

Laboratory Testing & Quality Assurance Laboratory, MSEDCL, Bapat Camp, Kolhapur, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6424 (in lieu of T-2657)

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Validity 08.10.2017 to 07.10.2019

Last Amended on 12.10.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<u>ELECTRICAL TESTING</u>				
I. MEASURING INSTRUMENTS-ELECTRICAL AND ELETRONIC (STATIC) ENERGY METER				
1.	Electrical Measuring Equipment AC Watt-hour Meter Class 1 & Class 2	Insulation Resistance	IS 13779 (with amendment 1, 2, 3, 4, 5) Clause 12.7.6.4	1 MΩ to 999 MΩ / 500 V _{DC}
		AC Voltage	Clause 12.7.6.3	Up to 5 kV _{AC} at Power freq.
		Limits of Error	Clause 11.1	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead (Active and Reactive) 45 Hz to 55 Hz
		Starting Condition	Clause 12.14	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		No Load Condition	Clause 12.13	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Repeatability of Error	Clause 12.17	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Meter Constant	Clause 12.15	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Power Consumption	Clause 12.7.1	0.12 W to 1.92 W 0.12 VA to 9.6VA 45 Hz to 55 Hz
		Tamper and Fraud Monitoring	CBIP Publication No. 325 Jan 2015 (Clause 6.7)	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	AC Watt-hour Meter Class 0.5, Class 1.0 and Class 2.0	Insulation Resistance	IS 13010 with amendments 1, 2 Clause 11.2	1 MΩ to 999 MΩ / 500 V _{DC}
		Limits of Error	Clause 11.5	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Starting Condition	Clause 11.4	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		No Load Condition	Clause 11.3	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Repeatability of Error	Clause 11.19.1	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Meter Constant	Clause 11.6	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Power Consumption	Clause 11.8	0.12 W to 1.92 W 0.12 VA to 9.6VA 45 Hz to 55 Hz
3.	AC Static transformer Operated Watt-hour & VAR-hour Meter, Class 0.2 S Class 0.5 S Class 1.0 S	Insulation Resistance	IS 14697, with amendment 1, 2, 3, 4, Clause 12.7.6.4	1 MΩ to 999 MΩ / 500 V _{DC}
		AC Voltage	Clause 12.7.6.3	Upto 5 kV _{AC} at Power Freq.
		Limits of Error	Clause 11.1	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead (Active & Reactive) 45 Hz to 55 Hz

Naveen Jangra
Convenor

N. Venkateswaran
Program Director

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		Starting Condition	Clause 12.13	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		No Load Condition	Clause 12.12	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Repeatability of Error	Clause 12.16	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Meter Constant	Clause 12.14	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz
		Power Consumption	Clause 12.7.1	0.12 W to 1.92 W 0.12 VA to 9.6VA 45 Hz to 55 Hz
		Tamper and Fraud Monitoring	CBIP Publication No. 325 Jan 2015 (Clause 6.7)	40 V to 320 V (P-N) 1 mA to 120 A 0.2 Lag to UPF to 0.2 Lead 45 Hz to 55 Hz

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