



COATING THICKNESS GAUGE

ACT280 Coating thickness gauge

Features

- Two measuring methods: magnetic induction (F) and eddy current (N)
- 2 measurement modes: continuous / single
- 5 types of probes can be used (F400, F1, F10, N1, CN02);
- 5 statistical ways: Mean values / Max. values / Min. values / testing numbers.(No.) / standard deviations (S.DeV)
- 5 statistic values: mean value (MEAN) , max. value (MAX) , min. value (MIN) , numbers of measuring (NO.) , standard deviation (S. DEV);
- Direct testing mode and block statistics mode (APPL/BATCH)
- Direct print out of statistical values
- Low battery indication
- 2 switch off modes: manual and auto
- The instrument caters for the demands as follows:
GB/T 4956—1985 GB/T 4957—1985 JB/T 8393—1996
JJG 889—95 JJG 818—93
- Application fields : Electroplating industry, Spray-painting and plastic-painting industry ,Aluminum processing industry, Pipeline industry, Car manufacture industry Steel construction and color steel plate industry
- The ACT280 dataview software with USB interface is in the standard delivery for the customer



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Standard Configuration

Name	Quantity
ACT280	1
Probe	1
Standard test plate	5
Substrate	1
Carrying Case	1
Operation Manual	1

Optional Accessories

Designation	Model
Probes for other applications	F400, F1, F10, N1, CN02

Technical Specifications

Measuring range	Refer to the table below
Probes available	
Tolerance	
Minimum resolution:	
Measuring condition	
Operation language	English
Standards	DIN, ISO, ASTM,BS
Calibration	Zero and foil calibration
Statistics	Number of measurements, mean, standard deviation, maximum and minimum of 3000 readings
Data memory	495 readings
Humidity:	20% ~ 90%RH
Environment of application:	0-40°C (No strong magnetic field)
power supply	2 × 1.5V AA
Dimensions	1250mm × 67 mm × 31 mm
Weight	400g



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Optional probes and technical specification

Probe model		F400	F1	F1/90°	F5	F10	
Operating principle		Magnetic induction					
Measuring range (μm)		0 ~ 400	0 ~ 1250		0 ~ 5000	0 ~ 10000	
Low range resolution(μm)		0.1	0.1		1	10	
Accuracy	One-point calibration (μm)	± (3%H+1)			± (3%H+5)	± (3%H+10)	
	Two-point calibration (μm)	± ((1 ~ 3)%H+0.7)		± ((1 ~ 3)%H+1)	± ((1 ~ 3)%H+5)	± ((1 ~ 3)%H+10)	
Measuring conditions	Min curvature radius (mm)	Convex	1	1.5	Flatten	5	10
	Diameter of the min area (mm)	Φ3		Φ7	Φ7	Φ20	Φ40
	Critical thickness of substrate (mm)	0.2		0.5	0.5	1	2

Probe model		N400	N1	N1/90°	CN02	N10	
Operating principle		Eddy current					
Measuring range (μm)		0 ~ 400	0 ~ 1250		10 ~ 200	0 ~ 10000	
Low range resolution(μm)		0.1	0.1		1	10	
Accuracy	One-point calibration (μm)	± (3%H+0.7)	± (3%H+1.5)		± (3%H+1)	± (3%H+25)	
	Two-point calibration (μm)	± [(1 ~ 3)%H+0.7]	± [(1 ~ 3)%H+1.5]		—	± [(1 ~ 3)%H+25]	
Measuring conditions	Min curvature radius (mm)	Convex	1.5	3	Flatten	Only flatten	25
	Diameter of the min area (mm)	Φ4		Φ5	Φ5	Φ7	Φ50

Application of two measuring method :

● Magnetism method (F-probe)

The probe and the magnetic metal substrate will form a closed magnetic circuit when probe contacting with the coating. The magnetic resistance of closed magnetic circuit varies due to the existing of non-magnetic coating. The thickness of the coating can be measured through the variation of magnetic resistance.

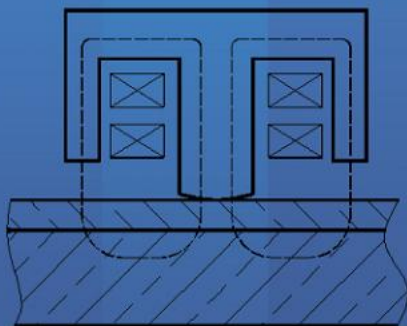


Fig. 1-1 principle of magnetism method

● Eddy current method (N-probe)

The high frequency alternating current generates an electromagnetic field in probe coil eddy current will be formed on metal substrate when the probe contacting with coating and the eddy current has an effect of feedback on the coil in probe. The thickness of the coating can be calculated through measuring the effect of feedback.

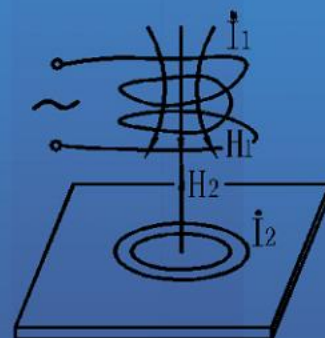


Fig. 1-2 principle of eddy current method