

**COATING THICKNESS GAUGE
(F & NF TYPE)
AC-110MC**

This Coating Thickness Gauge is small in size, light in weight, easy to carry, it is convenient to use and operate. Its ruggedness will allow many years of use if proper operating techniques are followed. Please read the following instructions carefully and always keep this manual within easy reach.



Fig-1

1.Product Description
* It meets the standards of both ISO-2178 and ISO-2361 as well as DIN, ASTM and BS. Suitable for the laboratory and for use in harsh field conditions.
* The F probes measure the thickness of non-magnetic materials (e.g. paint, plastic, porcelain enamel, copper, zinc, aluminium, chrome etc.) on magnetic materials (e.g. iron, nickle etc.). often used to measure the thickness of galvanizing layer, lacquer layer, porcelain enamel layer, phosphide layer, copper tile, aluminium tile, some alloy tile, paper etc.
* The N probes measure the thickness of non-magnetic coatings on non-magnetic metals. It is used on anodizing, varnish, paint, enamel, plastic coatings, powder, etc. applied to aluminum, brass, non-magnetic stainless steel, etc.

Fig-1 Information Form

3-1	Display
3-2	Data Cable Interface
3-3	Power / Zero
3-4	Battery Cover
3-5	Wrist Ring
3-6	Probes Inbuilt


4.Measuring Procedure
4.1 Press the power key to switch on the power and “0” shows up on the Display. The gauge will restore the state of last operation itself, with a symbol “Fe” or “NFe” indicating on Display. The gauge enters the auto mode which can automatically recognize the substrate itself.
4.2 Place the probe on a coating layer to be measured. The reading on the

* Automatic substrate recognition.
* Manual or automatic shut down.
* Wide measuring range and high resolution.
* Metric / Imperial conversion.
* Digital display gives exact reading with no guessing or errors.
* Can communicate with PC computer for statistics and printing by the optional USB cable or bluetooth adapter with Software.
2.Technical Parameters
Display: 4 digits LCD
Range : 0~500µm/0~20mil (other range may be specified)
Resolution: 0.1µm (0~100µm)
 1µm (over 100µm)
 0.1mil
Accuracy: ±1~5% n or 3.5µm or 0.1mil (Whichever is the greater)
Minimum Substrate Thickness: 0.3mm / 12mil

Display is the thickness of the coating layer.
4.3 To take the next measurement, just lift the probe to more than 1 centimeter and then repeat the step 4.2.
4.4 If you suspect the accuracy of measurement, you should calibrate before taking the measurements. For the calibration procedures, please refer to the calibration part 5.
4.5 The gauge can be switched off by pressing the Power key. On the other side, the gauge will power itself off about 50 seconds after the last operation.
4.6 To change the measurement unit “um” or “mil” by Depressing the Zero or Power key and not releasing it till “UNIT” on the Display. And the unit changes after releasing the power key. It takes about 6 seconds from starting depressing the Zero/Power key.
4.7 To change measurement mode

Minimum Convex Surface Diameter: 26mm / 1.02inch
Minimum Concave Surface Radius: 50mm / 1.97inch
Minimum Sample Diameter: 26mm / 1.02inch
Single / Continuous measurement
Operating condition:
Temp: 0~50°C (32~122°F)
Humidity: <80% RH
Size: 108x48x32mm 4.3x1.9x1.3inch
Power supply: 2x1.5V AAA Um-4 Battery
Weight: 55g (Not including batteries) 1.94oz
Standard Accessories
* Main Unit
* Calibration foils
* Substrate (Iron)
* Substrate (Aluminium)
* Carrying case
Optional Accessories
* USB data output

from the single to continuous or vice visa, just depressing the Zero/ Power key and not releasing it till “SC” on the Display. The measurement mode changes after releasing the Power key. It takes about 8 seconds from starting depressing Power key. It is a continuous mode if the symbol “(••)” on the Display.
5. Zero Calibration
5.1 Zero adjustment for “Fe” and “Nfe” should be carried out separately. Take the iron substrate if “Fe” on Display, while take the aluminium substrate if “NFe” on the Display. Place the probe on the substrate steadily. Press the Zero key and “0” will be on the Display before lifting the probe. If pressing the ZERO key but the probe is not placed on the substrate or an uncoated standard. The zero adjustment is invalid.
6. Battery Replacement
6.1 When it is necessary to replace the battery, i.e. battery voltage less than

approx.2.5v , the battery symbol “” will appear on the Display.

6.2 Slide the Battery Cover away from the instrument and remove the batteries.

6.3 Install the batteries (2x1.5v/UM-4) correctly into the case.

6.4 If the instrument is not to be used for any extended period , remove batteries.

7.Calibration Foils

7.1 As accessories, the instrument includes a different foil set for different ranges. Please see the following table.

Rang um	Standard Foil Included					
	CM 25	CM 50	CM 100	CM 200	CM 500	CM1000
0~200	X	X	X	X		
0~500		X	X	X	X	
0~1000		X	X	X	X	X
0~2000		X	X	X	X	X
Customized						

8.Considerations

8.1 In order to weaken the influence of the measured material on the accuracy of measurement, it is recommended that the calibrations should be done on the uncoated material to be measured.

8.2 Probes will eventually wear. Probe life will depend on the number of measurements taken and how abrasive the coating is. Replacement separate can be fitted by qualified persons only.