



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

Certification Accreditation

(Certificate No: L2297-230316)

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

Ching-Chang Lien

Ching-Chang Lien
President, Taiwan Accreditation Foundation
March 16, 2023

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	explanation	value	units
KA3016 Electronic Level Meter	Digital Indicator	Calibration Procedure for Electronic Level Meter (Document No.: MT-C-95-148)	-0.573	°	+0.573	°	resolution: 0.001°	0.002	°
	(Sylvac/25mm-0.001/1"-0.00005)		-90	°	+90	°	resolution: 0.01°	0.02	°
	Angle Generator (OPUS/OL-301) Angle Generator (GSA^+/CNC-120R)		-90	°	+90	°	resolution: 0.1°	0.2	°
Approval Signatory: MA, Chao-Pang; PENG, Chiao									



Vibration & Acoustics

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			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									
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 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
KB2099 Sonic Belt Tension Meter	Frenquency Counter (AGILENT/53181A) Function/Arbitrary Waveform Generator (AGILENT/33220A)	Calibration Procedure for Sonic Belt Tension Meter (Document No.: MT-C-95-083)	20	Hz	<1000	Hz	Resolution: 0.1	0.2	Hz
			1000	Hz	4000	Hz	Resolution: 1	1	Hz
Approval Signatory: MA, Chao-Pang									

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	maximum value	units	explanation	value	units
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									



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
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									
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									



Electricity

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		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	mV	1	mV	DC Volt Source	15	mV/V
			>1	mV	10	mV	DC Volt Source	0.19	mV/V
			>10	mV	100	mV	DC Volt Source	65	μV/V
			>100	mV	1000	V	DC Volt Source	29	μV/V
			0.1	mV	1	mV	DC Volt Meter	24	mV/V
			>1	mV	10	mV	DC Volt Meter	4.1	mV/V
			>10	mV	100	mV	DC Volt Meter	0.97	mV/V
			>100	mV	1000	V	DC Volt Meter	47	μV/V
Approval Signatory: WANG, Jo-Fan									
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



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
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)	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									
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									



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
KF1012 ACA Source AC Ampere meter (on-site calibration included)	Calibrator (FLUKE/5730A)	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
	Multimeter (FLUKE/8588A)		>1	A	10	A	AC Current Source (@ 60 Hz)	7.3	mA/A
	Calibrator (FLUKE/5500A)		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									
KF3001 Resistor Ohmmeter (on-site calibration included)	Calibrator (FLUKE/5500A)	DC RESISTANCE MEASURING SYSTEM CALIBRATION PROCEDURE (Document No.: MT-C-99-006)	1	$\text{m}\Omega$	10	$\text{m}\Omega$	Resistor	8.8	$\text{m}\Omega/\Omega$
			>10	$\text{m}\Omega$	1	Ω	Resistor	7.4	$\text{m}\Omega/\Omega$
	Multimeter (FLUKE/8588A)		>1	Ω	100	$\text{k}\Omega$	Resistor	0.12	$\text{m}\Omega/\Omega$
			>100	$\text{k}\Omega$	100	$\text{M}\Omega$	Resistor	0.44	$\text{m}\Omega/\Omega$
	Multimeter (KEITHLEY/6517B)		>100	$\text{M}\Omega$	1	$\text{G}\Omega$	Resistor	9.7	$\text{m}\Omega/\Omega$
			>1	$\text{G}\Omega$	100	$\text{G}\Omega$	Resistor	10	$\text{m}\Omega/\Omega$
	Resistance Decade Box (IET/HARS-X-3-0.001)		1	$\text{m}\Omega$	10	$\text{m}\Omega$	Resistance Meter	25	$\text{m}\Omega/\Omega$
			>10	$\text{m}\Omega$	1	Ω	Resistance Meter	9.4	$\text{m}\Omega/\Omega$
	Resistance Decade Box (IET/HRRS-B-3-100M)		>1	Ω	100	$\text{k}\Omega$	Resistance Meter	1.1	$\text{m}\Omega/\Omega$
			>100	$\text{k}\Omega$	100	$\text{M}\Omega$	Resistance Meter	5.9	$\text{m}\Omega/\Omega$
Resistance Decade Box (IET/ HRRS-F-4-1G-5kV)	>100	$\text{M}\Omega$	1	$\text{G}\Omega$	Resistance Meter	14	$\text{m}\Omega/\Omega$		
	>1	$\text{G}\Omega$	100	$\text{G}\Omega$	Resistance Meter	20	$\text{m}\Omega/\Omega$		
Approval Signatory: WANG, Jo-Fan									



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) Filter (Newport/FSQ-ND003)		1	%	100	%	Spectral Transmittance, wavelength: 380 nm to 780 nm	0.48	%
Approval Signatory: PENG, Chiao									
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									
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									



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	
Approval Signatory: WANG, Jo-Fan									
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	
Approval Signatory: PENG, Chiao									
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	
Approval Signatory: 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
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
Approval Signatory: WANG, Jo-Fan; PENG, Chiao									
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									

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

