Laboratory Hi-Tech Meter Laboratory, UGVCL, Sabarmati, Ahmedabad, Gujarat **Accreditation Standard** ISO/IEC 17025: 2005 Discipline **Electrical Testing** Issue Date 02.07.2015 **Certificate Number** Valid Until 01.07.2017 T-1261 last Amended on **Page** 1 of 4 S.No. Product / **Specific Test Performed Test Method Specification** Range of Testing / limits of Detection **Material of Test** against which tests are performed I. MEASURING INSTRUMENTS - ELECTRICAL AND ELECTRONIC (STATIC) ENERGY METERS 1. **Electrical and** Insulation Resistance test CBIP-304: July 2008 0.1Ω to $100 M\Omega$,

Electronic (Static) Energy Meters and Electromechanical Meters		IS 13779: 1999 with Amd. 1, 2, 3 &4 IS 14697: 1999 with Amd. 1, 2 &3 IS 13010: 2002 with Amd. 1 & 2	500 V
	Running With No Load Condition	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2, 3 & 4 IS 14697: 1999 with Amd. 1,2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V
	Starting Conditions	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2, 3 & 4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 1 mA to 120 A
	Limits of Errors	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2, 3 & 4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2 IS 15707: 2006	40 V to 300 V 10 mA to 120 A 45 Hz to 65 Hz

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Accreditation Standard ISO/IEC 17025: 2005

Discipline Electrical Testing Issue Date 02.07.2015

Certificate Number T-1261 Valid Until 01.07.2017

last Amended on - Page 2 of 4

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
	Electrical and Electronic (Static) Energy Meters and Electromechanical Meters	Meter Constant	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2, 3 & 4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300V 10 mA to 120 A 45Hz to 65Hz
		Test of Power Consumption / Power Loss Test	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2, 3 &4 IS 14697: 1999 with Amd. 1, 2 &3 IS 13010: 2002 with Amd. 1 & 2	Single Phase: (0.002 W to 38.4 kW, 0.002 VA to38.4 kVA) Three Phase: 0.006 W to 115.2 kW, 0.006 VA to 15.2 kVA 0.002 V to 300 V, 0.01 A to 120 A 45 Hz to 65 Hz
		Test of Influence Quantities	CBIP-304: July 2008 IS 13779: 1999 with	40 V to 300 V 10 mA to 120 A,
		Voltage Variation	Amd. 1, 2,3 & 4 IS 14697: 1999 with	45 Hz to 65 Hz
		Frequency Variation	Amd. 1,2 & 3	
		Reverse Phase Sequence		
		Voltage Unbalance		
		Influence of Harmonics in		
		Voltage and Current Circuit		

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Accreditation Standard ISO/IEC 17025: 2005

Discipline Electrical Testing Issue Date 02.07.2015

Certificate Number T-1261 Valid Until 01.07.2017

last Amended on - Page 3 of 4

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
	Electronic (Static) Energy Meters and Electromechanical Meters Rep	Influence of Self-Heating	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1, 2,3 & 4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1&2	40 V to 300 V 10 mA to 120 A, 45 Hz to 65 Hz
		Repeatability of Errors Test	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1,2,3 &4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A, 45 Hz to 65 Hz
		Immunity to Earth Fault Test	CBIP-304: July 2008 IS 13779: 1999 with Amd. 1,2,3 &4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A, 45 Hz to 65 Hz
		Start up Test of Energy Meters	CBIP-304 :July 2008 IS 13779: 1999 with Amd. 1,2,3 &4 IS 14697: 1999 with Amd. 1, 2 & 3 IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A 45 Hz to 65 Hz
2.	Electromechanical Energy Meters	Range of Adjustment	IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A, 50 Hz

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Accreditation Standard ISO/IEC 17025: 2005

Discipline Electrical Testing Issue Date 02.07.2015

Certificate Number T-1261 Valid Until 01.07.2017

last Amended on - Page 4 of 4

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / limits of Detection
	Electromechanical Energy Meters	Running at Low Load	IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A, 50 Hz
		Test of Influence Quantities Voltage Variation Frequency Variation Reverse Phase Sequence Voltage Unbalance	IS 13010: 2002 with Amd. 1 & 2	40 V to 300 V 10 mA to 120 A, 45 Hz to 65 Hz