

MATERIALS

- CMI233 Gage and Carrying Case
- ECP and/or SMP Probe
- 1/25 and 10/254 mil/um jacketed certified shims

OPERATING SPECIFICATIONS

ECP	Non-Conductive coatings over Non-Ferrous substrates ECP RANGE: 0 – 40mil/1016 um
SMP	Non-magnetic coatings over Ferrous substrates SMP-2 RANGE: 0 - 120 mil/3048 um SMP-1 RANGE: 0 – 50 mil/1270 um

MEASURE MODE

MODE	DISPLAY	MEASUREMENT
Regular	Numeric	Last reading passed to STATS
Continuous	InF	Probe in air, no reading
	Numeric	Probe on part, continuous reading not passed to STATS
Scan	ScAn	Probe in air, no reading
	Numeric	Probe moved across part for approx. 10 sec., average value passed to STATS
	dOnE	Beeps once, lift probe

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MEMORY STRUCTURE

- 99 memory channels store calibration and group statistics.
Locations 01-50 are for SMP, 51-99 are for ECP.
- Current location shown in the upper left of display.

CALIBRATING THE GAGE

1. The gage must be calibrated before using.
2. Connect probe to gage and power gage on.
3. Perform Base Calibration and Two-Point Shim
Calibration on a bare non-ferrous substrate for ECP, or
on a bare ferrous substrate for SMP.
4. For maximum accuracy, use a bare part of the same
geometry as the coated parts to be measured.

BASE CALIBRATION

1. Press **CAL** key
2. Place and hold probe on base material.
3. Press **ZERO** key, display will show 0.00
4. Lift probe from base material, unit beeps

TWO-POINT SHIM CALIBRATION

1. Press * and then **CAL**, display will show "c1"
2. Place probe on the 1 mil shim on the Base Calibration point,
- 3 Enter shim thickness, press **ENTER** and "c2" will display.
4. Place probe on the 10 mil shim on the Base Calibration
point, enter shim thickness and press **ENTER**.
5. The gage is now calibrated and ready to measure.

ONE-POINT STANDARD CALIBRATION (OPTIONAL)

If desired, the gage can auto-correct all measurements
based on a standard or a part of known thickness.

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1. Press **CAL** key
2. Place and hold probe on standard or part of known thickness, enter known thickness and press **ENTER**.
3. The gage is now calibrated and ready to measure coatings in the proximity of that thickness.

USING THE GAGE

1. After calibrating, connect probe and power gauge on.
2. Software version shown in the upper left of display and model **233** in the center of display.
3. Select Memory Location as shown below.
4. Select Measure Mode as shown below.
5. Select Units as shown below.
6. Place probe firmly on a flat area of the part to make a measurement.

SELECTING MEMORY LOCATION

1. Press SEL, location number and ENTER.
2. Or press SEL to scroll and ENTER to select.

SELECTING MEASURE MODE

Press C/M key to toggle between Regular, Continuous and Scan modes.

SELECTING UNITS

1. Press **UNITS** to toggle between MIL (mil = 1/1000 in) and UM (micrometer).
2. Units appear on right side of display.

USING STATS

1. Use the following keystrokes to display statistics of the stored readings at a memory location

STATISTIC IN MAIN DISPLAY	PRESS KEY	Lower Left Display
Number of Readings	N [9]	STAT M
High	HIGH [4]	STAT H
Low	LOW [5]	STAT L
Mean	MEAN [7]	STAT M
Standard Deviation	S.D. [8]	STAT S

2. Statistics are retained on power-down.
3. To clear all statistics of a memory location, press CLEAR, and CLEAR again, while a statistic is displayed.

ADDITIONAL FEATURES

The following features are described in the User Manual

- Change scan time to desired value 1 to 60 seconds.
- Set High and Low Limits.
- Use serial output capabilities.

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