Coating Thickness Gauge
Instruction manual

CM-8801FN



The handheld digital thickness gauges can measure the coating and clad layer on metal in an accurate and fast way.

Fe type is used for measurement of non-magnetic coatings on ferromagnetic substrates .e.g., paint, porcelain, enamel, plastic, rubber, or electroplated coating of nonferrous metal like nickel-chromium, anticorrosive coating in chemical industry.

NFe type is used to for measurement of electrically non-conductive coatings on non-ferrous metals, e.g., paint, plastic coating and anodic oxide film on aircraft, car, home appliances, aluminum alloy door and window, or other aluminum product. When the coating has slightly electrical conductivity, and if the electrical conductivity of the coating and substrate differs at least 3 times, e.g., chrome layer on copper. Gage can measure it too, Stainless

Steel belong to this type not Fe type.

FN type combines two measuring probes in one meter. Gage automatically recognizes the substrate material. Depending on the substrate, the symbol FE (ferromagnetic material, e.g., iron and steel) or NFE (non-ferromagnetic material, e.g., aluminum, alloy) is displayed on the screen.

OPERATION:
Starting up: Gage automatically powers up when probe is pressed and automatically powers down after 30 seconds of inactivity.
Measurement: keep the probe on the coating and hold it steadily for a while till the buzzer sounds, take up the gage and read the measurement.
Note: remove gage from the surface for at least 2 seconds to take another measurement, don't drag gage against the surface.

MEASUREMENT UNITS:
Press the “μm/mil” button to convert from μm to mil and vice versa.

FLIP LCD DISPLAY:
Press the “FLIP”, to turn the display upside down for easy viewing when measurement is taken on top, side or bottom surface.

MEMORY:
Press “MEM”, a”0” displayed on the bottom of LCD, and the last 10 measurements can be checked by pressing the buttons “+”and”-”.

CALIBRATION SHIMS:
Available with the gage for calibration or self test. Also used for protection of probe on rough or hot surface.
Accuracy Check:
Accuracy check is the act of measuring known Calibration Standards and verifying that the results are within the tolerance of the Gage, e.g., the accuray is ± (3%+2μm) ,when measuring the 50μm shim, the result should be between 46-54μm, otherwise,

the gage need to be calibrated.

CALIBRATION
Gage is factory calibrated and performs an automatic self-check each time it takes a measurement. For many applications, it's only necessary to check is it zero on the uncoated substrate. If not, please do Zero calibration as follows:

Press “+” for 2 seconds, “000” displays on the screen, then take a normal measurement on uncoated metal substrates, the reading is calibrated to zero automatically.

But sometimes Gage readings can be influenced by changes in substrate shape, composition, and surface roughness or by measuring in a different location on the part, the measuring after zero calibration can still be not accurate, that is why calibration with standard shims is necessary:
CALIBRATION WITH

STANDARD SHIMS:
After measuring the calibration shims, press “MEM” till the buzzer sounds, then adjust the displayed reading to the expected value, by pressing “+” and ”-” buttons (to speed up adjustment by long press of those buttons), press “MEM” again to keep the calibration. 2 point calibration method can be used too; only need calibrate a thinner film and thicker film, or 1 point method to calibrate only one expected value that will use most.

RESTORE FACTORY DEFAULTS:
Press “-” for 2 seconds, “0, 00,000” is displayed on the screen, the function is useful when calibration is standard test shims is not possible or uncoated part is not available for zero calibration. After restore factory defaults, all the data will be deleted, it is necessary to do a zero calibration on the uncoated

substrate again.

Operating Temperature range:
0℃ to+50℃(32℉ to +120℉）
Note: Wait for a while till the temperature of the probe gets close to the environment temperature. Please ignore the previous results under the circumstance of temperature difference.

BATTERY REPLACEMENT:
Replace the battery cell(s) when “” is displayed on the screen, otherwise the measurement results may not be accurate. For the best results use only Alkaline AAA size batteries.

SPECIFICATION:
Range: 0-1250μm 0-50mils
Resolution: 1μm / 0.1mils
Accuracy: ± (3%+2μm) or
± （3%+0.1mils）
Size: 110mmx45mmx30mm
Product net weight: 68g (no battery)

Condition of Warranty
For this product, we provide a warranty of two years.
The period commences on the date of purchase from an authorized dealer, and the warranty is subject to the following condition;
1.During to warranty period we shall deal with complaints based on faulty manufacture by repair, replacement of defective parts or replacement by an identical flawless product at our own discretion.
2.Claims under warranty are null and void if the defect has been caused by improper handing and if the manufacturers has been serviced by unauthorized persons or workshops, or if the serial number has been obliterated.
3.Warranty claims can only made by submission of this warranty card which has been complete with date of purchase (Invoice), Model Number, and Serial Number.