Valid from 27 October 2024
to 26 October 2028
Issued on 27 October 2024

As an accredited laboratory, this laboratory is entitled to use the following accreditation symbol.

ISO/ IEC 17025
CL 007- 01

Schedule of Accreditation

Accreditation Scheme for Testing/Calibration Laboratories
Sri Lanka Accreditation Board for Conformity Assessment

Accreditation Number: CL 007-01

Lanka Calibration Services (Pvt) Ltd,

No 27/14A, Rosmead Place Colombo 07.

Scope of Accreditation: Performing Electrical, Mass and related Quantities (Mass. Pressure, Force), length and Thermal calibrations as per the calibration methods appearing in this Schedule.

The laboratory is accredited for the following calibrations as per given in the pages 02 to 13.

SI No	Type of Instrument / Gauge	Calibration performed/ Measured Quantity	Calibration methods / Measurement procedure	Range of calibration	Calibration Measurement Capability (Expanded uncertainty at a coverage probability of 95 %; coverage factor of k = 2.)	Location (Site/ In house)
Electrical						
01	DC Volt Measuring Instrument	Direct Comparison with DC Volt Generator	LCS/TM/05	0 mV to 200 mV	$U = b_0 + b_1 \cdot X + b_2 \cdot X^2 + SE_{u\text{-}fit}$ X in unit of range b_0 : 6.69E-04 b_1 : 3.35E-07 b_2 : 1.08E-08 $SE_{u\text{-}fit}$: 2.20E-05	In- house
				>0.2 V to 2 V	b_0 : 3.81E-06 b_1 : 1.12E-07 b_2 : 6.53E-07 $SE_{u\text{-}fit}$: 4.31E-07	
				>2 V to 20 V	b_0 : 9.72E-06 b_1 : -2.29E-07 b_2 : 1.75E-07 $SE_{u\text{-}fit}$: 2.54E-06	
				>20 V to 200 V	b_0 : 3.15E-04 b_1 : 2.97E-07 b_2 : 1.56E-08 $SE_{u\text{-}fit}$: 9.49E-06	
				>200 V to 1000 V	b_0 : 1.12E-03 b_1 : 3.95E-07 b_2 : 2.35E-09 $SE_{u\text{-}fit}$: 3.55E-05	

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Electrical						
02	DC Volt Generating Instrument	Direct measurement of DC Volt	LCS/TM/05	0 to 100 mV	$U = b_0 + b_1 \cdot X + b_2 \cdot X^2 + SE_{u\text{-}fit}$ X in unit of range b_0 : 1.54E-03 b_1 : 1.14E-06 b_2 : 1.94E-08 $SE_{u\text{-}fit}$: 6.14E-05	In- house
				>0.1 V to 1 V	b_0 : 8.01E-06 b_1 : -2.46E-07 b_2 : 0.00E-00 $SE_{u\text{-}fit}$: 4.89E-06	
				>1 V to 10 V	b_0 : 4.49E-05 b_1 : -6.93E-07 b_2 : 0.00E-00 $SE_{u\text{-}fit}$: 2.73E-05	
				>10 V to 100 V	b_0 : 9.91E-04 b_1 : -3.23E-06 b_2 : 0.00E-00 $SE_{u\text{-}fit}$: 9.06E-04	
				>100 V to 1000 V	b_0 : 2.70E-03 b_1 : 3.27E-06 b_2 : 8.58E-09 $SE_{u\text{-}fit}$: 5.84E-03	

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Electrical						
03	DC Current measuring instrument	Direct Comparison with DC Current Generator	LCS/TM/05	0 µA to 200 µA	$U = b_0 + b_1 \cdot X + b_2 \cdot X^2 + SE_{u\text{-}fit}$ X in unit of range b_0 : 1.30E-03 b_1 : 1.67E-08 b_2 : 7.02E-09 $SE_{u\text{-}fit}$: 9.32E-05	In- house
				>0.2 mA to 2 mA	b_0 : 6.54E-06 b_1 : 4.38E-07 b_2 : 1.26E-06 $SE_{u\text{-}fit}$: 1.72E-07	
				>2 mA to 20 mA	b_0 : 2.08E-04 b_1 : 4.67E-07 b_2 : 2.22E-07 $SE_{u\text{-}fit}$: 1.82E-05	
				>20 mA to 200 mA	b_0 : 2.51E-03 b_1 : -2.97E-07 b_2 : 1.03E-07 $SE_{u\text{-}fit}$: 9.99E-05	
				>0.2 A to 2 A	b_0 : 1.97E-05 b_1 : 5.73E-07 b_2 : 3.17E-05 $SE_{u\text{-}fit}$: 4.07E-08	
				>2 A to 20A	b_0 : 3.89E-04 b_1 : 1.15E-06 b_2 : 1.53E-06 $SE_{u\text{-}fit}$: 3.74E-05	

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Electrical						
04	DC Current generating instrument	Direct measurement of DC Current	LCS/TM/05	0 to 10 mA	$U = b_0 + b_1 \cdot X + b_2 \cdot X^2 + SE_{u\text{-}fit}$ X in unit of range b_0 : 2.38E-05 b_1 : 5.63E-05 b_2 : 0.00E+00 $SE_{u\text{-}fit}$: 0.00E+00	In- house
				>10 mA to 100 mA	b_0 : 1.38E-03 b_1 : 6.25E-05 b_2 : 0.00E+00 $SE_{u\text{-}fit}$: 0.00E+00	
				>0.1 A to 1 A	b_0 : 2.56E-05 b_1 : 2.58E-06 b_2 : 9.37E-05 $SE_{u\text{-}fit}$: 1.25E-05	
				>1 A to 3 A	b_0 : 1.46E-04 b_1 : -5.90E-06 b_2 : 1.02E-04 $SE_{u\text{-}fit}$: 8.57E-05	
05	AC Volt measuring instrument	Direct comparison with AC Volt generator	LCS/TM/05	0 mV to 200 mV (40 Hz to 100 kHz) >0.2 V to 2 V (40 Hz to 100 kHz) >2 V to 20 V (40 Hz to 20 kHz) >20 V to 200 V (40 Hz to 20 kHz) >200 V to 1000 V (40 Hz to 10 kHz)	0.036 mV 0.00041 V 0.0015 V 0.023 V 0.11 V	In- house
06	AC volt generating instrument	Direct measurement of AC Voltage	LCS/TM/05	0 mV to 100 mV (40 Hz to 10 kHz) >0.1 V to 1 V (40 Hz to 10 kHz) >1 V to 10 V (40 Hz to 10 kHz) >10 V to 100 V (40 Hz to 10 kHz) >100 V to 750 V (40 Hz to 10 kHz)	0.041 mV 0.00042 V 0.0016 V 0.024 V 0.08 V	In- house
07	AC Current measuring instrument	Direct comparison with AC Current generator	LCS/TM/05	0 µA to 200 µA (40 Hz to 1 kHz) >0.2 mA to 2 mA (40 Hz to 1 kHz) >2 mA to 20 mA (40 Hz to 1 kHz) >20 mA to 200 mA (40 Hz to 1 kHz) >0.2 A to 2 A (40 Hz to 1 kHz) >2 A to 20A (40 Hz to 1 kHz)	0.034 µA 0.00034 mA 0.0033 mA 0.043 mA 0.00009 A 0.0006 A	In- house

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Electrical						
08	AC Current generating instrument	Direct measurement of AC Current	LCS/TM/05	>0 A to 1 A (40 Hz to 1 kHz) >1 A to 3 A (40 Hz to 1 kHz)	0.00025 A 0.0015 A	In- house
09	Resistance Measuring Instruments	Direct Comparison with Fixed Resistors (2 – Wire)	LCS/TM/05	0.1 Ω 0.2 Ω 1.2 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ 100 MΩ 1 GΩ	0.011 Ω 0.011 Ω 0.010 Ω 0.011 Ω 0.097 Ω 0.000018 kΩ 0.00010 kΩ 0.0009 kΩ 0.000082 MΩ 0.00084 MΩ 0.023 MΩ 0.000082 GΩ	In- house
		Direct Comparison with Resistance Simulator (2 – Wire)		0 Ω to 100 Ω > 0.1 kΩ to 1 kΩ > 1 kΩ to 10 kΩ > 10 kΩ to 100 kΩ > 0.1 MΩ to 1 MΩ > 1 MΩ to 10 MΩ	0.04 Ω 0.0002 kΩ 0.002 kΩ 0.02 kΩ 0.0002 MΩ 0.002 MΩ	
		Direct Comparison with Fixed Resistors (4 – Wire)		0.1 Ω 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ	0.00026 Ω 0.00020 Ω 0.00012 Ω 0.0010 Ω 0.00002 kΩ 0.00010 kΩ 0.0011 kΩ	

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Electrical						
10	Resistance Generating Instruments	Direct Measurement of Resistance (2- wire)	LCS/TM/05	0 Ω to 100 Ω > 0.1 kΩ to 1 kΩ > 1 kΩ to 10 kΩ > 10 kΩ to 100 kΩ > 0.1 MΩ to 1 MΩ > 1 MΩ to 10 MΩ	0.091 Ω 0.00022 kΩ 0.0022 kΩ 0.022 kΩ 0.00022 MΩ 0.00024 MΩ	In- house
		Direct Measurement of Resistance (4- wire)		0.1 Ω 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ	0.00051 Ω 0.00032 Ω 0.00041 Ω 0.0012 Ω 0.00003 kΩ 0.00012 kΩ 0.0011 kΩ	In- house
11	Frequency Measuring Instruments	Direct comparison with Frequency generator	LCS/TM/05	100 Hz to 10 MHz	2 Hz	In- house
12	Frequency Generating Instruments	Direct Measurement of Frequency		10 Hz to 100 Hz >0.1 kHz to 10 kHz >10 kHz to 100 kHz >100 kHz to 1000 kHz	0.00006 Hz 0.000006 kHz 0.00006 kHz 0.0006 kHz	In- house
13	Capacitance Measuring Instruments	Direct comparison with fixed capacitors @ 1 kHz	LCS/TM/05	1 nF 10 nF 20 nF 50 nF 100 nF	0.002 nF 0.002 nF 0.009 nF 0.008 nF 0.012 nF	In- house
				1 µF 10 µF	0.0002 µF 0.002 µF	
14	Inductance Measuring Instruments	Direct comparison with an Inductance generator @ 1 kHz	LCS/TM/05	1 mH 10 mH 100 mH	0.0008 mH 0.001 mH 0.01 mH	In- house
				1 H	0.0002 H	

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15	Clamp on meters	Measurement of AC Current using a coil	LCS/TM/02	2 mA to 200 mA (40 Hz to 1 kHz) >0.2 A to 1 A (40 Hz to 1 kHz) >1 A to 20 A (40 Hz to 1 kHz) >20 A to 100 A (40 Hz to 1 kHz) >100 A to 1000 A (40 Hz to 1 kHz)	0.0001 mA 0.088 A 0.09 A 0.57 A 4.4 A	In- house
		Measurement of DC Current using a coil		2 mA to 200 mA >0.2 A to 1 A >1 A to 20 A >20 A to 100 A >100 A to 1000 A	0.0001 mA 0.088 A 0.09 A 0.57 A 4.4 A	
16	Insulation Resistance Testers	Direct comparison with fixed resistors	LCS/TM/01	10 MΩ 100 MΩ 1 GΩ 10 GΩ	0.005 MΩ 0.94 MΩ 0.024 GΩ 0.24 GΩ	In- house
		Measurement of Open Circuit Voltage		50 V to 5 kV	1 V	
17	Non-contact Digital tachometer	Direct comparison with a calibrated pulse generator	LCS/TM/06	240 rpm to 3000 rpm > 3000 rpm to 60000 rpm	0.6 rpm 1.2 rpm	In- house
18	Centrifuges / Rotating shafts / fan blades	Non-contact measurement of RPM using a calibrated digital tachometer	LCS/TM/20	240 rpm to 3000 rpm > 3000 rpm to 60000 rpm	0.61 rpm 1.4 rpm	In- house / site
19	High Voltage Generating Instruments	Measurement of voltage using HV probe	LCS/TM/28	500 V to 5000 V	1 V	In- house
20	pH Meter	Direct measurement with standard reference buffer solutions	LCS/TM/30	4 pH to 10 pH	0.03 pH	In- house / site

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Temperature						
21	Temperature Indicators intended to be used with Thermocouple	Direct comparison with an electrical temperature simulator			$U = b_0 + b_1 \cdot X$ X in °C	In- house
		Type K	LCS/TM/08	-200 °C to 1370 °C	b_0: 6.34 x 10 -2 b_1: -1.21 x 10 -5	
		Type J		-210 °C to 1200 °C	b_0: 5.83 x 10 -2 b_1: -2.43 x 10 -6	
		Type T		-250 °C to 400 °C	b_0: 3.00 x 10 -1 b_1: -3.91 x 10 -4	
		Type R		0 °C to 1760 °C	b_0: 1.03 x 10 0 b_1: -1.33 x 10 -4	
		Type S		0 °C to 1760 °C	b_0: 3.99 x 10 -1 b_1: -1.61 x 10 -4	
		Type N		-200 °C to 1300 °C	b_0: 1.52 x 10 -1 b_1: -7.29 x 10 -5	
		Type B		600 °C to 1820 °C	b_0: 5.11 x 10 -1 b_1: -1.91 x 10 -4	
		Type E		-250 °C to 1000 °C	b_0: 1.30 x 10 -1 b_1: -1.40 x 10 -4	
	Temperature Indicators intende to be used with PRT/RTD	PRT/RTD	LCS/TM/08	-100 °C to 100 °C >100 °C to 800 °C	0.008 °C 0.014 °C	

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Temperature						
22	Temperature Simulators intended to be used with Thermocouple	Direct comparison with an electrical temperature Indicator			$U = b_0 + b_1 \cdot X + b_2 \cdot X^2$ X in °C	In- house
		Type K	LCS/TM/08	-190 °C to 1370 °C	b_0: 2.77 x 10^{-6} b_1: -7.67 x 10^{-5} b_2: 1.24 x 10^{-7}	
		Type J		-200 °C to 1200 °C	b_0: 1.36 x 10^{-1} b_1: -1.24 x 10^{-4} b_2: 1.09 x 10^{-7}	
		Type T		-240 °C to 400 °C	b_0: 1.32 x 10^{-1} b_1: -8.30 x 10^{-4} b_2: 1.70 x 10^{-6}	
		Type R		0 °C to 1760 °C	b_0: 4.69 x 10^{-1} b_1: -6.74 x 10^{-4} b_2: 2.99 x 10^{-7}	
		Type S		0 °C to 1760 °C	b_0: 5.27 x 10^{-1} b_1: -8.19 x 10^{-4} b_2: 3.74 x 10^{-7}	
		Type N		-190 °C to 1300 °C	b_0: 1.50 x 10^{-1} b_1: -5.52 x 10^{-4} b_2: 4.16 x 10^{-7}	
		Type B		600 °C to 1820 °C	b_0: 9.10 x 10^{-1} b_1: -1.08 x 10^{-3} b_2: 3.89 x 10^{-7}	
		Type E		-240 °C to 1000 °C	b_0: 1.48 x 10^{-1} b_1: -5.01 x 10^{-4} b_2: 4.69 x 10^{-7}	
		Type U		-200 °C to 600 °C	b_0: 2.77 x 10^{-1} b_1: -2.32 x 10^{-4} b_2: 0.00 x 10^{0}	
		Type C		10 °C to 2316 °C	b_0: 2.06 x 10^{-1} b_1: -1.64 x 10^{-4} b_2: 1.15 x 10^{-7}	
	Temperature Simulators intended to be used with PRT/RTD	PRT/RTD	LCS/TM/08	-100 °C to 800 °C	0.02 °C	

SI No	Type of Instrument / Gauge	Calibration performed/ Measured Quantity	Calibration methods / Measurement procedure	Range of calibration	Calibration Measurement Capability (Expanded uncertainty at a coverage probability of 95 %; coverage factor of k = 2.)	Location (Site/ In house)
Temperature						
23	IR Thermometer	Measurement of temperature of a calibrated Black Body	LCS/TM/10	0 °C to 75 °C > 75 °C to 100 °C > 100 °C to 150 °C > 150 °C to 250 °C > 250 °C to 350 °C > 350 °C to 500 °C	0.4 °C 0.5 °C 0.9 °C 1.4 °C 2.0 °C 3.0 °C	In- house
24	Digital Thermometer	Direct comparison with calibrated thermometer	LCS/TM/O3	-30 °C to 30 °C > 30 °C to 42 °C > 42 °C to 100 °C > 100 °C to 400 °C > 400 °C to 600 °C > 600 °C to 900 °C > 900 °C to 1000 °C	0.045 °C 0.038 °C 0.045 °C 0.2 °C 0.7 °C 0.9 °C 1.4 °C	In- house/ Site
	Dial Thermometer			-30 °C to 100 °C > 100 °C to 200 °C > 200 °C to 400 °C > 400 °C to 900 °C > 900 °C to 1000 °C	0.25 °C 0.62 °C 1.2 °C 1.4 °C 2.8 °C	In- house/ Site
25	Cold rooms, Warehouses, Freezer trucks, Freezers / Refrigerators / Incubators	Thermal mapping & Temperature measurement using data loggers	LCS/TM/12	-35 ºC to 80 ºC	0.1 ºC	In- house/ Site
26	Temperature Enclosures / Oven / Incubator	Performance verification using thermocouples	LCS/TM/18	20 ºC to 250 ºC	0.6 ºC	In- house/ Site
		Performance verification using Temperature loggers		0 ºC to 80 ºC	0.07 ºC	

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Temperature						
27	Block calibrators	Performance verification using thermometers (Well Evaluation) Control sensor verification	LCS/TM/14	-30 °C to 1000 °C -30 °C to 1000 °C	0.1 °C 0.2 °C	In- house
28	Open & enclosed areas	Direct measurement of % rh using calibrated hygrometer	LCS/TM/17	5% rh to 95 % rh	3 % rh	Site
29	Humidity Sensors	Calibration with salt solutions	LCS/TM/16	10 % rh 35 % rh 80 % rh 95 % rh	0.21 % rh 0.30 % rh 0.56 % rh 0.64 % rh	In- house
30	Laboratory furnace	Direct comparison with a thermocouple	LCS/TM/19	200 °C to 900 °C 900 °C to 1000 °C	0.7 °C 1.3 °C	In- house/ Site
31	Oil / Water Bath	Performance verification using thermocouples	LCS/TM/15	-20 ºC to 150 ºC	0.5 °C	In- house/ Site
32	Humidity Data Loggers / Thermo-hygrometers	Direct comparison of % rh using calibrated hygrometer	LCS/TM/24	20 % rh to 90 % rh	3 % rh	In- house
33	Glass Thermometer	Direct comparison with calibrated thermometer	LCS/TM/30	0 ºC to 110 ºC	0.12 ºC	In- house/ Site

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Force						
34	Static Uniaxial Testing machines / CBR /Marshall Testers	Direct comparison with a calibrated load cell	LCS/TM/21	0.5 kN to 1.0 kN > 1.0 kN to 2 kN > 2 kN to 9 kN > 9 kN to 20 kN > 20 kN to 45 kN > 200 kN to 250 kN > 250 kN to 750 kN > 750 kN to 1990 kN	0.55 % 0.31 % 0.19 % 0.60 % 0.65 % 0.56 % 0.49 % 0.30 %	Site
Pressure						
35	Pneumatic Pressure Gauges / transmitters	Direct comparison with a reference pressure gauge	LCS/TM/04	-0.95 bar to 40 bar	0.0091 bar	In- house/ Site
	Hydraulic Pressure Gauges / Transmitters			0 bar to 600 bar	0.33 bar	
Mass						
36	Balances/ Weighing Scales	Direct comparison with standard weights	LCS/TM/09	0 to 200 g >200 g to 1000 g >1 kg to 10 kg >10 kg to 50 kg >50 kg to 150 kg	0.00031 g 0.0030 g 0.04 g 1.7 g 5.2 g	In- house/ Site
Dimension						
37	Micrometer	Direct comparison with standard Gauge Blocks	LCS/TM/25	0 mm to 150 mm	0.001 mm	In- house
38	Vernier Calipers	Direct comparison with standard Gauge Blocks	LCS/TM/26	0 mm to 150 mm	0.006 mm (Internal/External) 0.036 mm (Depth)	In- house
39	Dial Gauges	Direct comparison with standard Gauge Blocks	LCS/TM/27	0 mm to 50 mm	0.001 mm	In- house

Acting Director/CEO
Sri Lanka Accreditation Board for Conformity Assessment