

RECOMMENDED SCOPE OF ACCREDITATION

(For Calibration Laboratories)

La	Laboratory: Prism Calibration Centre, Ahmedabad					Date(s) of Visit: 7-8 Oct 201		
			cal (Source) L					
SI	Parameter*, Device under calibration	Master equipmen	Range(s) of	A CONTRACTOR OF THE PROPERTY O		ent Capability **	Remarks Method use	
				Claimed by Laboratory (±)	Observed by Assessor (±)	y Recommender by Assessor (±)		
1	Temperature simulation # Thermocoupl e K type J type B type R Type S type T type	Advance Calibrator	-50 - 1300°C -100 - 1200°C 600 - 1800°C 360 - 1700°C 300 - 1700°C -50 - 400°C	0.58°C75°C 0.48°C 2.42°C-1.41°C 1.37°C 1.82°C-1.28°C 0.75°C	-50 - 0.89°C 1200 -0.82°C 600 - 2.52°C 360 - 1.53°C 1700 - 1.56°C 400 - 1.01°C	0.90°C75°C 0.82°C 2.52°C-1.41°C 1.55°C 1.82°C-1.56°C 1.01°C	Direct Method	
	RTD PT 100		-200 - 800°C	0.41°C63°C	-199 – 0.39°C	0.41°C - 0.63°C		
2	1 Phase/3 Phase Power#	3 Phase Power / Energy Calibrator Zeal	50Hz 50-250V 0.1A- 5A -0.5 to +0.5 PF (7.5W - 3750W)	0.34% - 0.21%	250V/5A/0.5PF - 0.07%	0.34% - 0.21%	Direct Method	
3	1 Phase/3 Phase Energy#	3 Phase Power / Energy Calibrator Zeal	50Hz 50-250V 0.1A- 5A -0.5 to +0.5 PF (1.25Wh - 625Wh)	0.23% - 0.18%	250V/5A/0.5PF - 0.44%	0.25% - 0.44%	Direct Method	
1	Power Factor #	3 Phase Power / Energy Calibrator Zeal	-0.5 to +0.5	0.012 PF	-0.5001 +0.5 - 0.012	0.012 PF	Direct Method	
5	DC Voltage #	MFC Zeal	10 mV – 100 mV 100 mV – 1000V	0.27% - 0.13% 0.13% - 0.12%	10mV - 0.14% 100 0V- 0.12%	0.27% - 0.13% 0.13% - 0.12%	Direct Method	
3	AC Voltage#	MFC Zeal	50Hz 10 mV – 100 mV 100 mV – 1000V	0.52% - 0.19% 0.19% - 0.17%		0.52% - 0.22% 0.22%	Direct Method	

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Mr.Gautam Pal Signature, Date & Name of Assessor(s) Mr.Gautam Pal

Signature, Date & Name of Lead Assessor

Lab	oratory: Prisn	n Calibrati	Date(s) of Visit: 7-8 Oct 2017				
Dis	cipline: Electi	ro Technic	al (<u>Source</u>) La	b & Site			
SI	Parameter*/ Device under calibration	Master equipmen t used	Range(s) of measurement	Calibration a Claimed by Laboratory (±)	Observed by Assessor (±)	Recommended by Assessor (±)	Remarks ⁺ /- Method used
7	DC Current #	Advanced calibration & MFC with Current coil	0.2mA - 24mA 24mA - 100mA 100mA - 10A 10A - 800A	2.1% - 0.042% 0.042% - 0.21% 0.21% - 0.40% 0.87%	0.2mA - 1.80% 24mA - 0.027% 24mA - 0.20% 10A - 0.39% 10A - 1.48% 800A - 0.51%	2.1% - 0.042% 0.2% - 0.21% 0.21% - 0.40% 1.48% -0.51%	Direct Method
8	AC Current#	MFC with Current coil	1mA – 100 mA 100mA – 10A 10A – 800A	0.36% - 0.25% 0.25% - 0.42% 0.67%	1mA - 0.26% 10A -0.42% 10A - 1.55% 800A - 1.27%	0.36% - 0.25% 0.25% - 0.42% 1.55% - 1.27%	Direct Method
9	Frequency #	Advanced Calibrator	10Hz – 50kHz	0.07% - 0.03%	10Hz – 1.5% 50kHz – 0.01%	1.5% - 0.03%	Direct Method
10	DC resistance #	Decade Box	1Ω - 1 GΩ 1GΩ - 100 GΩ	1.4% - 2.65% 2.65% - 6.0%	1Ω -1.4% 1 GΩ- 2.64% 100 GΩ - 5.99%	1.4% - 2.65% 2.65% - 6.0%	Direct Method

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Signature, Date & Name of Lead Assessor

Laboratory: Prism Calibration Centre, Ahmedabad Date(s) of Visit: 7-8 Oct 2017 Discipline: Electro Technical (Measure) Lab & Site Master Parameter*/ Range(s) of Calibration and Measurement Capability ** Remarks+/ equipment Device under measurement Method used Observed Recommended used Claimed by calibration by by Assessor Laboratory Assessor (±) (±) (±) 1 DC Voltage # 0.70% - 0.012% DMM Fluke Direct/Comparison 1mV - 100mV 0.70 - 0.012% 1mV - 0.7%0.01% - 0.2% Method 0.01% - 0.2% 1V -0.04% 100mV - 1V 1V - 1000V 0.008% 1000V -.041% 0.2% - 0.041% 50Hz 100mV -2 AC Voltage # **DMM Fluke** 100mV - 1V 0.12% - 0.2% 0.12% 0.12% - 0.2% Direct/Comparison 0.2%-0.10% 1V - 1000V 0.2%-0.10% 1V-0.12% Method 1000V -0.10% DMM Fluke 3 DC Current# 0.1mA - 1mA 1.01% - 0.06% 0.1mA -1% Direct/Comparison 1.01% - 0.06% 1mA - 100mA 0.06% - 0.07% 1A -0.04% 0.06% - 0.07% Method 100mA - 1A 0.07% -0.2% 10A -0.19% 0.07% -0.2% 1A - 10A 0.2% - 0.18% 0.04% - 0.19% 50Hz AC Current# DMM Fluke 0.1mA - 1mA 1.0% - 0.3% 0.1mA -1% 1.0% - 0.3% Direct/Comparison 1mA - 100mA 1A -0.2% 0.3% - 0.19% 0.3% - 0.19% Method 100mA - 1A 0.19% -0.3% 10A -0.25% 0.19% -0.3% 1A - 10A 0.3% - 0.24% 0.3% - 0.24% 50 kHz -**DMM Fluke** 10Hz - 50kHz 0.04% - 0.03% 5 Frequency # 0.02% 0.04% - 0.03% **Direct Method** 6 $1\Omega - 0.70\%$ Direct Method

DMM Fluke

1Ω - 1GΩ

0.7% - 2.32%

1GΩ- 2.32%

0.7% - 2.32%

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Lab Representative

Resistance #

9-17

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Mr.Gautam Pal
Signature, Date & Name of Lead
Assessor

NABL 143 shall be referred for the recommendation of CMC

Remarks shall also include whether the same scope is applicable for site calibration as well. NABL 130 shall be referred while recommending the scope 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.

Date(s) of Visit: 7-8 Oct 2017 Laboratory: Prism Calibration Centre, Ahmedabad Discipline: Electro Technical (Measure) Lab & Site Master Calibration and Measurement Capability ** Remarks⁺/ Parameter*/ Range(s) of Method used equipment Device under measurement Recommended Observed Claimed by used calibration by Assessor by Laboratory (±) Assessor (±) (±) **Direct Method** Temperature simulation # Thermocoupl Advance 0.88°C - .75°C -50 - 0.88°C 0.57°C--50 - 1300°C Calibrator K type 0.82°C 0.74°C 1150 -0.82°C -100 -J type 2.52°C-1.41°C 600 - 2.51°C 0.46°C 1150°C B type 360 - 1.53°C 1.55°C 2.4°C-1.36°C 600 - 1800°C R Type 1.82°C-1.55°C 1700 -1.25°C 360 - 1700°C S type 1.01°C 1.82°C-1.28°C 1.55°C 300 - 1700°C T type 400 - 1.01°C -50 - 400°C 0.74°C 0.28°C - 0.39°C RTD PT 100 -200 - 0.28°C 0.28°C --200 - 800°C 0.39°C Comparison Method 2.42s -2.53s 2.42s -2.53s 7s - 3600sDig Stop 8 Time # 2.53s - 20.49s 2.53s - 20.49s Watch 3600s -86400s 1kV - 8.3% 1kV - 5 kV 1.70% AC High 9 Comparison Method 5 kV-5.8% 8.3% - 5.8% **HV Probe** Voltage with DMM 5.0% 3.4% **HV Probe** 10 DC High 1kV - 5 kV with DMM Voltage Comparison Method

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Laboratory: Prism Calibration Centre, Ahmedabad Dat							Date(s) of Visit: 7-8 Oct 2017	
Dis	cipline: Elect	ro Technica	al (Measure)	Only Site				
SI	Parameter*/ Device under calibration	aguinment	Range(s) of	Calibration a	nd Measureme	nt Capability **	Remarks [†] / Method used	
			measurement	Claimed by Laboratory (±)	Observed by Assessor (±)	Recommended by Assessor (±)		
1	AC High Voltage	HV Probe with DMM	1kV – 30 kV	1.70%	1kV - 8.3% 30kV- 5.7%	8.3% - 5.7%	Comparison Method	
2	DC High Voltage	HV Probe with DMM	1kV –30 kV	3.4%	-	5.0%	Comparison Method	

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