof and dust-proof, and excellent anti-interference ability.
- High performance lithium battery, can work continuously for 8-10 hours.
- Real-time clock recording: real-time flaw detection date, time tracking record, and storage.
- Power-down protection, storage data can not lost.
- Digital reject, does not affect gain and linearity.
- Gain compensation: Db attenuation can be corrected for surface roughness, curved surfaces, long-range flaw detection of thick work-pieces, etc.

Technical Specification

Name	Technical Data	Name	Technical Data
Display	7 inch TFT color screen，800*480 resolution	Adapter power	36W
Operation mode	Button, Rotary, Touch Screen	Data storage	SD card(16G)
Power supply	Lithium Ion Battery	Alarm	1
Battery capacity	5.0Ah	Working Temperature	-10℃～45℃
Power voltage	12V	Storage Temperature	-20℃～60℃
Power quantity	1	IP Grade	IP65
Working time	≥8 hours	Dimension	245*155*55mm
Adapter input	DC100～240V 50Hz/60Hz	Weight	1.18kg（included battery）
Adapter output	AC 12V		
Probe Connector type	BNC	Probe Type	Single，Dual, Through, Immersion type
Channel Type	Single channel	Filter	1~4MHz/0.5~10MHz/2~20MHz
Channel Num	500 group(able to be scaled)	Detection Mode	Negative/Positive/Full wave/RF
Pulse Type	Negative sharp wave	Reject	0~80%，step 1%
Transmit Voltage	50～350V，step in 50V	Material Velocity	100~20000m/s
Damping	560Ω	Pulse displacement	-10~1000mm
Gain	0~110dB，step：0.5/2/6/12dB	P DELAY	0~200us
Gain Fine Adjustment	-4~+4	X-VAL	0~100mm
Surface compensation	All Gain Range	Guide	Weld, Sheet, Forging inspection
Working Frequency	0.5~20MHz;	Testing Point	Peak/X-val/J val
Testing Range	0~15000mm，Minimum display range:15mm（in steel）		
Measurement	Gate: Amplitude、Amplitude dB value、Range、Horizontal distance、Vertical distance、The difference value between A and B Gate		
	Cursor: 2 cross cursors, can test the horizontal and vertical distance, and the distance between cursors(under B scan function)		
Gate	Gate start:all range		
	Gate width:all range		
	Gate level：10~90%，step:1%		
Curve	DAC, maximum six curves, meet to NB/T 47013,GB/T 11345,GB/T 29712, and other standards		
	TCG, maximum six curves		
	AVG		
Other functions	Full screen, cursor switch(range/Height/Horizon), single/continuous auto gain(10~100%, step 10%), echo compare, echo full, peak envelope,peak memory,fast scan,outside mode,screenshot		
	Peak freeze/Crack depth/Gate expansion/curved surface modification/ B scan/Flat weld simulation/video		
Alarm	Sound and light alarm		
Sensitivity Leavings	≥62dB(200mm—Φ2FH,2.5PΦ20)		
Horizontal linearity error	≤0.3%		
Vertical linearity error	≤3%		
Amplitude linearity error	≤±2%		
Attenuator accuracy	20dB ±1 dB		
Dynamic range	≥32dB		
Distant resolution	≥26dB		
Noise Level	≤40×10-9 V		

Y-1 / Y-2 / Y-8
Magnetic Yoke Flaw Detector

Standard Configuration

Main engine	1	Power coonector wire (Y-2 & Y-8)	1
Instrument box	1	Warranty card	1
Direct electrical conductor	1	Product Certificate	1
Power adapter (Y-2 & Y-8)	1	Instruction manual	1
DC magnetized power supply (Y-2)	1	Instrument case	1
AC magnetized power supply (Y-8)	1		

Introduction

With the characteristics of compact structure, reasonable layout, compact size, light weight and easy to carry, this kind of detector can be directly plugged into AC, as well as be equipped with AC magnetized power supply (AC battery pack) and DC magnetized power supply (DC battery pack), which is of high efficiency and compactness. Besides, it is applicable for inspection of hull welds, high-altitude steel structure welds and internal operation of pressure vessels. Moreover, it is suitable for magnetic powder inspection of surface and near surface defects for various steel structures, boilers, pressure vessels, pressure pipes and welding structures in electric power, metallurgy, petrochemical, machinery and other industries.

Features

Three power supply modes can be selected freely:

- Be directly connected to AC power supply for place with direct insert AC power supply.
- For place without direct insert AC power supply, AC magnetized power supply (AC battery pack) can be used to realize AC magnetization inspection function.
- DC magnetized power supply (DC battery pack) also can be selected to realize function of DC magnetization.
- AC magnetized power supply (AC battery pack) has the protection function of stable voltage output, over-charge, over-current, over-discharge.
- Automatic power off will be started when the lifting force is insufficient, so as to ensure the detection sensitivity.
- Power display function, which can display current battery capacity, as well as with sound-light alarm function.
- Built-in microcomputer chip, stable output voltage to ensure detection sensitivity.
- Adjustable magnetization intensity.
- Special working pockets.

Technical Specification

Model	Y-1	Y-2	Y-8
Electrode spacing	0～210mm	0～210mm	0～210mm
Maximum current	2.8A	2.8A	2.8A
Weight	2.2kg	2.2kg	2.2kg
Main function	Y1/Y2/Y8: AC magnetization(direct insert power)		
	Y-2: DC magnetization(with MT-500)		
	Y-8: AC magnetization(with MT-600)		
Working temp.	-10～+40℃	Storage temp.	-20～50℃
Relative humidity	No condensing<80%		
Operation temp. rise	<18℃	Duty cycle	>50%
Sensitivity			
Minimum AC boost	>4.5kg(44N), maximum AC boost: 7kg (68.6N)		
Minimum DC boost	>18.1kg(177N), maximum DC boost: 23kg (225N)		

Parameter Table of Magnetized Power Supply		
Model	MT-600	MT-500
Battery capacity	4400mAh(AC/Lithium/2A)	4400mAh(DC/Lithium/2A)
Detection time	About 4h	About 8h
Overall dimensions	55×95×180(mm)	55×95×110(mm)