Laboratory	**Bharti Automation Private Limited, 48-49, Vasundhra Nagar, Bhiwadi, Distt. Alwar, Rajasthan**		
Accreditation Standard	**ISO/IEC 17025:2005**		
Discipline	**Electro-Technical Calibration**	**Issue Date**	**24.04.2015**
Certificate Number	**C-0680**	**Valid Until**	**23.04.2017**
Last Amended on	**-**	**Page**	**1 of 3**

	Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (±)	Remarks
	MEASURE			
1.	**DC VOLTAGE$**	10 mV to 100 mV 100 mV to 10 V 10 V to 100 V 100 V to 1000 V	0.9 to 0.05 0.05 to 0.06 0.06 to 0.05 0.05 to 0.04	Using 6 .5 DMM, FLUKE 8845
		>1 kV to 10 kV	0.2 kV to 0.6 kV	HV Probe 80K40
2.	**AC VOLTAGE$**	**50 Hz**		
		100 mV to 100 V 100 V to 750 V	0.15 to 0.12 0.12	Using 6 .5 DMM, FLUKE 8845
3.	**AC HIGH VOLTAGE$**	**50 Hz**		
		>1kV to 20 KV	0.2 kV to 1.3 kV	Using HV Probe with DMM
4.	**DC CURRENT$**	2 mA to 20 mA 20 mA to 100 mA 100 mA to 1 A 1 A to 10 A	0.2 to 0.1 0.1 to 0.12 0.12 to 0.2 0.2 to 0.22	Using 6 .5 DMM, FLUKE 8845 A
5.	**AC CURRENT$**	1 mA to 100 mA 100 mA to 1 A 1 A to 10 A	1 to 0.6 0.6 to 0.4 0.4 to 0.29	Using 6 .5 DMM, FLUKE 8845 A
6.	**FREQUENCY$**	50 Hz to 300 kHz	0.12 to 0.3	Using 6 .5 DMM, FLUKE 8845 A
7.	**STOP WATCH$**	20 s 10 15 min.	0.7 s	Using Digital Stop Watch
8.	**INDUCTANCE$**	1 mH to 100 mH 100 mH to 1 H	3.1 to 2.2 2.2 to 1.7	Using LCR Meter Agilent U1731

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Convenor

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Program Manager

	Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (±)	Remarks
9.	**CAPACITANCE$**	100 nF to3.3 µF	1.1 to 1.4	Using LCR Meter Agilent U1731
10.	**RESISTANCE$ (2 WIRE)**	10 Ω to 100 Ω 100 Ω to 10 kΩ 10 kΩ to 100 kΩ 100 kΩ to 1 MΩ 1MΩ to 100 MΩ	0.02 to 0.09 0.013 to 0.02 0.013 to 0.02 0.02 0.02 to 1	Using 6 .5 DMM, FLUKE 8845 A
11.	**AC POWER /ENERGY♯** **1 ϕ & 3 ϕ ACTIVE** **COSØ=0.50 LAG to 1**	**50Hz** 240Wh to 2.4 kWh 110 V to 415 V 1A to 5A	0.13 %	Using Standard Energy meter 0.1 Class Yokogawa WT 330
	SOURCE			
1.	**AC CURRENT♯**	1 A to 20 A 20 A to 2000 A	0.4 % to 0.3 % 0.3 % to 2.3 %	Precision High Current Source Model: bapl/hcs3
2.	**TEMPERATURE SIMULATION♣** **Temperature Indicator / Temperature Controller / PID / Temperature Recorder& Thermocouple Indicator**			
	RTD (pt-100)	-200 °C to 600 °C	1.1 °C	
	Thermocouple **R Type**	200 °C to1700 °C	1.5 °C	Using Universal Calibrator of masibus
	S Type	200 °C to 700 °C	2.1 °C	(Unicab3001M)
	K Type	50 °C to 1300 °C	1.1 °C	

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Last Amended on	**-**	**Page**	**3 of 3**

Quantity Measured / Instrument	Range/ Frequency	* Calibration Measurement Capability (±)	Remarks
J Type	50 °C to 750 °C	1.1 °C	
T Type	-150 °C to 400 °C	1.1 °C	

*** Measurement Capability is expressed as an uncertainty (±) 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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Convenor

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Program Manager