

Laboratory Adcon Test & Calibration Lab, 44, Udyog Vihar, Phase-I, Gurgaon, Haryana
Accreditation Standard ISO/IEC 17025:2005
Discipline Electro-Technical Calibration **Issue Date** 17.03.2016
Certificate Number C-1034 **Valid Until** 16.03.2018
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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
SOURCE			
1. DC Voltage ^{\$}	1 mV to 300 mV	0.45 % to 0.15 %	Using Multi product calibrator (Fluke- 5522A) by Direct method
	300 mV to 3 V	0.15 % to 0.12 %	
	3 V to 300 V	0.12 % to 0.18 %	
	300 V to 1000 V	0.18 % to 0.05 %	
2. AC Voltage ^{\$}	50 Hz		Using Multi product calibrator (Fluke- 5522A) by Direct method
	1 mV to 300 mV	1.0 % to 0.08 %	
	300 mV to 3 V	0.08 % to 0.05v	
	3 V to 300 V	0.05 % to 0.04 %	
3. DC Current ^{\$}	100 μ A to 300 μ A	1.5 % to 0.16 %	Using Multi product calibrator (Fluke- 5522A) by Direct method
	300 μ A to 3 mA	0.16 % to 0.10 %	
	3 mA to 300 mA	0.10 % to 0.05 %	
	300 mA to 3 A	0.05 % to 0.08 %	
	3 A to 20 A	0.08 % to 0.15 %	
	20 A to 1000 A	0.15 % to 0.5 %	Using Multi product calibrator (Fluke- 5522A) & current coil by Direct method
4. AC Current ^{\$}	50 Hz		Using Multi product calibrator (Fluke- 5522A) by Direct method
	300 μ A to 3 mA	0.4 % to 0.7 %	
	3 mA to 300 mA	0.7 % to 0.2 %	
	300 mA to 3 A	0.2 % to 0.3 %	
	3 A to 20 A	0.3 % to 0.4 %	
	20 A to 1000 A	0.4 % to 0.7 %	Using Multi product calibrator (Fluke- 5522A) & current coil by Direct method

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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
5. DC resistance ^{\$}	1 m Ω	0.2 %	Using Standard resistors of fixed value by Direct method
	10 m Ω	0.09 %	
	100 m Ω	0.08 %	
	1 Ω	0.1 %	
	10 Ω	0.09 %	
	10 Ω to 100 Ω	0.12 % to 0.05 %	Using Multi product calibrator (Fluke- 5522A) by Direct method
	100 Ω to 100 k Ω	0.05 % to 0.02 %	
	100 k Ω to 100 M Ω	0.02 % to 0.5 %	
	100 M Ω to 1 G Ω	0.5 % to 2.0 %	
6. Capacitance ^{\$}	1 kHz		Using Multi product calibrator (Fluke- 5522A) by Direct method
	1 nF to 33 nF	1.8 % to 0.8 %	
	100 Hz		
	0.3 μ F to 30 μ F	1.8 % to 0.8 %	
7. Inductance ^{\$}	1 kHz		Using Decade inductance box by Direct method
	1 mH to 100 mH	3.5 %	
	100 mH to 10 H		
8. Power factor [#]	50 Hz		Using 3 Φ power energy calibrator(Zeal) by Direct method
	0.5 to 1(lag & lead)	0.02 PF	
9. Active power [#] (1 Φ , 3 Φ at P.F. unity & (-) 0.9 to 0.9	50 Hz		Using 3 Φ power energy calibrator(Zeal) by Direct method
	100 V to 300 V Current : 1 A to 5 A	0.3 % to 0.8 %	
10. Active energy [#] (1 Φ , 3 Φ at P.F. unity & (-) 0.9 to 0.9	50 Hz		Using 3 Φ power energy calibrator(Zeal) by Direct method
	100 V to 300 V Current : 1 A to 5 A	0.3 % to 0.8 %	

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11. Frequency ^{\$}	10 Hz to 100 kHz	0.35 % to 0.04 %	Using Multi product calibrator (Fluke- 5522A) by Direct method
12. Temperature Simulation ^{\$} (Indicator/controller/ recorder/data logger)			
RTD Type	(-)200 °C to 800 °C	0.13 °C to 0.3 °C	Using Multi product calibrator (Fluke- 5522A) by Direct method
J-Type T/C	(-)200 °C to 760 °C	0.4 °C	
K-Type T/C	(-)200 °C to 1300 °C	0.5 °C	
T-Type T/C	(-)200 °C to 400 °C	0.65 °C to 0.20 °C	
N-Type T/C	(-)200 °C to 1300 °C	0.5 °C to 0.3 °C	
R-Type T/C	0 °C to 1700 °C	0.57 °C	
S-Type T/C	0 °C to 1700 °C	0.57 °C	
13. Temperature Simulation [*] (Indicator/controller/ recorder/data logger)			
RTD Type	(-)100 °C to 600 °C	1.5 °C to 1.9 °C	Using Universal calibrator(Radix) (Microcal) by Direct method
J/K-Type T/C	(-)100 °C to 1200 °C	2.4 °C to 2.0 °C	
T-Type T/C	(-)100 °C to 380 °C	1.5 °C to 2.5 °C	
B-Type T/C	800 °C to 1600 °C	5.1 °C to 6.5 °C	
R- Type T/C	800 °C to 1600 °C	5.1 °C to 6.5 °C	
S-Type T/C	800 °C to 1600 °C	5.1 °C to 6.5 °C	
MEASURE			
1. DC Voltage ^{\$}	1 mV to 1000 V	0.15 %	Using 8 ½ Digits Digital Multimeter (Fluke, 8508A) by Direct method
2. AC Voltage ^{\$}	50 Hz 10 mV to 1000 V	0.1 % to 0. %	Using 8 ½ Digits Digital Multimeter (Fluke, 8508A) by Direct method

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3. DC Current ^{\$}	1 mA to 20 A	0.02 % to 0.07 %	Using 8 ½ Digits Digital Multimeter (Fluke, 8508A) by Direct method
4. AC Current ^{\$}	50 Hz 10 mA to 20 A	0.1 % to 0.2 %	Using 8 ½ Digits Digital Multimeter (Fluke, 8508A) by Direct method
5. DC Resistance ^{\$}	1 Ω to 1 k Ω 1 k Ω to 100 k Ω 100 k Ω to 100 M Ω 100 M Ω to 2 G Ω	0.1 % to 0.5 % 0.1 % to 0.5 % 0.1 % to 0.5 % 0.1 % to 0.5 %	Using 8 ½ Digits Digital Multimeter (Fluke, 8508A) by Direct method
6. Frequency [#]	10 Hz to 1 MHz	0.35 % to 0.08 %	Using 6 ½ Digits Digital Multimeter (Agilent) by Direct method
7. Timer & Stop watch [#]	10 s to 01 hr.	0.5 s to 1.2 s	Using Digital time interval meter (Leetron) by Direct method
8. DC Voltage [*]	1 mV to 200 mV 200 mV to 200 V 200 V to 1000 V	4.5 % to 0.5 % 0.5 % to 0.2 % 0.2 % to 0.15 %	Using Digital Multimeter (Agilent) by Direct/comparison method
9. AC Voltage [*]	50 Hz 10 mV to 200 mV 200 mV to 200 V 200 V to 750 V	1.6 % to 0.3 % 0.3 % 0.5 %	Using Digital Multimeter (Agilent) by Direct/comparison method

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Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (\pm)	Remarks
10. DC Current *	1 mA to 200 mA	0.35 %	Using 6 ½ Digital Multimeter (Agilent) by Direct/comparison method
	200 mA to 3A	0.35 %	
	3 A to 10 A	0.35 %	
11. AC Current *	50 Hz	0.6 %	Using 6 ½ Digital Multimeter (Agilent) & Shunt by Direct/comparison method
	100 mA to 10 A		
12. DC High voltage *	1 kV to 15 kV	1.5 %	Using 4 ¾ Digits Digital multimeter (Rishabh) and high voltage probe by Direct method
13. AC High voltage *	50 Hz	3.0 %	Using 4 ¾ Digits Digital multimeter (Rishabh) and high voltage probe by Direct method
	1 kV to 10 kV		

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

\$Only in Permanent Laboratory

*Only for Site Calibration

The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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