



METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER

Department of Science and Technology
Gen. Santos Ave., Bicutan, Taguig City, 1631 Philippines
Tel. Nos. 8837-0431 to 38 local 481 or 482/Fax Nos.: 8837-0430



PAB ACCREDITED
CALIBRATION LABORATORY
PNS ISO/IEC 17025:2017
LA-1996-008H

ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.
1854 Santa Rita Street, Guadalupe Nuevo, Makati City

Type of Job	:	CALIBRATION		
Customer's Equipment	:	Multitester (Analog)		
Manufacturer's Name	:	Sanwa		
Model No.	:	YX360TRF		
Serial No.	:	19051301845	Date Received	: 09 January 2026
Ambient Temperature	:	23 ± 3 °C	Date Calibrated	: 03 February 2026
Relative Humidity	:	55 ± 15 % R.H.	Date Due	: 03 February 2027

CALIBRATION METHOD:

This Multitester has been calibrated in accordance with MIRDC's INSCMP 017, using a Multifunction Calibrator (E045), traceable to the International System of Units (SI) as maintained by KRISS, South Korea and NMC-A*STAR, Singapore.

CALIBRATION RESULT/S:

The results of this calibration are shown on page 2 of this certificate.

REMARKS:

1. Customer's test cables were used during calibration.
2. The calibration results in the tables refer to the date of calibration and should the instrument be modified or damaged in any way, or develop inconsistent readings, the results may not be valid and the unit will require recalibration. The user should determine the suitability of this instrument for its intended use.
3. The applied frequency for AC voltage measurement was 60 Hz.
4. The uncertainties of measurement for the results given in this certificate are estimated at a confidence level of 95%, with a coverage factor, $k = 2.01$.
5. This instrument was calibrated at MIRDC's Instrumentation Laboratory.

- Page 1 of 2 Pages -

CHRISTIAN M. IBANEZ
Approved Signatory

Noted by :
ARVIN YAN V. PACIA
Officer-in-Charge
Instrumentation and Metrology Section

Certificate No. : **MIRDC-012026-INS-0032A**
Date : 10 February 2026

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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.

CALIBRATION RESULT/S:

Range	Test Instrument Indicated Value	Test Instrument Implied Value	Standard Instrument Applied Value	Measurement Uncertainty
DC Voltage				
0.1 V range	5	0.05 V	51.4 mV	± 0.5 mV
0.25 V range	125	0.125 V	126.0 mV	± 1.2 mV
2.5 V range	125	1.25 V	1.242 V	± 0.012 V
10 V range	5	5 V	4.98 V	± 0.05 V
50 V range	25	25 V	25.11 V	± 0.23 V
250 V range	5	125 V	126.0 V	± 1.2 V
1 000 V range	5	500 V	507.0 V	± 4.6 V
	9.8	900 V	992 V	± 4.6 V
AC Voltage				
10 V range	5	5 V	5.18 V	± 0.05 V
50 V range	25	25 V	25.12 V	± 0.23 V
250 V range	125	125 V	124.4 V	± 1.2 V
750 V range	5	500 V	502.2 V	± 4.6 V
	7.4	740 V	743 V	± 4.6 V
DC Current				
50 µA range	25	25 µA	24.92 µA	± 0.23 µA
2.5 mA range	125	1.25 mA	1.248 mA	± 0.012 mA
25 mA range	125	12.5 mA	12.50 mA	± 0.12 mA
0.25 A range	125	0.125 A	123.5 mA	± 1.2 mA
	250	0.25 A	247.0 mA	± 1.2 mA
Resistance				
x 1 range	1	1 Ω	1.0 Ω	± 0.05 Ω
x 10 range	1	10 Ω	11.0 Ω	± 0.5 Ω
	10	100 Ω	101.6 Ω	± 1.2 Ω
x 100 range	1	100 Ω	111.0 Ω	± 4.6 Ω
	10	1 000 Ω	1.02 kΩ	± 12 Ω
x 1 k range	1	1 kΩ	1.1 kΩ	± 0.05 kΩ
	10	10 kΩ	10.2 kΩ	± 0.12 kΩ
	100	100 kΩ	100 kΩ	± 1.2 kΩ

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CMIBAÑEZ

Certificate No. : **MIRDC-012026-INS-0032A**
 Date : 10 February 2026

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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.
1854 Santa Rita Street, Guadalupe Nuevo, Makati City

Type of Job	: CALIBRATION		
Client's Equipment	: Digital Clampmeter		
Manufacturer's Name	: Alexan		
Model No.	: CM 200		
Serial No.	: L0014407	Date Received	: 09 January 2026
Ambient Temperature	: 23 ± 3 °C	Date Calibrated	: 27 January 2026
Relative Humidity	: 55 ± 15 % R.H.	Date Due	: 27 January 2027

CALIBRATION METHOD:

This Digital Clampmeter has been calibrated in accordance with MIRDC's INSCMP 002 using a Multifunction Calibrator (E053) traceable to the International System of Units (SI) as maintained by KRISS, South Korea, NMC-A*STAR, Singapore and NIM, China through SCM, Hong Kong.

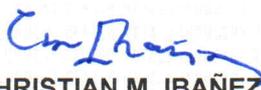
CALIBRATION RESULT/S:

The results of calibration are shown on page 2 of this certificate.

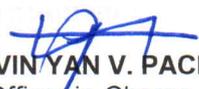
REMARKS:

1. MIRDC's test cables were used during calibration.
2. The calibration results in the tables refer to the date of calibration and should the instrument be modified or damaged in any way, or develop inconsistent readings, the results may not be valid and the unit will require recalibration. The user should determine the suitability of this instrument for its intended use.
3. The uncertainties of measurement for the results given in this certificate are estimated at a confidence level of 95%, with a coverage factor, $k = 1.96$.
4. This instrument was calibrated at MIRDC's Instrumentation Laboratory.

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CHRISTIAN M. IBAÑEZ
Approved Signatory

Noted by :


ARVIN YAN V. PACIA
Officer-in-Charge
Instrumentation and Metrology Section

Certificate No. : **MIRDC-012026-INS-0032B**
Date : 02 February 2026

METALS INDUSTRY RESEARCH AND DEVELOPMENT CENTER



Department of Science and Technology
 Gen. Santos Ave., Bicutan, Taguig City, 1631 Philippines
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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.

CALIBRATION RESULT/S:

Function	Standard Instrument Applied Value	Test Instrument Indicated Value	Measurement Uncertainty
AC Current @ 60 Hz Auto range	50 A	50.0 A	± 0.41 A
	100 A	100.4 A	± 0.63 A
	200 A	199 A	± 1.7 A
	300 A	300 A	± 2.1 A
	400 A	401 A	± 2.5 A
	500 A	502 A	± 2.9 A
	590 A	592 A	± 3.3 A
AC Voltage @ 60 Hz Auto range	50 V	49.9 V	± 0.06 V
	100 V	100.1 V	± 0.06 V
	200 V	199 V	± 0.6 V
	300 V	301 V	± 0.6 V
	400 V	403 V	± 0.6 V
	500 V	506 V	± 0.6 V
	590 V	599 V	± 0.6 V
DC Voltage Auto range	50 V	50.0 V	± 0.06 V
	100 V	100.0 V	± 0.06 V
	200 V	200 V	± 0.6 V
	300 V	301 V	± 0.6 V
	400 V	402 V	± 0.6 V
	500 V	502 V	± 0.6 V
	590 V	590 V	± 0.6 V
Resistance Auto range	0 Ω	0.0 Ω	± 0.06 Ω
	100 Ω	98.9 Ω	± 0.06 Ω
	1 kΩ	0.996 kΩ	± 0.000 6 kΩ
	10 kΩ	9.99 kΩ	± 0.006 kΩ
	100 kΩ	99.6 kΩ	± 0.06 kΩ
	1 MΩ	0.979 MΩ	± 0.000 6 MΩ
	10 MΩ	8.25 MΩ	± 0.006 MΩ

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CMIBAÑEZ

Certificate No. : **MIRDC-012026-INS-0032B**
 Date : 02 February 2026

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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.
1854 Santa Rita Street, Guadalupe Nuevo, Makati City

Type of Job : **PARTIAL CALIBRATION**
Customer's Equipment : Capacitance Meter
Manufacturer's Name : Alexan
Model No. : CT-20K
Serial No. : 141104696 Date Received : 09 January 2026
Ambient Temperature : 23 ± 3 °C Date Calibrated : 05 February 2026
Relative Humidity : 55 ± 15 % R.H. Date Due : 05 February 2027

CALIBRATION METHOD:

This Capacitance Meter has been calibrated using the MIRDC's INSCMP 093 using a Multifunction Calibrator (E053), traceable to the International System of Units (SI) as maintained by NMC-A*STAR, Singapore.

CALIBRATION RESULT/S:

Range	Standard Instrument Applied Value	Test Instrument Indicated Value	Measurement Uncertainty
2 000 pF	1 000 pF	1 172 pF	± 1.22 pF
20 nF	10 nF	10.52 nF	± 0.011 nF
200 nF	100 nF	106.1 nF	± 0.11 nF
2 µF	1 µF	0.998 µF	± 0.001 1 µF
20 µF	10 µF	9.98 µF	± 0.012 µF
200 µF	100 µF	99.7 µF	± 0.19 µF
2 000 µF	1 000 µF	999 µF	± 0.6 µF
20 mF	10 mF	10.04 mF	± 0.006 mF

REMARKS:

1. This instrument was partially calibrated (200 pF not included) due to unavailability of standard instruments.
2. MIRDC's test cables were used during calibration.
3. The calibration results in the tables refer to the date of calibration and should the instrument be modified or damaged in any way, or develop inconsistent readings, the results may not be valid and the unit will require recalibration. The user should determine the suitability of this instrument for its intended use.
4. The uncertainties of measurement for the results given in this certificate are estimated at a confidence level of 95%, with a coverage factor, $k = 2.01$.
5. This instrument was calibrated at MIRDC's Instrumentation Laboratory.


CHRISTIAN M. IBANEZ
Approved Signatory

Noted by :


ARVIN YAN V. PACIA
Officer-in-Charge
Instrumentation and Metrology Section

Certificate No. : **MIRDC-012026-INS-0032C**
Date : 10 February 2026

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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.
1854 Santa Rita Street, Guadalupe Nuevo, Makati City

Type of Job : **PARTIAL CALIBRATION**
Customer's Equipment : Digital Thermometer
Manufacturer's Name : UNI-T
Model No. : UT320D
Serial No. : C243498092
Thermocouple Type : K
Ambient Temperature : 23 ± 3 °C
Relative Humidity : 55 ± 15 % R.H.

Date Received : 09 January 2026
Date Calibrated : 16 January 2026
Date Due : 16 January 2027

CALIBRATION METHOD:

This Digital Thermometer was calibrated in accordance with MIRDC's INSCMP 068 using a Multifunction Calibrator (E045), traceable to the International System of Units (SI) as maintained by KRISS, South Korea. The calibration was based on thermocouple reference tables as per ASTM E 230-03.

CALIBRATION RESULT/S:

Standard Instrument Applied Value (°C)	Test Instrument Indicated Value (°C)	
	T1	T2
- 50	- 50.6	- 50.9
- 40	- 40.6	- 40.8
- 30	- 30.6	- 30.7
- 20	- 20.6	- 20.7
- 10	- 10.5	- 10.7
0	- 0.5	- 0.7
10	9.5	9.3
20	19.5	19.4
30	29.5	29.4
40	39.5	39.4
50	49.6	49.4
100	99.6	99.5

REMARKS:

1. This instrument was partially calibrated (at thermocouple type K range only), as per customer's request.
2. The calibration results in the tables refer to the date of calibration and should the instrument be modified or damaged in any way, or develop inconsistent readings, the results may not be valid and the unit will require recalibration. The user should determine the suitability of this instrument for its intended use.
3. The uncertainty of measurement for the results given in this certificate is ± 0.33 °C estimated at a confidence level of 95%, with a coverage factor, k = 1.96.
4. This instrument was calibrated at MIRDC's Instrumentation Laboratory.


CHRISTIAN M. IBANEZ
Approved Signatory

Noted by : 
ARVIN YAN V. PACIA
Office-in-Charge
Instrumentation and Metrology Section

Certificate No. : **MIRDC-012026-INS-0032D**
Date : 23 January 2026

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ANALYSIS AND TESTING DIVISION

CERTIFICATE

KOLIN PHILIPPINES INTERNATIONAL, INC.
1854 Santa Rita Street, Guadalupe Nuevo, Makati City

Type of Job : **PARTIAL CALIBRATION**
Customer's Equipment : Digital Thermometer
Manufacturer's Name : UNI-T
Model No. : UT320D
Serial No. : C243498104
Thermocouple Type : K
Ambient Temperature : 23 ± 3 °C
Relative Humidity : 55 ± 15 % R.H.

Date Received : 09 January 2026
Date Calibrated : 16 January 2026
Date Due : 16 January 2027

CALIBRATION METHOD:

This Digital Thermometer was calibrated in accordance with MIRDC's INSCMP 068 using a Multifunction Calibrator (E045), traceable to the International System of Units (SI) as maintained by KRISS, South Korea. The calibration was based on thermocouple reference tables as per ASTM E 230-03.

CALIBRATION RESULT/S:

Standard Instrument Applied Value (°C)	Test Instrument Indicated Value (°C)	
	T1	T2
- 50	- 51.0	- 51.1
- 40	- 41.1	- 41.1
- 30	- 31.1	- 31.1
- 20	- 21.1	- 21.1
- 10	- 11.1	- 11.1
0	- 1.1	- 1.2
10	8.9	8.9
20	18.9	18.9
30	28.9	28.8
40	38.9	38.8
50	48.9	48.7
100	98.8	98.6

REMARKS:

1. This instrument was partially calibrated (at thermocouple type K range only), as per customer's request.
2. The calibration results in the tables refer to the date of calibration and should the instrument be modified or damaged in any way, or develop inconsistent readings, the results may not be valid and the unit will require recalibration. The user should determine the suitability of this instrument for its intended use.
3. The uncertainty of measurement for the results given in this certificate is ± 0.33 °C estimated at a confidence level of 95%, with a coverage factor, $k = 1.96$.
4. This instrument was calibrated at MIRDC's Instrumentation Laboratory.


CHRISTIAN M. IBAÑEZ
Approved Signatory

Noted by : 
ARVIN YAN V. PACIA
Officer-in-Charge
Instrumentation and Metrology Section

Certificate No. : **MIRDC-012026-INS-0032E**
Date : 23 January 2026