

6. Measure Mode

There are four measurement modes of the instrument: basic mode, QA mode, statistics mode and continuous mode.

If auto save is on, the system will name the currently displayed data: "s000 **" , and save the value with the name, and will automatically increment the serial number on the original basis.

6.1 Basic Mode

The basic mode is to display the Fe/NFe thickness data according to the setting of the measurement type.

The basic mode measurement interface is shown in Figure 16. Press “up” and “down” keys to check the data records, as shown in Figure 17.

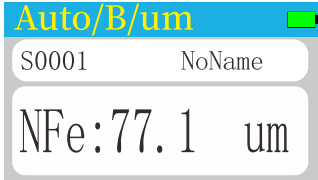


Figure 16 Basic Mode

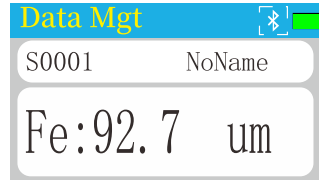


Figure 17 Check the basic record

6.2 QA Mode

QA Mode: In this mode it will compare the current data with STD data, and show you the difference, as figure18 shown.

The current data in the tolerance will be black small words, out of tolerance, will be red small words. And you may press "UP" and "Down" key to check the records.

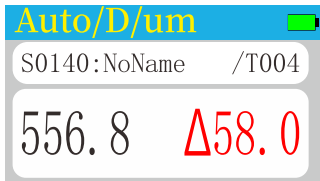


Figure 18 QA Mode

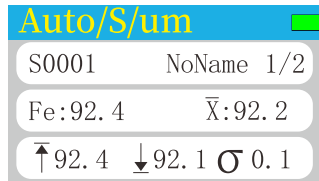


Figure 19 Statistical Mode

6.3 Statistical Mode

The statistical mode carries out multiple average measurements, makes basic statistics on the data of multiple measurements, and compares it with the standard data. The measurement interface is shown in Figure 19.

Symbols in statistical mode:

1. "Fe:" : Observed Value
2. " \bar{X} " : Avg;
3. " \downarrow " : Min;
4. " \uparrow " : Max;
5. " σ " : Std Dev;

In the top left corner (such as S0001) of the screen in Statistical Mode measuring interface is the name of the current of measurement, and the top right corner (such as 1/2) is times of the current round measurement, 1 indicate that it's the 1st time of current round, 2 indicates that total 2 times in this round. When the current round run out, the following interface will be show. Press "UP" and "DOWN" to check the measured data.

Average Times: Select "Statistical mode" to set how many times in the current round of measurement. Press "OK" to enter edit mode, press "UP" or "DOWN" to select the times from 2~99, as figure 20 shown.

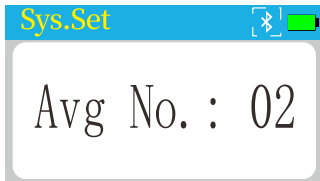


Figure 20 Average Times

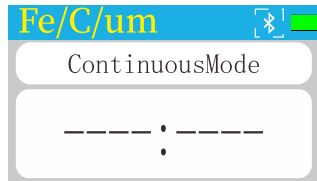


Figure 21 Continuous Mode

6.4 Continuous Mode

In Continuous Mode, press the probe down and without releasing and moving the probe, it will continuously to measure the thickness data of the path, and releasing the probe to end the measurement, as shown in figure 21.

7. Standard Management

Select “Std-Manage” in “Main Menu” by press “OK”, to enter the “STD-Manage” interface as Figure 22 shown.

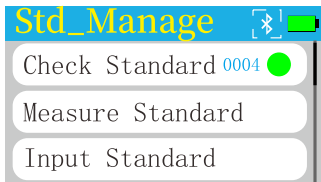


Figure 22 Std Management

7.1 Check Standards

Select “Check Standard” in “Std Manage” by press “OK” to enter the check standard interface, as Figure 23 shown. The standard’s name ((*) STD 0001) will be displayed in the top right corner, and a star (*) will be ahead the name when the data is current standard for measurement.

“value” indicates the nominal value; “Lower” indicates the min value; “upper” indicates the max value; Press “UP” and “DOWN” to check the standard records.

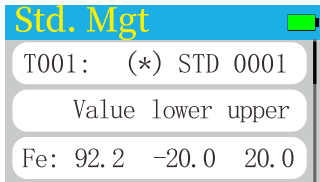


Figure 23 check standard record

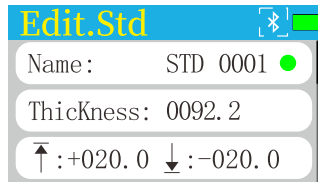


Figure 24 Modify Standard Record

Select a standard record, and press "OK" to edit it. You can set it as current standard, print and delete.

- Delete: delete the current standard record.

7.2 Measure Standard

Select the "Measure STD" in "Standard Management", and then press the probe to set the measured value as a standard.

7.3 Input Standards

Select "Input standards" under the Standard Management menu and press OK to input a new standard. On the "Input Standards" interface, modify the standard name and set the target value and upper and lower limits, as shown in Figure 25.

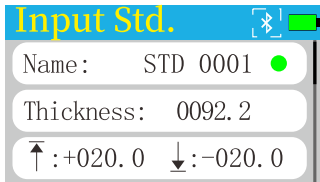


Figure 25 input Standards

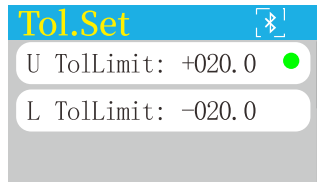


Figure 26 Tolerance settings

7.4 Tolerance settings

Tolerances can be set according to product requirements, as shown in Figure 26.

7.5 Clear Standards

Clear standards will delete all saved standards.

In the standard management menu, select "Clear Standards" and press the "OK", the system will prompt to confirm, press the "OK" to clear the standard, and press the "CAL" to cancel the emptying operation .

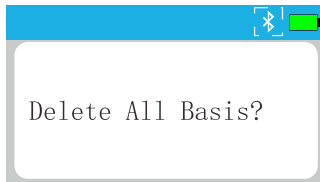


Figure 27 Empty standards

8. Date Management

Enter the main menu, select the "Data Management" submenu item and then press the OK key to enter the data management interface, you can check the data records in various modes, select a certain data to edit it independently, or delete all the data.

8.1 Check records

Record types include basic records, QA records, and statistical records, as shown in Figure 28. Among them, the QA record stores the QA measurement results, the statistical record stores the statistical measurement results, and the basic record stores the basic mode and continuous mode measurement results.

To check the corresponding records, select the corresponding records and press the “OK” to start browsing. When browsing, press the “UP” and “DOWN” to switch records; press the “CAL” to return to the data management menu; press the “OK” to enter the single data deletion, name renaming, and print this record interface.

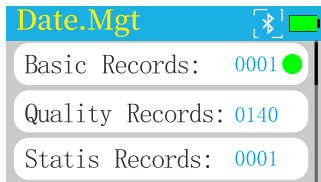


Figure 28 Data management

8.2 Delete all

Select "Delete All" in the data management, and press the "OK" to enter the delete all records menu, as shown in Figure 29. Then select the record type to be deleted, select and press the "OK", then a confirmation will be prompted, confirming will delete all the data of this type, canceling will keep the data.



Figure 29 Delete all

9. System settings

The System Settings submenu includes:

1. Auto save: turn on or turn off the storage, that is, whether to save the measurement data.

Note:

Auto save is turned on to save all measurement data and settings. When it is turned off, the measured data are temporary data, and the data will be lost when the power is turned off.

2. Buzzer: Turn on and off the buzzer , and it will remind you when the measurement data is completed.

3. Bluetooth: Turn on and off Bluetooth to communicate.

Note:

① Bluetooth will consume power even if it is not in use, so please turn off the Bluetooth when not in use.

② Some models do not have Bluetooth.

4. Automatic printing: Turn on and off the printer to print out the measurement results.

5. Result prompt: When the measured data exceeds the tolerance setting value, it will be displayed in red.

6. Unit: switch between the metric unit "um" and the imperial unit "mil".

7. Language: Choose between Chinese and English to switch.

8. Sleep time: select the sleep time of the instrument.

9. Backlight time: Select the backlight time of the instrument.

10. Factory reset: restore to the factory data settings of the instrument, and the user data will be lost.

11. Instrument information: check "software version number", "hardware version number", "product model", "SN code", etc., as shown in Figure 30.

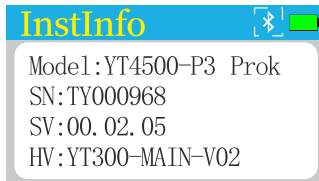


Figure 30 Instrument information

10. Technical specifications

Items	Specification
Name	Professional Dual-purpose Coating Thickness Gauge
Characteristic	<p>This coating thickness gauge is a domestic coating thickness gauge manufactured by our company with completely independent intellectual property rights, which can quickly and accurately measure the thickness of various coatings on metal substrates. The instrument fully complies with the testing principles of magnetic method and eddy current method stipulated by ISO 2178, ISO 2360, GB/T 4956, GB/T 4957, ASTM B499 and other standards.</p> <p>The instrument has accurate measurement, large test range, multiple calibration modes, multiple measurement modes, convenient positioning, and powerful functions. It is widely used in surface engineering inspection fields such as manufacturing, metal processing, and chemical industries, it is the basic equipment of coating surface treatment industry.</p> <p>Fe-based probes can detect the thickness of various non-magnetic coatings sprayed on various magnetic substrates (such as steel), such as paint layer, powder coating layer, porcelain coating layer, chrome plating layer, copper plating layer, galvanized layer of iron plate etc.</p> <p>NFe-based probe detects the thickness of all insulating coatings sprayed on non-magnetic metal substrates (such as aluminum, copper, brass, stainless steel, etc.), such as paint layers, powder coatings, ceramic coatings, etc.</p>

Coating Thickness Gauge User Manual

Standards	ASTM B499, ASTM D1400, ASTM D709; ISO 2178, ISO 2360, ISO 2808; GB/T 4956, JB/T 8393
Body Type	Ferrous/non-ferrous (some models have different configurations)
Probe Form	Split type (some models have different configurations)
Resolution	0.1 μ m (some models have different configurations)
Measurement Range	0~5000 μ m (some models have different configurations)
Measurement Accuracy	Zero calibration: $\pm(3\%H+1)$ μ m; 2 dots calibration: $\pm(1\sim3\%H+1.5)$ μ m; Note: H is the thickness of the sample
display	IPS color screen, 1.14inch
Interface	Type C USB; Bluetooth 5.0; buttons (some models have different configurations)
Storage	3500 pieces, expandable mass storage through mobile APP (some models have different configurations)
Battery Power	Lithium battery, can test 10000 times continuously when fully charged
Measurement Mode	Basic Mode, qa Mode, Continuous Mode, Statistics Mode
Minimum Measurement Size	Magnetic: 10 \times 10mm; Non-magnetic: 10 \times 10mm
Minimum Measurement Thickness	Magnetic: 0.2mm, non-magnetic: 0.05mm (some models have different configurations)
Minimum Curvature	Convex radius 5mm; concave radius 10mm

Coating Thickness Gauge User Manual

Display Unit	$\mu\text{m}/\text{mil}$
Size	102×50×20mm(Probe \varnothing 18x69)
Weight	80g (some models have different configurations)
Operation Temperature	0~40°C (10~90%RH non-condensing)
Storage Temperature	-10~50°C
Standard Accessories	2 bases (iron base, aluminum base), wrist strap, wiping cloth, USB data cable, a set of calibration sheets(Some models have different configurations)
Optional Accessories	Printer, 5V-2A power adapter
Note	A set of 5 calibration sheets (the thickness is slightly different), the technical parameters are only for reference, and the actual sales products shall prevail

11. Q & A

Question	Possible Causes	Answer
Cannot turn on	Lithium battery dead	Please insert the USB Type-C cable to charge
Measured data is unstable or inaccurate	The electromagnetic properties of the matrix are not uniform	Due to the limitation of the principle, the instrument is not suitable for measuring on the substrate with uneven electromagnetic characteristics
	Environmental electric field, magnetic field interference	Measure away from (magnets, speakers, etc.) and strong electromagnetic fields (transformers, induction cookers).
	Edge effect	During measurement, the probe should be kept in the center of the point to be measured, and the periphery of the probe should not be suspended outside the surface to be measured.

Coating Thickness Gauge User Manual

	Probe pressure and orientation	The probe should be quickly and vertically pressed against the measuring surface, do not hit it hard or slowly approaching the DUT, It is forbidden to hang above the DUT at close range.
	The substrate is too thin and the area is too small or too bent	It is recommended to use within the recommended range of substrate thickness, area and curvature. Exceeding the recommended range will affect the accuracy of the instrument.
	Rough coating surface	This is a normal measurement
	Attachments on the surface to be tested	Please clean the surface to be measured, dust and dirt on the surface to be measured will affect the accuracy of the measurement
	Not calibrated	Zero calibration, single calibration and 5 dots calibration
Others		Please contact customer service

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.