



**CM30 Series**

**Coating Thickness Gauge**

## CM30 Series Specification

### Principle of Measurement

Magnetic Principle (Fe) :

Measure the thickness of non-magnetic coatings (such as paint layer, various anticorrosive coating, coating, powder spraying, plastic, rubber, synthetic materials, phosphating layer, chromium, zinc, lead, aluminum, tin, cadmium, etc.) on ferromagnetic metal substrates.

Eddy Current Principle (NFe) :

Measure the thickness of all non-conductive coatings (such as rot coating, coating, powder coating, plastic, rubber, synthetic materials, oxide film, phosphating film) on non-ferromagnetic substrates like copper, aluminum and stainless steel.

### CM30 Characteristics

#### IP68 Waterproof and Dustproof

IP68 is the highest waterproof and dustproof grade. The whole gauge including the connector is waterproof and sealed. This appearance design makes the gauge sturdier and more durable. CM30 has passed the professional grade test of 2 meters' underwater depth and continuous immersion for half an hour by the authoritative organization, and reaches IP68 protection grade. It can be used in any harsh working environment.



#### Probe Selection

Coating Thickness Gauge CM30 is a full-range, multi-functional coating thickness gauge upgraded on the basis of CM10 series. It can be equipped with all the split probes of YUSHI INSTRUMENTS', and the user can choose one or more probes according to their needs.



F3  
(Magnetic)  
0~3000μm



N2  
(Eddy Current)  
0~2000μm



FN1.5  
(Magnetic/Eddy Current)  
0~1500μm



F10  
(Magnetic)  
0~10000μm

## Ingeniously crafted all-metal housing

Aluminum stretching integrated molding process with Anodized sandblasting is strong, wear-resistant and artistic. The back of the gauge adopts an Arc design which is ergonomic comfort. The window opening part of the screen adopts CNC processing method making the positioning more accurate. Four supporting points are added to both upper and lower covers of the instrument for smoothly placing.

## Functions

### Large Value Interface

2.4 inch 320x240 dots Array Color IPS screen, clear and bright. Eye-catching large Value interface: Large font display, Simple interface the reading is intuitive.



### Statistics Interface

The Statistics Interface consists of Measured Values and 6 Statistical Data (Number of testing, Average Value, Max Value, Min Value, Standard deviation and Variable-coefficient). Convenient to observe the change of testing data at any time.



### Tendency Chart Interface

The trend chart displays the latest 20 measurements, which shows the testing value and average value in real time.



### User debugging function

The user debugging function can calibrate the probe from several points to dozens of points according the requirement. Suitable for 4 kinds of probes with different testing principle. The measured value is accurate and stable.

N1.5		▲	
NO.	STD.	PERIOD	CHANGE
1	1500	228	-
2	1300	284	3.57
3	1000	413	2.31
4	500	859	1.11
5	241	1300	0.59
6	99.5	1659	0.39
7	48.6	1814	0.32
8	22.9	1895	0.32
9	0.0	1975	0.28
CANCEL		SAVE	

### File Management

It can store 200,000 testing values in 200 numbered files, in which can store 1000 values and the corresponding statistics per file. User can switch the file number as required. In Read Storage interface, the first page is statistic data, and other pages show 20 measurement values.

STATISTICS	
FILE:001	
NUM	23
MAX (um)	538
MIN (um)	20.8
AVG (um)	272
S.D (um)	76.9
C.V (%)	28.2
RETURN	

FILE:001		0001-0020	
NO.	VALUE	NO.	VALUE
A	268 um	K	283 um
B	268 um	L	272 um
C	255 um	M	260 um
D	281 um	N	284 um
E	270 um	O	284 um
F	282 um	P	261 um
G	20.8 um	Q	274 um
H	271 um	R	538 um
I	260 um	S	261 um
J	283 um	T	273 um
RETURN			

Technical Specifications	
Display	2.4 " (320×240) IPS Color LCD Screen
Working Principle	Magnetic/Eddy Current (Non-Magnetic)
Unit	Metric(Micrometer, Millimeter) / Imperial (Mils)
Resolution	High/Low (only in the Metric mode)
Language	Chinese / English
Storage Capacity	200 files, each file can store 1000 measurement values and 6 statistics
Backlight	Adjustable 6 levels(automatically, 100%,80%,60%,40%,20%,)
Power Off	Automatically shut down after 3 minutes without operation or shut down manually
Communication Interface	USB 2.0 Full Speed Interface
Power	Two 1.5V AA Batteries
Operation Time	20 Hours
Operating Environment	-10 to +50℃ Non-strong magnetic field environment
Dimension	121.5mm*63.5mm*31.5mm
Weight	317g (Exclude probe and batteries)

### Measurement Specifications

Model	CM30F	CM30N	CM30FH	CM30FN	
Probe Model	F3	N2	F10	FN1.5	
Working Principle	Magnetic	Eddy Current	Magnetic	Magnetic/ Eddy Current	
Measurement Range (μm)	0 ~ 3000	0 ~ 2000	0 ~ 10000	0 ~ 1500	
Resolution (μm)	0.1	0.1	0.1	0.1	
Indication Error (μm)	±(2%H+2)	±(2%H+2)	±(2%H+10)	±(2%H+2)	
Testing Conditions (mm)	Min. Radius of Curvature (Convex)	5	5	10	5
	Min. Area Diameter	Φ20	Φ20	Φ40	Φ20
	Base Material Critical Thickness	0.5	0.5	2	0.5

### Standard Configuration

CM30 Gauge	1	AA Battery	2	Zero Plate	1 (F,N,FH) 2 (FN)
USB Communication Cable	1	DataView Software (CD)	1	Probe	1
Operation Manual	1	Instrument Seal Box	1	Calibration Foil	5

### Optional Configurations

Probe (Including Calibration Foils)	F3	N2	FN1.5	F10
Zero Plate	Fe Zero Plate,Al Zero Plate			
Calibration Foil	Various thickness foils are available			