







4.2 Measuring


After preparations is done, just press Start key to measurelf measuring conditions are not to be changed. Firstly, you will see the “—” on the display and the probe is moving forward and sampling. Then you will see the probe stop sliding and move backward. The measurement result shows on the display after the probe stop moving. You can browse measurement values of different parameters once depressing the key .

5. HOW TO SET THE EVALUATION LENGTH

To set or browse the evaluation length, just depress the  key and not release it until 'LEN' showing on the display. It takes about 6 seconds from starting pressing

the key CAL. Then change the evaluation length to the desired length among 1~2L by the key  or . To save or quit, just press any key except the key  or .

6. HOW TO CALIBRATE THE TESTER

6.1 To enter the calibration state, just depressing the key , The calibration state is marked by “CAL”.

6.2 Take a measurement based on the Standard sample. Contrast the measuring value with the value of standard sample plate based on the same parameter.

6.3 Depress the key  or  to adjust the reading to the standard value.

6.4 Just repeat 6.2 to 6.3 till the accuracy is ok.

6.5 To quit, just press any key other than “START” key.

6.6 The instrument has been thoroughly tested before delivery to ensure that the display value error is less than 10%. The user is recommended not to use the calibration function too often.

7. COMMUNICATE WITH PC

This tester can communicate with PC computer by use of the optional communicating cable and software. For detailed information, please see the instructions with the optional software.

8. GENERAL MAINTENANCE

8.1 Avoid crashes, intensive vibration, heavy dust, humidity, grease stains and strong magnetic fields.

8.2 The sensor is a precise part and should be protected carefully. It is recommended to put it back in the box after each operation.

8.3 Protect the standard sample plate belonging to the instrument carefully to avoid calibration faults caused

Fig.4-2

by scratches.

9. REFERENCES

9.1 Central line

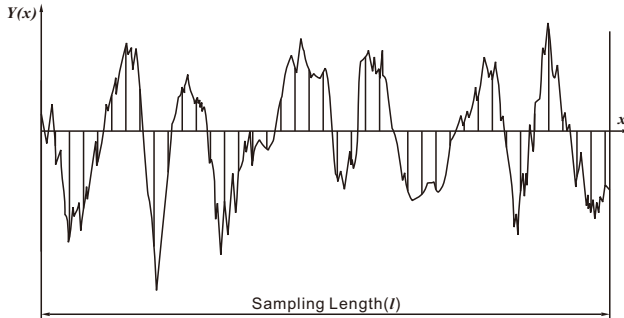
This tester adopts minimum central line of Least Square Algorithm.

9.2 Definition of roughness parameter

9.2.1 Ra arithmetical mean deviation of profile

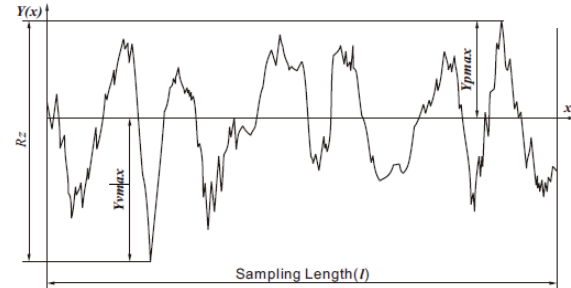
Arithmetic value of mean deviation of profile within sampling length.

$$Ra = \frac{1}{l} \int_0^l |Y(x)| dx$$



9.2.2 Rz maximum height of profile

Sum of height of the largest profile peak height Y_{pmax} and the largest profile valley depth Y_{vmax} within a sampling length.

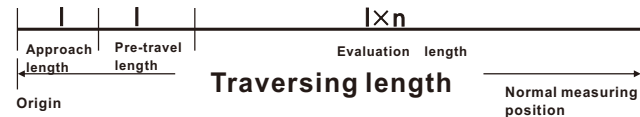


9.3 Code Standard Name

ISO 4287 International Standard
DIN 4768(2010-07-00) German Standard
JIS B601 Japanese Industrial Standard
ANSI B46.1 American Standard

9.4 Traversing length

L=sampling length
n=number of sampling length
l x n=evaluation length



10. BATTERY REPLACEMENT

10.1 When it is necessary to replace the battery, i.e battery voltage less then approx 5v, the battery symbol '☐' will appear on the Display.

10.2 Slide the Battery cover(3-6)away from the instrument and remove the

batteries.

10.3 Install the batteries (4x1.5v AA/UM 3) correctly into the case.

Cutoff length recommended

Please see the table on page 13.

Ra (μm)	Rz (μm)	Cutoff length (mm)
> 5~10 > 2.5~5	> 20~40 > 10~20	2.5
> 1.25~2.5	> 6.3~10	0.8
> 0.63~1.25	> 3.2~6.3	
> 0.32~0.63	> 1.6~3.2	
> 0.25~0.32	> 1.25~1.6	0.25
> 0.20~0.25 > 0.16~0.20	> 1.0~1.25 > 0.8~1.0	
> 0.125~0.16 > 0.1~0.125 > 0.08~0.1	> 0.63~0.8 > 0.5~0.63 > 0.4~0.5	
> 0.063~0.08 > 0.05~0.063 > 0.04~0.05	> 0.32~0.4 > 0.25~0.32 > 0.2~0.25	
> 0.032~0.04 > 0.025~0.032 > 0.02~0.025	> 0.16~0.2 > 0.125~0.16 > 0.1~0.125	