

NABL Accredited Laboratory in Jaipur Discom.

Accreditation as per IS/ISO/IEC 17025:2005 : General requirements for the competence of testing and calibration laboratories for Testing and Calibration activities is granted by NABL which is an autonomous body known as "National Accreditation Board for Testing and Calibration Laboratories" NABL is established by Govt. of India and headed by its Director who is equivalent to Secretary rank in Govt. of India hierarchy. It works under Deptt. of Science and Technology, Ministry of Science and Technology NABL, New Delhi. It has its dedicated web site (www.nabl-india.org) which provide complete information about NABL activities and list of accredited laboratories in the field of Testing and Calibration.

Jaipur Discom has got NABL Certification for Meter testing Lab designated as Central Meter Testing Laboratory, JVVNL, Jaipur located at Chambal Power House, Hawa Sarak, Jaipur under the administrative control of SF(M&P), JVVNL, Jaipur in the following fields as per IS/ISO/IEC 17025:2005 from NABL, New Delhi.

1. Electrical Testing.
2. Electro-technical Calibration.

The details of NABL certificates for both the activities are as detailed below:-

(Annexure-A)

S.No.	Name of field	Certificate No.	Issued date	Validity.
1	Electrical Testing.	T-1729	08.03.2010	07.03.2012
2	Electro-technical Calibration.	C - 0633	23.04.2010	22.04.2012

NABL, New Delhi has also approved to test / calibrate the equipment of outside customers w.e.f.28.06.2010. NABL has reviewed assessment of the working in yearly surveillance and also enhance the scope in the field of electrical testing w.e.f. 31.5.2011 & electro-technical calibration w.e.f. 17.6.2011.

Brief Description of the meter testing bench in NABL lab:-

The Central Meter Testing Laboratory has the fully computerized Automatic Meter Test Bench of ZERA make, Germany installed with ERSS (Electronic Reference Sub-standard) of having accuracy class of 0.02 and current range of

10 mAmp. To 120 Amp., voltage range from 10 Volt to 500 Volt & power factor range 0.0 lag-unity-0.0 lead. The Automatic meter Test Bench of ZERA is from the best Company of the world and only few Discoms have got this type of Automatic Meter Test Bench. We can test 20 Nos. energy meters of different make with different pulse constant simultaneously on this test bench. The Testing Bench has been provided with Isolation Current Transformer (ICT) and Multi Secondary Voltage Transformer (MSVT) facility whereby 20 Nos. single phase & three phase meters can be tested without opening link between current and voltage circuits. 20 Nos. of scanners have been provided for each position for capturing the pulse output of the meter and give command to the error calculator for giving appropriated computerized analysis through computer software programs.

The testing of meters is carried out in auto mode without any manual interference. The reference meters (with frequency output & pulse output) can be tested with this bench as per scope of NABL certificate.

Scope:-

A. NABL, New Delhi has approved the scope of Electrical testing for the following test of AC static Watt Hour and VAR Hour meters as per Annexure-2.

1. Test on limits of error
2. Test of meter constant
3. Test of Starting condition
4. Test of No load condition
5. Test of repeatability of errors (Acceptance test)
6. Test of influence quantity
 - a) Voltage Variation
 - b) Frequency Variation
 - c) Reverse Phase sequence.
 - d) Influence of 10% of third harmonics in current circuit.
7. Test of power consumption test
8. Vibration test
9. Shock Test
10. Interpretation of test results & adjustments.
11. DC Component in AC current circuit.

B. NABL, New Delhi has approved the scope of Electro Technical Calibration for AC Power / Energy active & reactive of three phase four wire and single phase two wire system as per Annexure-3.

Charges for Calibration:-

Charges for calibration reference meters are very nominal i.e. Rs. 3000 for first sixteen load points + Rs. 60 for every additional point + service charges.

Testing Charges for ABT compliant HTTVM :-

Testing Charges for ABT compliant HTTVM is Rs. 5440 + service charges (at present service charge is @ 10.3%).

For any query regarding testing and charges of any meter / reference meter contact to SE(M&P), JVVNL, Jaipur or E-mail to semeters@yahoo.in.

Superintending Engineer(M&P)



NABL

National Accreditation Board for Testing and Calibration Laboratories

Department of Science & Technology, India

CERTIFICATE OF ACCREDITATION

CENTRAL METER TESTING LABORATORY, J.V.V.N.L.,

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

JAIPUR

in the field of

ELECTRICAL TESTING

Certificate Number T- 1729

Issue Date 08/03/2010

Valid Until 07/03/2012

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

Shally Sharma
Convenor

Dr B. Hari Gopal
Director

Dr T. Ramasami
Chairman



रा.प्र.प्र.बो.

राष्ट्रीय परीक्षण और अंशशोधन
प्रयोगशाला प्रत्यायन बोर्ड
विज्ञान एवं प्रौद्योगिकी विभाग, भारत

प्रत्यायन प्रमाण-पत्र

केन्द्रीय मीटर परीक्षण प्रयोगशाला, ज. वि. वि. नि. लि.,

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”

जयपुर

में स्थित इसकी सुविधाओं के लिए

इलेक्ट्रिकल परीक्षण

के क्षेत्र में किया गया।

प्रमाण-पत्र संख्या प-1729
जारी करने की तिथि 08/03/2010

वैधता की तिथि 07/03/2012

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

शैली शर्मा

शैली शर्मा
संयोजक

डा. हरि गोपाल

डा. बो. हरि गोपाल
निदेशक

डा. टी. रामसामी

डा. टी. रामसामी
अध्यक्ष



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Department of Science & Technology, India

SCOPE OF ACCREDITATION

Laboratory	Central Meter Testing Laboratory, J.V.V.N.L., Hawa Sarak, Civil Lines, Jaipur	Issue Date	08.03.2010
Accreditation Standard	ISO/IEC 17025: 2005	Valid Until	07.03.2012
Field	Electrical Testing	Page	1 of 3
Certificate Number	T-1729		
Last Amended on	31.05.2011		

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Limits of Errors	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz
2	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Meter Constant	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz
	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Starting Conditions	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz
	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	No Load Condition	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 50Hz


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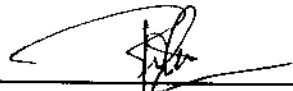
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No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Repeatability of Errors test (Acceptance test)	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ± 0.25 pf to UPF 50Hz
6	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Test of influence quantity a) Voltage Variation b) Frequency variation c) Reverse Phase sequence d) Influence of 10% of third harmonics in Current circuit	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ± 0.25 pf to UPF 50Hz
7	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Test of Power consumption / Power loss test for voltage & current circuit	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ± 0.25 pf to UPF 50Hz
8	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Vibration Test	IS 13010:1990 (REAFFIRMD 1994)	60 V to 320V 10mA to 100 A ± 0.25 pf to UPF 50Hz



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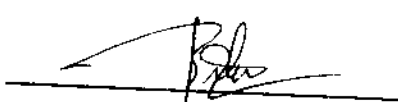
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Field	Electrical Testing	Page	3 of 3
Certificate Number	T-1729		
Last Amended on	31.05.2011		

No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Shock Test	IS 13010:1990 (REAFFIRMD 1994)	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz
10	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Marking of meters	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004)	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz
11	AC STATIC WATT HOUR METERS Class 1 & 2, AC STATIC WATT HOUR & VAR-HOUR METERS Class 0.2s & 0.5s, 1.0s.	Interpretation of test results & adjustments	IS 13779:1999 (REAFFIRMD 2002) IS 14697:1999 (REAFFIRMD 2004)	Visual Observations
12	AC STATIC WATT HOUR METERS Class 1 & 2	DC component in AC current circuit	IS 13779:1999 (REAFFIRMD 2002) IEC 62053-22 IEC 62053-21 IEC 62052-11 CBIP304:2008	60 V to 320V 10mA to 100 A ±0.25 pf to UPF 50Hz

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Laboratory	Central Meter Testing Laboratory, J.V.V.N.L., Hawa Sarak, Civil Lines, Jaipur		
Accreditation Standard	ISO/IEC 17025:2005		
Field	Electro-Technical Calibration	Issue Date	23.04.2010
Certificate Number	C-0633	Valid Until	22.04.2012
Last Amended on	17.06.2011	Page	1 of 2

Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
MEASURE			
1. AC POWER/ENERGY ACTIVE 3 ϕ 4Wire	50 Hz 240 V 10 mA to 100 A, 0.25 PF to UPF	0.054%	Using ZERA 3 Phase Power/Energy Meter EPZ-303-5 along with MTS 320 Bench by Standard comparison method
	50 Hz 63.5 V 50 mA to 10 A, UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.055% 0.05% to 0.085%	
	50 Hz 320 V, 5 A 0.25 PF to UPF	0.054%	
2. AC POWER/ENERGY ACTIVE 1 ϕ 2Wire	50 Hz 240 V 10 mA to 100A, 0.25 PF to UPF	0.064%	Using ZERA 3 Phase Power/Energy Meter EPZ-303-5 along with MTS 320 Bench by Standard comparison method
	50 Hz 63.5 V 50 mA to 10 A UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.05% 0.05% to 0.085%	
	50 Hz 320 V, 5A 0.25 PF to UPF	0.064%	

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Quantity Measured/ Instrument	Range / Frequency	*Calibration Measurement Capability (\pm)	Remarks
3. AC POWER/ENERGY REACTIVE 3 ϕ 4Wire	50 Hz 240 V 10 mA to 100 A UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.05% 0.05% to 0.085%	Using ZERA 3 Phase Power/Energy Meter EPZ-303-5 along with MTS 320 Bench by Standard comparison method
	50 Hz 63.5 V 50 mA to 10 A UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.05% 0.05% to 0.085%	
4. AC POWER/ENERGY REACTIVE 1 ϕ 2Wire	50 Hz 240 V 10 mA to 100 A UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.05% 0.05% to 0.085%	Using ZERA 3 Phase Power/Energy Meter EPZ-303-5 along with MTS 320 Bench by Standard comparison method
	50 Hz 63.5 V 50 mA to 10 A UPF to 0.50 PF 0.50 PF to 0.25 PF	0.035% to 0.05% 0.05% to 0.085%	

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


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