

Laboratory Delta Electronics India Pvt. Ltd., Plot No. 38, Sector-05, Sidcul Rudrapur, Uttarakhand

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number CC-2534 Page 1 of 5

Validity 12.03.2019 to 14.01.2020 Last Amended on --

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>ELECTRO TECHNICAL CALIBRATION</u>				
I.	SOURCE			
1.	DC Voltage ^{\$}	1 mV to 300 mV 300 mV to 1000 V	5.8% to 0.02% 0.02% to 0.06%	Using Multiproduct Calibrator 5500 A by Direct Method
2.	DC Current ^{\$}	1 mA to 10 A 50 A to 550A	0.58% to 0.06% 0.57%	Using Multiproduct Calibrator 5500 A by Direct Method
3.	AC Voltage ^{\$}	50 Hz 1 mV to 1000 V	7.47% to 0.07%	Using Multiproduct Calibrator 5500 A by Direct Method
4.	AC Current ^{\$}	50 Hz 1 mA to 10 A 50 A to 550A	0.58% to 0.21% 0.68% to 0.56%	Using Multiproduct Calibrator 5500 A by Direct Method
5.	DC Resistance ^{\$}	1 Ω to 100 Ω 100 Ω to 1 M Ω 1M Ω to 50 M Ω	5.8% to 0.07% 0.07% to 0.82% 0.82 % to 0.02%	Using Multiproduct Calibrator 5500 A by Direct Method
6.	Capacitance ^{\$}	1kHz 1nF to 1 μ F 1 μ F to 10 μ F 10 μ F to 100 μ F	0.09% to 0.07% 0.07% to 0.11% 0.11% to 0.26%	Using Multiproduct Calibrator 5500 A by Direct Method

Mohit Kaushik
Convenor

Alok Jain
Program Manager

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7.	A.C.Power [§]	50 Hz,1P.F 1 W to1 kW 1 kW to 6.4 kW	5.77% to 0.60% 0.60% to1.00%	Using Multiproduct Calibrator 5500 A by Direct Method
8.	Oscilloscope [§] Time Base Amplitude	1 μ s to 1ms 20 mV to 100 mV 100 mV to 1 V 1 V to 10 V	0.6% 1.57% to 1.00% 1.00% to 0.70% 0.70% to 1.34%	Using Multiproduct Calibrator 5500 A by Direct Method
9.	Scope Sine Wave Generator [§]	50Hz 20 mV to 3.3 V 1kHz 20 mV to 3.3 V	1.10% to1.75% 1.19% to 2.66%	Using Multiproduct Calibrator 5500 A by Direct Method
10.	Level Sign Wave [§] 3.3 V	50 kHz to 200MHz	3.54%	Using Multiproduct Calibrator 5500 A by Direct Method
11.	Frequency [§] 3V	50Hz to 1kHz	0.06%	Using Multiproduct Calibrator 5500 A by Direct Method
12.	Insulation Tester [§]	1M Ω to 1000M Ω	5.78%to0.76%	Using Decade Resistance Box
II.	MEASURE			
1.	DC Voltage [§]	1V to 600V	0.62% to 0.1%	Using 6. 5 Digit Multimeter by Direct Method

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2.	AC Voltage ^{\$}	50 Hz 1V to 300V	7.70% to 0.10%	Using 6. 5 Digit Multimeter by Direct Method
3.	AC High Voltage ^{\$}	50Hz 1kV to 5kV	3.66% to 1.39%	Using HV Probe with Multimeter by Direct Method
4.	DC High Voltage ^{\$}	1kV to 5kV	3.24% to 3.01%	Using HV Probe with Multimeter by Direct Method

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<u>MECHANICAL CALIBRATION</u>				
I.	DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)			
1.	Digital / Vernier Caliper [§] LC : 0.01 mm LC : 0.01 mm	0 to 300 mm 0 to 600 mm	14.0 μ m 15.0 μ m	Using Slip Gauge 0 Grade, Caliper Checker Comparison Method IS 3651
2.	External Micrometer [§] LC : 0.001 mm	0 to 25 mm	2.0 μ m	Using Slip Gauge 0 Grade by Comparison Method IS 2967
3.	Height Gauge [§] LC : 0.01 mm	0 to 600 mm	14.0 μ m	Using Caliper Checker Surface Plate by Comparison Method IS 2921
4.	Feeler Gauge [§]	0.03 to 1.0 mm	3.8 μ m	Using Digital Micrometer by Comparison Method IS 3179
5.	V Block [§] Parallelism Working Face Parallelism V Axis Symmetricity Error	Upto 150 mm	7.2 μ m 7.2 μ m 7.2 μ m	Using Dial Test Indicator with Height Gauge, Surface Plate, Test Mandrel by Comparison Method IS 2949

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II.	PRESSURE INDICATING DEVICES			
1.	Pressure Gauge [§]	0 to 100 bar	0.29 bar	Using Digital Pressure Gauge & hydraulic comparator pump as per DKD-R6-1
III.	TORQUE MEASURING DEVICES			
1.	Torque Screw Driver [§] (Type II, Class D, E & F)	0.81 Nm to 4.41 Nm	2.7 % rdg	Using Digital Torque Meter As per IS/ISO 6789

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

[§]Only in Permanent Laboratory

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