



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

## Certificate of Accreditation

(Certificate No : L0165-240304)

This is to certify that

**Pacific Electric Wire & Cable Co., Ltd.**

**Pacific Electric Wire & Cable Co.,Ltd. Calibration Laboratory**

No. 858,Sec. 5, Kuaisu Rd., Yangmei District, Taoyuan City, Taiwan

**is accredited in respect of laboratory**

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

**Accreditation Number** : 0165

**Originally Accredited** : November 01, 1994

**Effective Period** : April 23, 2024 to April 22, 2027

**Accredited Scope** : Calibration Field, see described in the Appendix

*Yi-Ling Chen*



Scan to verify

Yi-Ling Chen  
President, Taiwan Accreditation Foundation  
March 04, 2024

Accreditation Number : 0165  
 Laboratory Head : CHEN, Chih-Chiang

Length

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range		measurement conditions /independent variable explanation	smallest uncertainty	
			minimum value	maximum value		value	units
KA1001 gauge block (Steel/ceramic /112 pcs)	Gauge block /FRANK Class 00	In-house Method: gauge block calibration procedure (Document No.: LT-ZZ-012)	0.5	9	Steel, Reference standard	0.08	mm
			9.5	16	Steel, Reference standard	0.09	mm
			16.5	21	Steel, Reference standard	0.10	mm
			21.5	25	Steel, Reference standard	0.11	mm
			50	50	Steel, Reference standard	0.18	mm
			75	75	Steel, Reference standard	0.26	mm
			100	100	Steel, Reference standard	0.33	mm
			0.5	1.18	Steel, Working standard	0.09	mm
			1.19	1.5	Steel, Working standard	0.09	mm
			2	10	Steel, Working standard	0.10	mm
			10.5	20	Steel, Working standard	0.13	mm
			20.5	25	Steel, Working standard	0.14	mm
50	100	Steel, Working standard	0.43	mm			
0.5	1.18	Ceramic	0.09	mm			
1.19	1.5	Ceramic	0.09	mm			
2	10	Ceramic	0.10	mm			
10.5	20	Ceramic	0.13	mm			
20.5	25	Ceramic	0.15	mm			
50	100	Ceramic	0.48	mm			

Approval Signatory: CHEN, Chih-Chiang; YEH, Grow





calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable		smallest uncertainty	
			minimum value	units	maximum value	units	explanation	value	units	
KA2003 digimatic caliper	Gauge block /Mitutoyo class 0 Long gauge blocks /FRANK class 0	In-house Method: caliper calibration procedure (Document No.: LT-ZZ-024)	0	mm	150	mm	Outside diameter (resolution: 0.01 mm) Inside diameter (resolution: 0.01 mm)	0.02	mm	
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KA2005 digimatic outside micrometer (ball probe)	Gauge blocks /Mitutoyo class 0 Long gauge blocks /FRANK class 0	In-house Method: outside micrometer calibration procedure (Document No.: LT-ZZ-023)	0	mm	25	mm	resolution: 0.001 mm	0.002	mm	
			150	mm	175	mm	resolution: 0.001 mm	0.002	mm	
			300	mm	325	mm	resolution: 0.001 mm	0.002	mm	
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Mass/Force

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable		smallest uncertainty	
			minimum value	units	maximum value	units	explanation	value	units	
KC1001 weight	Standard weights /Mettler class E <sub>2</sub>	In-house Method: 1 mg~200 g mass calibration procedure (Document No.: LT-ZZ-022) In-house Method: 500 g mass calibration procedure (Document No.: LT-ZZ-020)	1	mg	1	mg	Steel	0.07	mg	
			2	mg	2	mg	Steel	0.08	mg	
			5	mg	5	mg	Steel	0.07	mg	
			10	mg	10	mg	Steel	0.07	mg	
			20	mg	20	mg	Steel	0.08	mg	
			50	mg	50	mg	Steel	0.07	mg	
			100	mg	100	mg	Steel	0.07	mg	
			200	mg	200	mg	Steel	0.07	mg	
			500	mg	500	mg	Steel	0.07	mg	







calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable explanation	smallest uncertainty		
			minimum value	units	maximum value		units	value	units
KC1001 weight	Standard weights /Mettler class E <sub>2</sub>	In-house Method: 1 mg~200 g mass calibration procedure (Document No.: LT-ZZ-022) In-house Method: 500 g mass calibration procedure (Document No.: LT-ZZ-020)	1	g	1	g	Steel	0.08	mg
			2	g	2	g	Steel	0.07	mg
			5	g	5	g	Steel	0.07	mg
			10	g	10	g	Steel	0.07	mg
			20	g	20	g	Steel	0.08	mg
			50	g	50	g	Steel	0.08	mg
			100	g	100	g	Steel	0.08	mg
			200	g	200	g	Steel	0.10	mg
			500	g	500	g	Steel	3	mg
			1	mg	1	mg	Brass	0.07	mg
			2	mg	2	mg	Brass	0.08	mg
			5	mg	5	mg	Brass	0.07	mg
			10	mg	10	mg	Brass	0.07	mg
			20	mg	20	mg	Brass	0.08	mg
			50	mg	50	mg	Brass	0.07	mg
			100	mg	100	mg	Brass	0.07	mg
200	mg	200	mg	Brass	0.07	mg			
500	mg	500	mg	Brass	0.07	mg			
			1	g	1	g	Brass	0.08	mg
			2	g	2	g	Brass	0.07	mg
			5	g	5	g	Brass	0.08	mg
			10	g	10	g	Brass	0.08	mg
			20	g	20	g	Brass	0.11	mg
			50	g	50	g	Brass	0.21	mg
			100	g	100	g	Brass	0.39	mg
			200	g	200	g	Brass	0.77	mg
			500	g	500	g	Brass	4	mg

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Electricity calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable explanation	smallest uncertainty	
			minimum value	units	maximum value		value	units
KF1001 DCV source DC volt meter	1.Multi-function meter /DATRON 1281 2.Multi-function calibrator /DATRON 4808	In-house Method: DC voltage calibration procedure (Document No.: LT-ZZ-016)	100	mV	100	1.DCV source	15	μV/V
			>0.1	V	1	1.DCV source	15	μV/V
			>1	V	10	1.DCV source	15	μV/V
			>10	V	100	1.DCV source	15	μV/V
			>100	V	1000	1.DCV source	15	μV/V
			100	mV	100	2.DCV meter	19	μV/V
			>0.1	V	1	2.DCV meter	19	μV/V
			>1	V	10	2.DCV meter	19	μV/V
			>10	V	100	2.DCV meter	19	μV/V
			>100	V	1000	2.DCV meter	19	μV/V
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KF1002 DCA source DC ampere meter Current Shunt	1.Multi-function meter /DATRON 1281 2.Multi-function calibrator /DATRON 4808	In-house Method: DC current calibration procedure (Document No.: LT-ZZ-018)	100	μA	100	1.DCA source	0.14	mA/A
			>0.1	mA	1	1.DCA source	0.14	mA/A
			>1	mA	10	1.DCA source	0.14	mA/A
			>10	mA	100	1.DCA source	0.14	mA/A
			>0.1	A	1	1.DCA source	0.27	mA/A
			100	μA	100	2.DC ampere meter	0.21	mA/A
			>0.1	mA	1	2.DC ampere meter	0.21	mA/A
			>1	mA	10	2.DC ampere meter	0.21	mA/A
			>10	mA	100	2.DC ampere meter	0.21	mA/A
			>0.1	A	1	2.DC ampere meter	0.32	mA/A
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calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable	smallest uncertainty				
			minimum value	units	maximum value		units	value	units		
KF1011 ACV source AC volt meter	1.Multi-function meter /DATRON 1281 2.Multi-function calibrator /DATRON 4808	In-house Method: AC voltage calibration procedure (Document No.: LT-ZZ-017)	1	V	1	V	1.AC.V source (@ 60 Hz)	0.28	mV/V		
			>1	V	10	V	1.AC.V source (@ 60 Hz)	0.28	mV/V		
			>10	V	100	V	1.AC.V source (@ 60 Hz)	0.28	mV/V		
			>100	V	1000	V	1.AC.V source (@ 60 Hz)	0.28	mV/V		
			1	V	1	V	1.AC.V source (@ 1 kHz)	0.24	mV/V		
			>1	V	10	V	1.AC.V source (@ 1 kHz)	0.24	mV/V		
			>10	V	100	V	1.AC.V source (@ 1 kHz)	0.24	mV/V		
			>100	V	1000	V	1.AC.V source (@ 1 kHz)	0.24	mV/V		
			1	V	1	V	2.AC volt meter (@ 60 Hz)	0.34	mV/V		
			>1	V	10	V	2.AC volt meter (@ 60 Hz)	0.34	mV/V		
			>10	V	100	V	2.AC volt meter (@ 60 Hz)	0.34	mV/V		
			>100	V	1000	V	2.AC volt meter (@ 60 Hz)	0.34	mV/V		
			1	V	1	V	2.AC volt meter (@ 1 kHz)	0.28	mV/V		
			>1	V	10	V	2.AC volt meter (@ 1 kHz)	0.28	mV/V		
>10	V	100	V	2.AC volt meter (@ 1 kHz)	0.28	mV/V					
>100	V	1000	V	2.AC volt meter (@ 1 kHz)	0.28	mV/V					
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KF1012 AC source AC ampere meter	1.Multi-function meter /DATRON1281 2.Multi-function calibrator /DATRON 4808	In-house Method: AC current calibration procedure (Document No.: LT-ZZ-019)	10	mA	10	mA	1.ACA source (@ 60 Hz)	0.63	mA/A		
			>10	mA	100	mA	1.ACA source (@ 60 Hz)	0.63	mA/A		
			>0.1	A	1	A	1.ACA source (@ 60 Hz)	1.1	mA/A		
			10	mA	10	mA	1.ACA source (@ 1 kHz)	0.60	mA/A		
			>10	mA	100	mA	1.ACA source (@ 1 kHz)	0.60	mA/A		
			>0.1	A	1	A	1.ACA source (@ 1 kHz)	1.1	mA/A		
			10	mA	10	mA	2.AC ampere meter (@ 60 Hz)	0.68	mA/A		
			>10	mA	100	mA	2.AC ampere meter (@ 60 Hz)	0.68	mA/A		
			>0.1	A	1	A	2.AC ampere meter (@ 60 Hz)	1.2	mA/A		
			10	mA	10	mA	2.AC ampere meter (@ 1 kHz)	0.70	mA/A		
			>10	mA	100	mA	2.AC ampere meter (@ 1 kHz)	0.70	mA/A		
			>0.1	mA	1	A	2.AC ampere meter (@ 1 kHz)	1.3	mA/A		
			Approval Signatory: CHEN, Chih-Chiang; YEH, Grow								



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable		smallest uncertainty	
			minimum value	units	maximum value	units	explanation	value	units
KF3001 resistor ohmmeter	Resistor (100 Ω) /TINSLEY5685A	In-house Method: resistance calibration procedure (Document No.: LT-ZZ-015)	100	Ω	100	Ω		8	μΩ/Ω
	Resistor (1 kΩ) /TINSLEY5685A		1	kΩ	1	kΩ		9	μΩ/Ω
	Resistor (10 kΩ) /TINSLEY5685B		10	kΩ	10	kΩ		9	μΩ/Ω
	Resistor (100 kΩ) /TINSLEY5615		100	kΩ	100	kΩ		24	μΩ/Ω
	Resistor (1 MΩ) /TINSLEY5615		1	MΩ	1	MΩ		51	μΩ/Ω
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KF3002 inductor	inductor (1 mH) /GR 1482-E	In-house Method: inductance calibration procedure (Document No.: LT-ZZ-014)	1	mH	1	mH	(@ 100 Hz)	0.26	mH/H
	inductor (10 mH) /GR 1482-H		10	mH	10	mH	(@ 100 Hz)	0.26	mH/H
	inductor (100 mH) /GR 1482-L		100	mH	100	mH	(@ 100 Hz)	0.26	mH/H
			1	mH	1	mH	(@ 1 kHz)	0.26	mH/H
			10	mH	10	mH	(@ 1 kHz)	0.26	mH/H
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KF3003 capacitor	capacitor (10 pF) /GR 1404-C	In-house Method: capacitance calibration procedure (Document No.: LT-ZZ-013)	10	pF	10	pF	(@ 1 kHz)	0.06	mF/F
	capacitor (100 pF) /GR 1404-B		100	pF	100	pF	(@ 1 kHz)	0.05	mF/F
	capacitor (1000 pF) /GR 1404-A		1000	pF	1000	pF	(@ 1 kHz)	0.08	mF/F
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Note: Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence. (Null Below)

