JITAI8101 Surface Roughness Tester

I. Introduction

The surfaces roughness tester is suitable for shop floor use and mobile measure to need of a small handheld instrument, it operation simple, function overall, measure fast, accuracy stability, take convenience. This tester applies to production site and can be used to measure surface roughness of various machinery-processed parts.This tester is capable of evaluating sueface textures with a variety of parameters according to various national standards and international standard.The measurement results are displayed digital/graphically on the OLED,and output to the printer.

II. Main feature

- Electromechanical integration design, small size, light weight, easy to operation
- DSP chip control and data processing, high speed, low power consumption;
- Large measurement range;
- 14 parameters: Ra、Rq、Rz、Rt、Rp、Rv、R3z、R3y、RzJIS、Rs、Rsk、Rku、Rsm、Rmr
- 128 * 64 OLED dot matrix display, digital or graphic highlight display; no viewing angle;
- Display full information, intuitive and graphical displays all parameters;
- Compatible with ISO, DIN, ANSI, JIS multiple national standards;
- Built-in lithium-ion rechargeable battery and control circuit, high capacity, no memory effect;
- There are remaining charge indicator, charging hint;
- Tester has charging instructions, the operator can readily understand the level of charge
- Can work more than 20 hours while the power is enough;

- Large capacity data storage, can store 100 item of raw data and waveforms;
- Real-time clock setting and display for easy data recording and storage;
- With automatic sleep, automatic shutdown power-saving features;
- Reliable circuit and software design of prevent the motor stuck;
- Instrument can display a variety of information tips and instructions. For example Measurement
- result display, the menu prompts and error messages;
- Metal case design, rugged, compact, portable, high reliability;
- Can connected to the computer and printer;
- All parameters can be printed or print any of the parameters which set by the user;
- Optional curved surface pickup sensor, holes sensors, measurement stand, Sheath of sensor,
- extension rod,printer and analysis software

III. Technical Parameters

Name		Content
Measurement Range	The Z axis (vertical)	160μm
	The X axis (horizontal)	17.5mm
Resolution ratio	The Z axis (vertical)	0.01μm/±20μm
		0.02μm/±40μm
		0.04μm/±80μm
Measurement item	Parameter	Ra Rz==Ry(JIS) Rq Rt==Rmax Rp Rv R3z R3y Rz(JIS) Rs Rsk Rku Rsm Rmr
	Standard	ISO,ANSI,DIN,JIS
	Graphic	Material ratio curve
Filter		RC,PC-RC,Gauss,D-P
The sampling length(*l*r)		0.25,0.8,2.5mm
Assessment length（*l*n）		*L*n= *l*r×n n=1~5
Sensor	Principle	The displacement differential inductance
	Stylus	Natural Diamond, 90$\overrightarrow{OB}$ cone angle, 5μm tip radius
	Force	<4mN
	Skid	Ruby,Longitudinal radius 40mm
	Traversing speed	*l*r=0.25, Vt=0.135mm/s
		*l*r=0.8, Vt=0. 5mm/s
		*l*r=2. 5, Vt=1mm/s
		Return, Vt=1mm/s

Accuracy	No more than±10%
Repeatability	No more than 6%
Power supply	Built-in3.7VLithium ion battery,Charger :DC5V,800mA/3hour
Working Time	More than 20 hours
Outline dimension L*W*H	158*63.5*46mm
Weight	About 400g
Working Environment	Temperature:- 20℃ ~ 40℃ Humidity:< 90% RH
Store and Transportation	Temperature:- 40℃ ~60℃ Humidity:< 90% RH

IV. Standard Configuration

Number	Name	Quantity	Remarks
1	Main Unit	1	
2	Sensor	1	Precision parts
3	Adjustable Support	1	
4	Calibration block	1	
5	Block bracket	1	
6	Charger	1	
7	USB charging cable	1	
8	Operating manual	1	
9	Certificate	1	
10	Guarantee card	1	
11	Instrument container	1	
12	Software	1	

V. Optional configuration

	**JITAI55** -**Extension rod.** Used to extend length of sensor when testing deep hole (55mm)
	**JITAI90 -Right angle** measuring mechanism.
	**JITAI100 -standard sensor,** plane & shaft & inner surface of hole>6mm, depth <22mm
	**JITAI120 -small hole sensor**, cylindrical& plane &inner surface of hole>2 mm, depth <9mm
	**JITAI110 -sensor for curved surface** & plane, cylindrical, curvature radius>3 mm
	**JITAI131 -sensor for deep groove,** cylindrical & plane & groove width>3 mm, depth<10mm
	**JITAI520** -**Metal(Al)working platform**, elevating, convenient and stable for test process.
	**JITAI620** -**Marble substrate working platform**, elevating, V groove, high accuracy to test tiny work piece.
	**Roughness comparison block** High quality comparison block of surface roughness Strict anti-rust treatment process 27 comparison block/set
	**Mini Pinter** External printer