

COATING THICKNESS GAUGE

General features and functions :

AR930/931 film/coating thickness gauge using magnetic induction thickness measurement method, the thickness equipment specially designed to perform small, fast, accurate and non-destructive thickness measurement of coating and plating on steel magnetic conductor. it is widely used on manufacturing, workshop, chemistry or quality measuring range.

1. Have automatic system error correction error and set zero function.
2. Single, Continuously and Deviation mode select function.
3. Maximum 15 record storage memory
4. Delete selected or all record.
5. Maximum/Minimum/Mean/Standard deviation record function.
6. Sound notice function.
7. Automatic turn off function.
8. Metric/ Imperial interchange function.

AR931 also have the following characteristic:

- ◆ Separate into display control box and sensor, easily for accurately measuring.
- ◆ Temperature display function
- ◆ Maximum 1000 record storage
- ◆ Has standard USB plug and computer software for user real time measure time

Measuring range : 0~1999 μm

Accuracy : $\pm(3\%H+1)$

Power supply: 9V alkaline battery

Technical Specifications:

Backlight display	√
Resolution	0.1 μm (<100 μm) ;1 μm (>100 μm)
Low battery indication	√

About the instrument calibration

There are two different calibration modes to suit the needs of the user. Zero point calibration and two point calibration. Moreover, there are one basic modes armed at sensor calibration.

1. Zero point calibration:
 - a. Measure the base material one time, The equipment display <X.Xum>.
 - b. Press and hold "SET" button until you hear a sound signal "Di" for complete signal.
 - c. Repeat the above procedure until obtain the base value less than 1um for improve the equipment accuracy.
2. Two point calibration:
 - a. Firstly, complete the zero point calibration:
 - b. Measuring on sheet metal gauge or other reference material one times, and the equipment display <X.Xum>.
 - c. Press "▲" or "▼" key modify to reference value. Then, press and hold "SET" key until hear a sound signal "Di" for complete signal. Also, user can repeat the "b" and "c" for accuracy improvement.
3. Grit coating surface calibration: (Grit coating surface will affect the result of measuring. Please following the below procedure for avoid the error.)
 - a. Firstly, complete the zero point calibration and two point calibration on same radius glossy reference material.
 - b. Measure on the non-grit coating surface around 10 times to get the mean value (Mo).
 - c. Then, measure on the grit coating surface around 10times to get the mean value(Mm)
 - d. (Mm-Mo) \pm S is the coating thickness, S(Standard error) is the maximum value of SMm and SMo.
4. Equipment basic calibration: (In following situation, we must proceed basic calibration)
 - Sensor head distortion.
 - Sensor after fixing.
 - Special usage

(If the measuring value obviously deviate the standard limit. The equipment need to recalibrate the sensor character. Who call "Equipment Basic calibration". The equipment can reset sensor character by 6 calibrations (1 zero reference point and 5 thickness reference point).

 - a. Turn off the equipment, Press and hold "V" key to turn on the equipment again. LCD will display "B- Calibrate"
 - b. Precede zero point calibration, it can repeat for accuracy zero reference point mean.
 - c. Use sheet metal gauge, complete 5 calibrations from lowest to highest. Each thickness must increase minimum 1.5 times, in ideal increase 2 times. Etc: 50, 100, 200, 400, 800um. The maximum value should lower and close by equipment maximum value.
 - d. When input all 6 calibration value, Retest zero point. The equipment will turn off automatically. Then, when you

AR930



AR931 Detached probe



USB 1.1

AR931 Accessory :

