

The high efficiency type of 2 points adjustment "ZERO" and "STANDARD" adjustment methods applicable for standards, rules, used in public or private offices, laboratories, corporations and also international standards such as ASTM, ISO, etc.

SPECIAL FEATURES

1. Wide variety :

Selectable the most suitable type for use among various kinds of sensor types, measuring ranges, displays, etc.

2. Special electrode :

Further more accuracy by superprecise special processing in addition to the CVD treatment.

3. Multifunction and simple function :

Multifunction types are equipped with various functions requested for coating measurements and managements. Simple function types are laid emphasis on simple and easy operation.

4. Digital and analog :

Digital display types are easily readable without individual differences. Analog scale types are suitable for perceiving a coating thickness quantitatively.

5. Easy operation :

Large and easily readable display, key-layout, zero-standard adjustments by human engineering designs.

6. High reliability :

Anti-shock structure, special electrodes, highly reliable elements, durable cords and our after-service.

APPLICATIONS

● Electro-magnetic type :

For non-destructive measurements of the thickness of non-magnetic and non-conductive coatings and linings applied to magnetic metallic substrate including ferritic stainless steel.

● For magnetic metallic substrate :

- ▶ Paintings : Machines, automobiles, ships, buildings, bridges.
- ▶ Linings : Resin, tar epoxy, rubber, enamel, glass.
- ▶ Platings : Zinc, copper, chrome except electrolytic nickel.
- ▶ Metallikon, parkerizing, spray deposit coatings, oxide films.

● Eddy current type :

For non-destructive measurements of the thickness of non-conductive and anodic films applied to non-magnetic metallic substrate (aluminum, aluminum alloy, copper, austenitic stainless steel).

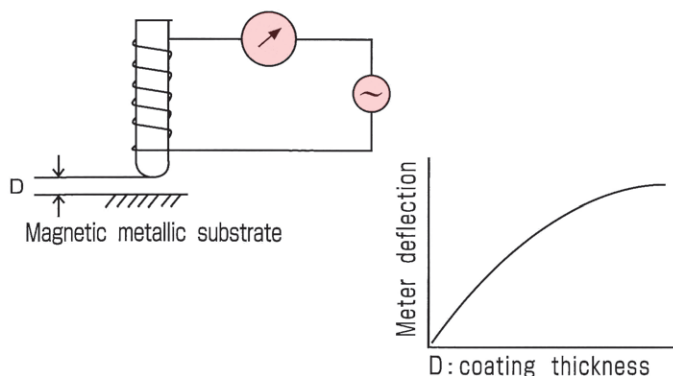
● For non-magnetic metallic substrate :

- ▶ Paintings : Building materials, vehicles, aircrafts, machines.
- ▶ Anodized coatings : Aluminum sashes, home electric products.
- ▶ Linings : Tanks, pools, chemical containers, rollers, machines.

PRINCIPLE

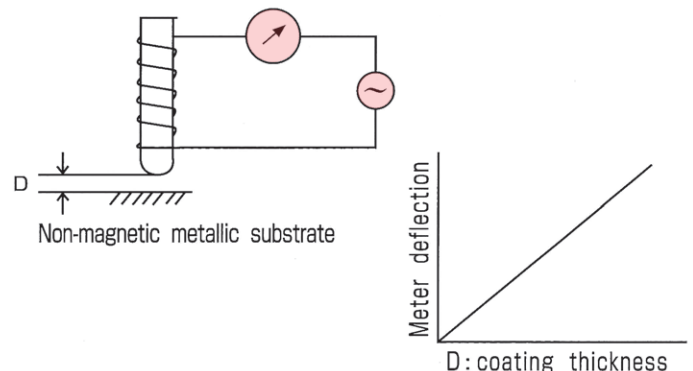
● Electromagnetic type :

When iron is moved toward or away from a steel core coil, self-inductance changes in accordance with distance. This principle is utilized to measure the thickness of non-magnetic coatings applied to magnetic metallic substrate.



● Eddy current type :

By utilizing the relativity between eddy current induced on the surface of metal by high frequency field of coil and distance to substrate from probe, the thickness of insulating coatings applied to non-magnetic metallic substrate can be measured with high accuracy.



SWT series



SWT-7000IV



SWT-7200IV

- All SWT-7000IV type probes (SFe/SNFe / SFN-325 type probes) are optional and interchangeable with SWT main units. Equipped with a function to convert the unit to "mil".
- Auto-Power-Off, USB data transfer and Tilt stand are equipped.
- SWT-7200IV is professional use with 10 calibration / 20,000 memory.

Specifications

Model	SWT-7000IV	SWT-7200IV
Range	Depending on optional probes	
Display	Graphic LCD (data, messages), Backup light	
Calibration	2 points (zeroing, thickness standards)	
Calibration curve	1	10
Measured value memory	Non	20,000
Data transfer	USB	
Statistics	Non	Built-in
Addition	<ul style="list-style-type: none"> • Backup light • Measurement mode switching (hold/non-interrupt) • Calibration curve: value deletion • Auto-Power-Off (3 min.) • Tilt stand • Display resolution switching • Limits-value setting (SWT-7200IV) 	
Power source	Dry Battery (LR6 × 2), AC adaptor Continuous operation hours: 50 hrs.	Dry Battery (LR6 × 2), AC adaptor Continuous operation hours: 25 hrs.
Temperature	0~40°C (Non-condensing)	
Dimensions & Weight	72 (W) × 30 (H) × 156 (D) mm, about 200 g	
Accessories	Dry battery, Carrying case, Hand strap cord, Inspection certificate, CD (Instruction manual, USB driver, etc.)	Dry battery, Carrying case, Hand strap cord, Inspection certificate, AC adaptor, USB cable, CD (Instruction manual, USB driver, etc.)
Probe (Probe must be ordered separately)	Probe for ferrous (SFe), Probe for non-Ferrous (SNFe), Dual probe for Fe and NFe metal substrates (SFN-325)	

SWT-7000IV series + SFN-325

- The pair set provide you with Dual use for both Ferrous (Fe) and Nonferrous (NFe) coating metal substrates with Auto-Detection / Setting function.
- SFN-325 automatically checks and identifies Ferrous or Nonferrous metal of coating substrates for self-setting.



Probe SFN-325

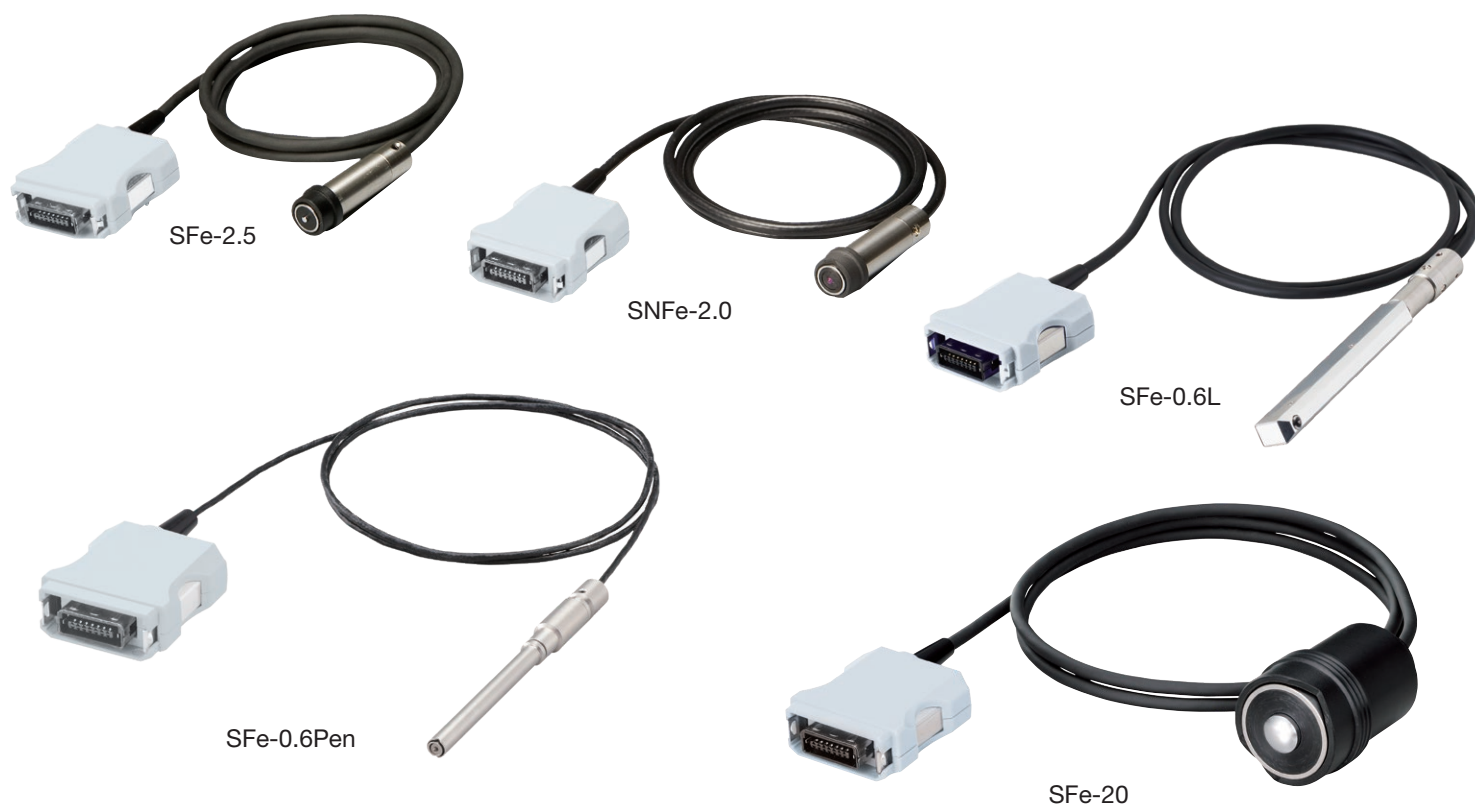


Specifications of SFN-325 (exclusive for SWT-7000IV series only)

Model	SFN-325
Method	Dual (Electromagnetic/Eddy current) type (auto-selection for Fe/NFe)
Range	Fe: 0~3.00mm, NFe: 0~2.50mm
Resolution	1 μm : 0~999 μm 0.01 mm: 1.00~3.00 mm (Fe), 1.00~2.50 mm (NFe) by switching 0.1 μm : 0~400 μm , 0.5 μm : 400~500 μm
Accuracy (to flat, smooth face)	0~100 μm : $\pm 1 \mu\text{m}$ or $\pm 2\%$ of reading 101 μm ~3.00 mm: $\pm 2\%$ (Fe) 101 μm ~2.50 mm: $\pm 2\%$ (NFe)
Probe	One point contact constant pressure type, V-cut about $\phi 15 \times 51 \text{ mm}$
Option	V type probe adaptors*
Accessories	Thickness standards, Zero plates for testing (Fe/NFe)
Measuring object	Fe: coating, lining, thermal spray film, plating (except electrolyte nickel plating), etc. on magnetic metal substrate like iron, steel. NFe: relatively general use objects like insulated films on non-magnetic metal substrate like aluminum, copper, etc.

※: V type probe adaptor has 3 different sizes, (for $\phi 5$ or less, $\phi 5 \sim 10$, $\phi 10 \sim 20$).

SWT series probes



Specifications of SWT (Fe probes)

Model	SFe-2.5 ^{※1} /SFe-2.5L	SFe-2.5LwA	SFe-0.6Pen
Method	Electromagnetic type		
Range	0~2.50 mm		0~600 μ m
Resolutions	1 μ m: 0~999 μ m 0.01 mm: 1.00~2.50 mm by switching 0.1 μ m: 0~400 μ m 0.5 μ m: 400~500 μ m		1 μ m: 0~600 μ m by switching 0.1 μ m: 0~400 μ m 0.5 μ m: 400~500 μ m
Accuracy (to flat, smooth face)	0~100 μ m: $\pm 1 \mu$ m or $\pm 2\%$ of reading 101 μ m~2.50 mm: $\pm 2\%$		0~100 μ m: $\pm 1 \mu$ m or $\pm 2\%$ of reading 101~600 μ m: $\pm 2\%$
Probe	One point contact constant pressure type, V-cut SFe-2.5: about $\phi 15 \times 47$ mm SFe-2.5L: about $18 \times 22 \times 67$ mm	One point contact constant pressure type Measuring part: about $24 \times 27 \times 56$ mm Full length (flexible): about 546~1,530 mm	One point contact constant pressure type, V-cut about $\phi 5.5 \times 92.5$ mm
Options	V type probe adaptors ^{※2} /—	—	
Accessories	Thickness standards, Zero plates for testing (Fe)	Thickness standards, Zero plates for testing (Fe), Carrying case	Thickness standards, Zero plates for testing (Fe)
Measuring objects	Coating, lining, thermal spray films, plating (except electrolyte nickel plating), etc. on magnetic metal substrate like iron, steel.	For coating thickness on remote, unreachable place of coating, lining on magnetic metal substrate like iron, steel.	Coating, lining, thermal spray film, plating (except electrolyte nickel plating), etc. on magnetic metal substrate like iron, steel. Small parts, narrow places, and so on.

Probe must be ordered separately.

※1: Heat-resistant (about 200°C for probe SFe - 2.5)

※2: 3 kinds of V type probe adaptors (less $\phi 5$, $\phi 5\sim 10$, $\phi 10\sim 20$)

Specifications of SWT (Fe probes)

Model	SFe-0.6L	SFe-10	SFe-20
Method	Electromagnetic type		
Range	0~600 μm	0~10 mm	0~20 mm
Resolutions	1 μm : 0~600 μm by switching 0.1 μm : 0~400 μm 0.5 μm : 400~500 μm	1 μm : 0~999 μm 0.01 mm: 1~10 mm	1 μm : 0~999 μm 0.01 mm: 1~5 mm 0.1 mm: 5~20 mm
Accuracy (to flat, smooth face)	0~100 μm : $\pm 1 \mu\text{m}$ or $\pm 2\%$ of reading 101~600 μm : $\pm 2\%$	0~3mm: $\pm(5\mu\text{m} + 3\% \text{ of reading})$ 3.01mm or over: $\pm 3\%$	
Probe	One point contact constant pressure type, about 8×13.5×119mm (Minimum measuring Diameter $\phi 16$)	One point contact constant pressure type, V-cut $\phi 21 \times 47 \text{ mm}$	One point contact constant pressure type, V-cut $\phi 35 \times 55 \text{ mm}$
Accessories	Thickness standards, Zero plates for testing (Fe)		
Measuring objects	Coating, lining, thermal spray film, plating (except electrolyte nickel plating), etc. on magnetic metal substrate like iron, steel. Inside of a small diameter tubes, narrow places, and so on.	On magnetic metal substrate like iron, steel For relatively thicker objects	On magnetic metal substrate like iron, steel For thick objects

Probe must be ordered separately.

Specifications of SWT (NFe probes)

Model	SNFe-2.0 ^{※1} /2.0L	SNFe-0.6	SNFe-5	SNFe-8
Method	Eddy current			
Range	0~2.00 mm	0~600 μm	0~5.00 mm	0~8.00 mm
Resolutions	1 μm: 0~999 μm 0.01 mm: 1.00~2.0 mm by switching 0.1 μm: 0~400 μm 0.5 μm: 400~500 μm	1 μm: 0~600 μm by switching 0.1 μm: 0~400 μm 0.5 μm: 400~500 μm	1 μm: 0~999 μm 0.01 mm: 1~5 mm	1 μm: 0~999 μm 0.01 mm: 1~8 mm
Accuracy (to flat, smooth face)	0~100 μm: ±1 μm or ±2% of reading 101 μm~2.0 mm: ±2%	0~100 μm: ±1 μm or ±2% of reading 101~600μm: ±2%	0~3 mm: ±(5 μm + 3% of reading) 3.01mm or over: ±3%	
Probe	One point contact constant pressure type, V-cut SNFe-2.0: about ϕ 15 × 47 mm SNFe-2.0L: about 18 × 22 × 67 mm	One point contact constant pressure type, V-cut about ϕ 13 × 45.5 mm	One point contact constant pressure type, V-cut about ϕ 20.5 × 47 mm	One point contact constant pressure type, V-cut about ϕ 35 × 59 mm
Options	V type probe adaptors ^{※2} /—	—		
Accessories	Thickness standards, Zero plates for testing (NFe)			
Measuring objects	Insulated films on non-magnetic substrate metal like aluminum, copper, etc.			
	Relatively general use objects	For high stability with narrow bars, small tubes, minute pieces	For relativfely thicker objects	

Probe must be ordered separately.

※: V type probe adaptors (3 kinds: less $\phi 5$, $\phi 5 \sim 10$, $\phi 10 \sim 20$) can be used with SNFe-2.0.

SAMAC series

Electromagnetic/Eddy Current Coating Thickness Meters

SAMAC-F is for ferrous metal substrates.

SAMAC-FN and SAMAC-Pro are Dual use for Ferrous / Nonferrous coating metals with Auto-Detection / Setting Function .



SAMAC-F · SAMAC-FN



SAMAC-Pro



Detachable stable legs with strap

SANMAC-F/FN/Pro are Probe built-in, Easy-to-Operate, Compact grip sized types with a Big display, Backup light. SAMAC-Pro is professional use with 10 calibration / 20,000 memory.

Specifications

Model	SAMAC-F	SAMAC-FN	SAMAC-Pro
Method	Electromagnetic		Electromagnetic/Eddy current/Dual
Range	0~2.5 mm	0~2.5 mm (Fe) / 2.0 mm (NFe)	
Display	Graphic LCD (data, messages), Backup light		
Resolutions	1 μm: 0~999 μm by switching 0.1 μm: 0~400 μm、 0.5 μm: 400~500 μm 0.01 mm: 1.00~2.50 mm	1 μm: 0~999 μm (Fe/NFe substrates) by switching 0.1 μm: 0~400 μm (Fe/NFe substrates) 0.5 μm: 400~500 μm (Fe/NFe substrates) 0.01 mm: 1.00~2.50 mm (Fe substrate) 0.01 mm: 1.00~2.00 mm (NFe substrate)	
Accuracy (perpendicularly on flat face)	0~100 μm: ±1 μm or ±2% of reading 101 μm~2.5 mm: ±2%	0~10 0μm: ±1 μm (Fe/NFe substrates) or ±2% of reading 101 μm~2.5 mm: ±2% (Fe substrate) 101 μm~2.0 mm: ±2% (NFe substrate)	
Probe	One point contact constant pressure type, with Cross V-cut Measuring part: φ28mm Probe part: φ10mm		
Additional function	① Switching of measuring mode (hold/non-interruption) ③ Backup light		② Auto-Power-OFF ④ Switching of Display Resolutions
			⑤Switching of display (main / sub.) ⑥Deletion of calibration values ⑦Calibration 10 ⑧Upper/lower limit setting (alarm / calib.) ⑨Statistical calculations ⑩USB connection
Power source	3 V DC (LR03 × 4), Continuous operation hours: 25 hours		
Temperature	0~40℃ (Non-condensing)		
Dimensions & Weight	63 (W) × 84 (H) × 30 (D) mm, about 125 g		
Accessories	Dry battery, Carrying case, Hand strap cord, Inspection certificate, CD (Instruction manual, USB driver, etc.)		Dry battery, Carrying case, Hand strap cord, Inspection certificate, USB cable, CD (Instruction manual, USB driver, etc.)

Electromagnetic Current Coating Thickness Meters

Pro-S/W

Specifications

Range	0~500 μm , 0.2~5 mm
Accuracy	$\pm 2 \mu\text{m}$ against uniform surface or $\pm 5\%$ of reading (whichever is larger)
Dimensions and weight	110 (W) $\times$ 50 (H) $\times$ 137 (D) mm, 470 g



SL-120C

Specifications

Range	Range I (upper): 2~15 mm Range II (middle): 0.2~3 mm Range III (lower): 0~0.3 mm
Accuracy	$\pm 5\%$ of reading on uniform surface
Dimensions and weight	190 (W) $\times$ 130 (H) $\times$ 80 (D) mm, 2 kg



SL-5P

Specifications

Range	Standard: 0~1 mm
Accuracy	$\pm 2 \mu\text{m}$ against uniform surface or $\pm 5\%$ of reading (whichever is larger)
Dimensions and weight	190 (W) $\times$ 90 (H) $\times$ 120 (D) mm, 1.8 kg



SL-200E

Specifications

Range	2 steps scale Upper 0~50 μm , Lower 0~500 μm
Accuracy	$\pm 1 \mu\text{m}$ on uniform surface or $\pm 2\%$ of reading
Dimensions and weight	190 (W) $\times$ 90 (H) $\times$ 120 (D) mm, 1.8 kg



TL-50

Specifications

Range	0.1~5 mm
Accuracy	$\pm 1 \mu\text{m}$ on uniform surface or $\pm 2\%$ of reading
Dimensions and weight	170 (W) $\times$ 130 (H) $\times$ 80 (D) mm, 1.7 kg



Electromagnetic Current Coating Thickness Meters

SM-Pen (Build to Order)

Specifications

Range	μm : 0~300 μm mm: 0~5 mm
Accuracy	$\pm 2 \mu\text{m}$ on uniform surface or $\pm 5\%$ of reading
Probe	Pen type Electrode: CVD treated ultra anti-abrasive electrode Dia of tip: $\phi 2.6 \text{ mm}$ Length of tip: $4.3 \pm 0.3 \text{ mm}$ Dia of holder: $\phi 11 \text{ mm}$ Length of holder: 130 mm
Power source	DC: Dry batteries R03 (1.5V) $\times$ 6 pcs. (with Auto power OFF function) AC: AC100V 50/60Hz (with optional AC adapter)
Dimensions and weight	105 (W) $\times$ 48 (H) $\times$ 165 (D) mm, 500 g (Including batteries)
Accessories	Standard thickness plate, Dial cover, Carrying case



SP-3300D

Specifications

Range	0~300 μm (Special order: 0~500 μm)
Accuracy (perpendicularly on flat face)	$\pm 1 \mu\text{m}$ to a flat level or $\pm 2\%$ the indicated value
Power source	AC100V~240V, Exclusive AC adapter
Dimensions and weight	190 (W) $\times$ 54 (H) $\times$ 200 (D) mm, 1 kg



SANKO LINE OF BUSINESS

- Coating thickness meter
(DUAL TYPE, Electro-magnetic & Eddy current)
- Electric moisture meter
(for Wood, Paper, Mortar, Plaster)
- Pinhole / Holiday detectors
(High voltage spark type and dampened type)
- Infrared moisture meters
- Needle and Iron piece detectors



SANKO ELECTRONIC LABORATORY CO., LTD.