



財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

(Certificate No : L2297-241205)

This is to certify that

Measurement Technology Co.,Ltd Calibration Laboratory of Hsinchu Service Department

Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.)

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017 ; CNS 17025:2018

Accreditation Number : 2297

Originally Accredited : November 17, 2010

Effective Period : November 18, 2022 to November 17, 2025

Accredited Scope : Calibration Field, see described in the Appendix



Scan to verify

Yi-Ling Chen

Yi-Ling Chen
President, Taiwan Accreditation Foundation
December 05, 2024

Accreditation Number : 2297

Laboratory Head : WANG, Jo-Fan

Length

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units		value	units
KA2003 Caliper (Digimatic)	GAUGE BLOCK SET (KERN/87PCS)	Caliper Calibration Procedure/	0	mm	300	mm	outside (Digimatic) (resolution: 0.01 mm)	0.03	mm
	CALIPER CHECKER (Mitutoyo/515-550)	Document No: MT-C-111-009	0	mm	250	mm	inside (Digimatic) (resolution: 0.01 mm)	0.03	mm

Approval Signatory: MA, Chao-Pang

Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)

KA2010 Dial & Digital Indicator	Dial Calibrator (SYLVAC/M3)	Calibration Procedure of Dial & Digital Indicator/ Document No: MT-C-111-008	0	mm	25	mm	resolution: 0.01mm	0.01	mm
			0	mm	25	mm	resolution: 0.001mm	0.004	mm

Approval Signatory: MA, Chao-Pang

Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)

KA3016 Electronic Level Meter	Digital Indicator (Sylvac /25mm-0.001/1"- 0.00005) Angle Generator (OPUS /OL-301) Angle Generator (GSA ⁺ /CNC-120R)	Calibration Procedure for Electronic Level Meter (Document No.: MT-C-95-148)	-0.573	°	+0.573	°	resolution: 0.001°	0.002	°
			-90	°	+90	°	resolution: 0.01°	0.02	°
			-90	°	+90	°	resolution: 0.1°	0.2	°

Approval Signatory: MA, Chao-Pang; PENG, Chiao

Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)



Vibration & Acoustics

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty			
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units		
KB1001 Accelerometer	Standard Accelerometer (PCB /353B33)	Document No.: MT-C-101-043		V/ (m/s ²)		V/ (m/s ²)	Voltage Sensitivity 3.54 m/s ² (@20 Hz to 40 Hz)	3.5	%		
				V/ (m/s ²)		V/ (m/s ²)	Voltage Sensitivity 10 m/s ² (@50 Hz to 2000 Hz)	4.7	%		
				V/ (m/s ²)		V/ (m/s ²)	Voltage Sensitivity 100m/s ² (@3000 Hz to 5000 Hz)	5.3	%		
Approval Signatory: MA, Chao-Pang											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KB1002 Vibration Meter	Standard Accelerometer (PCB /353B33)	Document No.: MT-C-101-044	2	m/s ²	50	m/s ²	Vibration Acceleration: (@20 Hz to 1000 Hz)	3.8	%		
			5	mm/s	80	mm/s	Vibration Speed: (@20 Hz to 1000 Hz)	3.9	%		
			20	μm	800	μm	Vibration Displacement: (@20 Hz to 200 Hz)	4.7	%		
Approval Signatory: MA, Chao-Pang											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KB2099 Sonic Belt Tension Meter	Frenquency Counter (AGILENT /53181A)	Calibration Procedure for Sonic Belt Tension Meter (Document No.: MT-C-95-083)	20	Hz	<1000	Hz	Resolution: 0.1	0.2	Hz		
	Function/Arbitrary Waveform Generator (AGILENT /33220A)		1000	Hz	4000	Hz	Resolution: 1	1	Hz		
Approval Signatory: MA, Chao-Pang											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

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Temperature/Humidity

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			brand /model	document name /no.	minimum value	units		explanation	value
KE1006 Digital Temperature Indicator (on-site calibration included)	Calibrator (FLUKE /5500A)	TEMPERATURE CALIBRATOR/DISPLAY CALIBRATION PROCEDURE (Document No.: MT-C-100-005)	-100	°C	1350	°C	K Type Thermocouple	0.53	°C
			-100	°C	1200	°C	J Type Thermocouple	0.53	°C
			-100	°C	1000	°C	E Type Thermocouple	0.36	°C
			-200	°C	400	°C	T Type Thermocouple	0.51	°C
			0	°C	1750	°C	R Type Thermocouple	2.7	°C
			0	°C	1750	°C	S Type Thermocouple	2.7	°C
			-100	°C	1300	°C	N Type Thermocouple	0.52	°C
			-100	°C	800	°C	PRT (385, 3916, 3926)	0.36	°C
Approval Signatory: WANG, Jo-Fan									
KE1009 Temperature Calibrator (on-site calibration included)	Calibrator (FLUKE /5500A)	TEMPERATURE CALIBRATOR/DISPLAY CALIBRATION PROCEDURE (Document No.: MT-C-100-005)	-100	°C	1350	°C	K Type Thermocouple	0.48	°C
			-100	°C	1200	°C	J Type Thermocouple	0.53	°C
			-100	°C	1000	°C	E Type Thermocouple	0.36	°C
			-200	°C	400	°C	T Type Thermocouple	0.50	°C
			0	°C	1750	°C	R Type Thermocouple	2.8	°C
			0	°C	1750	°C	S Type Thermocouple	2.7	°C
			-100	°C	1300	°C	N Type Thermocouple	0.57	°C
			-100	°C	800	°C	PRT (385, 3916, 3926)	0.33	°C
Approval Signatory: WANG, Jo-Fan									
KE1010 Temperature Controlled Chamber (on-site calibration included)	Thermocouple Thermometer ANRITSU /AM-9100K TYPE K	In-house method: Temperature Chamber Calibration Procedure (Document No.: MT-C-113-003)	-20	°C	350	°C		3.0	°C
Approval Signatory: WANG, Jo-Fan; MA, Chao-Pang; PENG, Chiao									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KE1099 Surface Thermometer	PLATINUM RESISTANCE THERMOMETER (FLUKE /5618B) Digital Thermometer (FLUKE /1529)	SURFACE THERMOMETER CALIBRATION PROCEDURE (Document No: MT-C-96-006)	-20	°C	400	°C		0.55	°C

Approval Signatory: MA, Chao-Pang

Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)

Electricity

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KF1001 DCV Source DC Voltmeter (on-site calibration included)	Calibrator (FLUKE /5730A) Multimeter (FLUKE /8588A) Multimeter (KEYSIGHT /34420A)	DC VOLTAGE MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-002)	0.1 >1 >10 >100 0.1 >1 >10 >100	mV mV mV mV mV mV mV mV	1 10 100 1000 1 10 100 1000	mV mV mV V mV mV mV V	DC Volt Source DC Volt Source DC Volt Source DC Volt Source DC Volt Meter DC Volt Meter DC Volt Meter DC Volt Meter	15 0.19 65 29 24 4.1 0.97 47	mV/V mV/V μV/V μV/V mV/V mV/V mV/V μV/V

Approval Signatory: WANG, Jo-Fan



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units		value	units
KF1002 DCA Source DC Ampere meter (on-site calibration included)	Calibrator (FLUKE /5730A) SUB-FEMTOAMP REMOTE SOURCEMETER (KEITHLEY /6430) Multimeter (FLUKE /8588A) Calibrator (FLUKE /5500A)	DC CURRENT MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-003)	10	pA	10	pA	DC Current Source	6.7	mA/A
			100	pA	100	pA	DC Current Source	2.2	mA/A
			1	nA	1	nA	DC Current Source	0.86	mA/A
			10	nA	10	nA	DC Current Source	0.85	mA/A
			100	nA	100	nA	DC Current Source	0.86	mA/A
			1	µA	1	µA	DC Current Source	0.95	mA/A
			10	µA	10	µA	DC Current Source	0.81	mA/A
			100	µA	100	µA	DC Current Source	0.37	mA/A
			>100	µA	1	A	DC Current Source	0.49	mA/A
			>1	A	10	A	DC Current Source	4.1	mA/A
			10	pA	10	pA	DC Current Meter	6.7	mA/A
			100	pA	100	pA	DC Current Meter	2.2	mA/A
			1	nA	1	nA	DC Current Meter	0.86	mA/A
			10	nA	10	nA	DC Current Meter	0.85	mA/A
			100	nA	100	nA	DC Current Meter	0.86	mA/A
			1	µA	1	µA	DC Current Meter	0.95	mA/A
			10	µA	10	µA	DC Current Meter	0.81	mA/A
			100	µA	100	µA	DC Current Meter	0.37	mA/A
			>100	µA	1	A	DC Current Meter	0.59	mA/A
			>1	A	10	A	DC Current Meter	4.1	mA/A
Approval Signatory: WANG, Jo-Fan									

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

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calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		explanation	value
KF1011 ACV Source AC Voltmeter (on-site calibration included)	Calibrator (FLUKE /5730A) Multimeter (FLUKE /8588A)	AC VOLTAGE MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-004)	1	mV	10	mV	AC Volt Source (@60 Hz, 1 kHz)	2.8	mV/V
			>10	mV	100	mV	AC Volt Source (@60 Hz, 1 kHz)	1.8	mV/V
			>100	mV	1000	V	AC Volt Source (@60 Hz, 1 kHz)	0.72	mV/V
			1	mV	10	mV	AC Volt Meter (@60 Hz, 1 kHz)	11	mV/V
			>10	mV	100	mV	AC Volt Meter (@60 Hz, 1 kHz)	2.1	mV/V
			>100	mV	1000	V	AC Volt Meter (@60 Hz, 1 kHz)	0.81	mV/V
Approval Signatory: WANG, Jo-Fan									
KF1012 ACA Source AC Ampere meter (on-site calibration included)	Calibrator (FLUKE /5730A) Multimeter (FLUKE /8588A) Calibrator (FLUKE /5500A)	AC CURRENT MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-005)	10	µA	1	A	AC Current Source (@60 Hz, 1 kHz)	4.1	mA/A
			>1	A	10	A	AC Current Source (@60 Hz)	7.3	mA/A
			10	µA	1	A	AC Current Meter (@60 Hz, 1 kHz)	3.2	mA/A
			>1	A	10	A	AC Current Meter (@60 Hz)	16	mA/A
Approval Signatory: WANG, Jo-Fan									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units		value	units
KF3001 Resistor Ohmmeter (on-site calibration included)	Calibrator (FLUKE /5500A) Multimeter (FLUKE /8588A) Multimeter (KEITHLEY /6517B) Resistance Decade Box (IET /HARS-X-3-0.001) Resistance Decade Box (IET /HRRS-B-3-100M) Resistance Decade Box (IET /HRRS-F-4-1G-5kV)	DC RESISTANCE MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-006)	1	mΩ	10	mΩ	Resistor	8.8	mΩ/Ω
			>10	mΩ	1	Ω	Resistor	7.4	mΩ/Ω
			>1	Ω	100	kΩ	Resistor	0.12	mΩ/Ω
			>100	kΩ	100	MΩ	Resistor	0.44	mΩ/Ω
			>100	MΩ	1	GΩ	Resistor	9.7	mΩ/Ω
			>1	GΩ	100	GΩ	Resistor	10	mΩ/Ω
			1	mΩ	10	mΩ	Resistance Meter	25	mΩ/Ω
			>10	mΩ	1	Ω	Resistance Meter	9.4	mΩ/Ω
			>1	Ω	100	kΩ	Resistance Meter	1.1	mΩ/Ω
			>100	kΩ	100	MΩ	Resistance Meter	5.9	mΩ/Ω
			>100	MΩ	1	GΩ	Resistance Meter	14	mΩ/Ω
			>1	GΩ	100	GΩ	Resistance Meter	20	mΩ/Ω
Approval Signatory: WANG, Jo-Fan									

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Electromagnetics

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty			
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units		
KG3005 Filter	Filter (Newport/FSQ-ND15)	Calibration Procedure for Transmittance (Document No.: MT-C-110-003)	1	%	100	%	Transmittance	0.39	%		
	Filter (Newport/FSQ-ND03)		1	%	100	%	Spectral Transmittance, wavelength: 380 nm to 780 nm	0.48	%		
Approval Signatory: PENG, Chiao											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KG3014 White Plate	White Plate (KONICA MINOLTA /CM-A139)	Calibration Procedure for Reflectance (Document No.: MT-C-110-002)	(0, 0)		(1, 1)		(x, y) de: 8°	(0.0006, 0.0006)			
			1		100		CIELAB L* de: 8°	0.20			
			(-500, - 200)		(500, 200)		(a*, b*) de: 8°	(0.26, 0.29)			
Approval Signatory: PENG, Chiao											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KG3017 White Plate	White Plate (KONICA MINOLTA/CM-A139)	Calibration Procedure for Reflectance (Document No.: MT-C-110-002)	1		100		Reflectance Factor de: 8°	0.27			
			0.01		1		Spectral Reflectance Factor de: 8°, wavelength: 400 nm to 740 nm	0.0074			
Approval Signatory: PENG, Chiao											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											



Time And Frequency

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty			
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units		
KJ0100 Stopwatch	Rubidium Frequency Standard (SRS /FS-725)	STOPWATCH CALIBRATION PROCEDURE (Document No.MT-C-95-040)	32768	Hz	32768	Hz	Time Base Comparison	1.4 E-05			
<u>Approval Signatory: WANG, Jo-Fan</u>											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KJ0200 Frequency Counter	Rubidium Frequency Standard (SRS /FS-725)	FREQUENCY COUNTER CALIBRATION PROCEDURE (Document No.: MT-C-98-002)	0.1	Hz	1	Hz		3.7 E-09			
			> 1	Hz	6	GHz		2.0 E-09			
<u>Approval Signatory: PENG, Chiao</u>											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KJ0200 Frequency Source	Rubidium Frequency Standard (SRS /FS-725)	FREQUENCY SIGNAL CALIBRATION PROCEDURE (Document No.: MT-C-98-001)	0.1	Hz	1	Hz		6.1 E-09			
			> 1	Hz	6	GHz		2.0 E-09			
<u>Approval Signatory: PENG, Chiao</u>											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											
KJ0300 Rotation Device (on-site calibration included)	Tachometer (HIOKI /FT3406)	ROTATION DEVICE CALIBRATION PROCEDURE (Document No.: MT-C-102-032)	30	rpm	14000	rpm	Rotating Speed	2.2	rpm		
<u>Approval Signatory: WANG, Jo-Fan; PENG, Chiao</u>											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											

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calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty			
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units		
KJ0300 Tachometer stroboscope	Function Generator (KEYSIGHT /33521B) Frequency Counter (KEYSIGHT /53230A)	TACHOMETER CALIBRATION PROCEDURE (Document No.: MT-C-101-057)	6	rpm	600	rpm	Tachometer	0.07	rpm		
			>600	rpm	30000	rpm	Tachometer	0.67	rpm		
			>30000	rpm	90000	rpm	Tachometer	0.77	rpm		
			100	rpm	25000	rpm	Stroboscope	0.77	rpm		
Approval Signatory: PENG, Chiao											
Calibration Site: 1.Bldg 53, Room 221, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C.) ; 2.Bldg 53, Room 216, 195, Sec.4 Chung Hsing Rd., Chutung, Hsinchu, Taiwan (R.O.C)											

Note : Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence.
(Null Below)

