NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

GOVERNMENT ELECTRICAL STANDARDS LABORATORY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Office of the Chief Electrical Inspector to Government, Thiru.Vi.Ka. Industrial Estate, Guindy, Chennai, Tamil Nadu

in the discipline of

ELECTRO-TECHNICAL CALIBRATION

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Certificate Number C-0832

Issue Date 19/07/2014

Valid Until 18/07/2016

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the additional requirements of NABL.

Signed for and on behalf of NABL

Avijit Das
Program Manager

Anil Relia
Director

Prof. K. VijayRaghavan
Chairman

रा.प्र.प्र.बो.

राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड

विज्ञान एवं प्रौद्योगिकी विभाग, भारत

प्रत्यायन प्रमाण–पत्र

शासकीय विद्युत मानक प्रयोगशाला

का मूल्यांकन और प्रत्यायन निम्न मानक के अनुसार

आई.एस.ओ./आई.ई.सी. 17025:2005

"परीक्षण एवं अंशशोधन प्रयोगशालाओं की सक्षमता की सामान्य अपेक्षाएँ"

चेन्नई, तमिलनाडु

में स्थित इसकी सुविधाओं के लिए

विद्युत तकनीकी अंशशोधन

के विषय क्षेत्र में किया गया।

(इस प्रयोगशाला के प्रत्यायन के विषय क्षेत्र की जानकारी एन ए बी एल वेबसाइट www.nabl-india.org से भी प्राप्त कर सकते हैं)

प्रमाण-पत्र संख्या अ-0832

जारी करने की तिथि 19/07/2014

वैधता की तिथि 18/07/2016

यह प्रमाण-पत्र उपर्युक्त मानक तथा राष्ट्रीय परीक्षण और अंशशोधन प्रयोगशाला प्रत्यायन बोर्ड की अतिरिक्त अपेक्षाओं का निरंतर संतोषप्रद अनुपालन किए जाने पर अनुबंध में निर्दिष्टानुसार प्रत्यायन के क्षेत्र के लिए वैध रहेगा।

रा.प्र.प्र.बो. की ओर से हस्ताक्षरित

अविजित दास	अनिल रेलिया	प्रो. के. विजयराघवन
कार्यक्रम प्रबन्धक	निदेशक	अध्यक्ष

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Laboratory	**Government Electrical Standards Laboratory, Office of The Chief Electrical Inspector to Government, Thiru. Vi. Ka. Industrial Estate, Guindy, Chennai, Tamil Nadu**		
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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
	SOURCE			
1.	**DC VOLTAGE**[$]	10 mV to 100 mV	0.057 % to 0.012 %	Using Universal Calibration System Fluke 9100E By Direct Method
		100 mV to 1 V	0.012 %	
		1 V to 100 V	0.12 % to 0.013 %	
		100 V to 1000 V	0.013 % to 0.0093 %	
2.	**AC VOLTAGE**[$]	**50 Hz**		
		10 mV to 100 mV	4.48 % to 0.077 %	Universal Calibration System Fluke 9100E By Direct Method
		100 mV to 1 V	0.077 % to 0.070 %	
		1 V to 100 V	0.70 % to 0.056 %	
		100 V to 1000 V	0.056 % to 0.074 %	
3.	**DC CURRENT**[$]	100 µA to 100 mA	0.031 % to 0.038 %	Using Universal Calibration System Fluke 9100E. By Direct Method
		100 mA to 1 A	0.038 % to 0.36 %	
		1 A to 10 A	0.36 % to 0.11 %	
		10 A to 100 A	0.11 % to 0.39 %	Using Universal Calibration System Fluke 9100E,Current Coil By Direct Method
		100 A to 990 A	0.39 % to 0.41 %	
4.	**AC CURRENT**[$]	**50Hz**		
		1 mA to 100 mA	0.68 % to 0.16 %	Using Universal Calibration System Fluke 9100E. By Direct Method
		100 mA to 1 A	0.16 % to 0.21 %	
		1 A to 10 A	0.21 % to 0.29 %	
		10 A to 100 A	0.29 % to 0.86 %	
		100 A to 990 A	0.86 % to 0.82 %	Using Universal Calibration System Fluke 9100E, with Current Coil by Direct Method

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Shally Sharma
Convenor

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5.	**RESISTANCE$**	0.1 Ω to 1 Ω	0.61 % to 0.18 %	Using Vaiseshika High Precision DRB 7400 by Direct Method
		1 Ω to 10 Ω	0.18 % to 0.70 %	Using 9100 E by Direct Method
		10 Ω to 100 Ω	0.70 % to 0.16 %	
		100 Ω to 100 kΩ	0.16 % to 0.070 %	
		100k Ω to 100 MΩ	0.070 % to1.60 %	
		100 MΩ to 1 GΩ	1.60 % to 2.61 %	Using Vaiseshika with Electronic Megger by Direct Method
		1 GΩ to 10 GΩ	2.61 % to 5.95 %	
		10 GΩ to 100 GΩ	5.95 % to 6.16 %	
		100 GΩ to 1000 GΩ	6.16 %	
6.	**FREQUENCY$**	10 Hz to 30 kHz	0.009 % to 0.01 %	Using Universal Calibration System Fluke 9100E. By Direct Method
	MEASURE			
1.	**DC VOLTAGE$**	100 mV to 1 V	0.054 % to 0.0040 %	Using 8.5 Digit Reference Multimeter Fluke 8508A By Direct Method
		1 V to 100 V	0.0040 % to 0.0010 %	
		100 V to 1000 V	0.0010 %	
2.	**AC VOLTAGE$**	**50 Hz**		
		100 mV to 1 V	0.30 %	Using 8.5 Digit Reference Multimeter Fluke 8508A By Direct Method
		1 V to100 V	0.30 % to 0.018 %	
		100 V to 1000 V	0.018 % to 0.037 %	
3.	**DC RESISTANCE$**	10 Ω to 100 Ω	3.30 % to 0.0011 %	Using 8.5 Digit Reference Multimeter Fluke 8508A By Direct Method
		100 Ω to 10 kΩ	0.0011 % to 0.0010 %	
		10 kΩ to 100 kΩ	0.0010 %	
		100 kΩ to 10 MΩ	0.0010 % to 0.017 %	
		10 MΩ to 400 MΩ	0.017 % to 1.55 %	

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
4.	**AC POWER$**	**240V @ 50 Hz**		Using ZERA Com 3003
	3 PHASE	5 mA to 50 mA	0.025 %	By Comparison Method
	ACTIVE PF: 0.5 to UPF	>50 mA to 10 A	0.015 %	
		>10 A to 120 A	0.017 %	
		63.5 V @ 50 Hz		
		5 mA to 50 mA	0.054 %	Using ZERA COM 3003 by
		50 mA to 10 A	0.015 %	Comparison Method
	ACTIVE POWER	**240V@47.5 Hz & 52.5 Hz**		Using ZERA COM 3003 by
	0.5 PT TO UPF	100mA to 10 A	0.015 %	Comparison Method
		>10A to 100 A	0.017 %	
		63.5V @47.5 Hz & 52.5Hz		Using ZERA COM 3003 by Comparison Method
		100 mA to 10A	0.015 %	
	REACTIVE POWER	**240 V @ 50 Hz**		Using ZERA COM 3003 by
	0.5 PF TO UPF	5 mA to 50 mA	0.023 %	Comparison Method
		50 mA to 10 A	0.015 %	
		>10 A to 120 A	0.018 %	
		63.5 V@50 Hz		Using ZERA COM 3003 by
		5 mA to 50 mA	0.056 %	Comparison Method
		>50 mA to 10 A	0.015 %	
	APPARENT POWER	**240 V @ 50 Hz**		Using ZERA COM 3003 by
		5 mA to 50 mA	0.014 %	Comparison Method
		>50mA to 10 A	0.012 %	
		>10 A to 120 A	0.013 %	

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	Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (±)	Remarks
		63.5V@ 50Hz		
		5 mA to 50 mA	0.036 %	
		>50 mA to 10 A	0.018 %	
5.	**AC POWER AND ENERGY$**			
	1PHASE	**240V@ 50 Hz**		Using ZERA COM 3003 by Comparison Method
	ACTIVE PF:	5mA to 50 mA	0.055 %	
	0.5PF to UPF	>50mA to 10 A	0.015 %	
		10 A to 120 A	0.017 %	

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

$Only in Permanent Laboratory

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