

<b>Laboratory</b>	<b>Hi Tech Meter Testing Laboratory, Naka Madar, AVVNL, Ajmer, Rajasthan</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Electrical Testing</b>	<b>Issue Date</b>	<b>28.01.2015</b>
<b>Certificate Number</b>	<b>T-1905</b>	<b>Valid Until</b>	<b>27.01.2017</b>
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<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
<b>I.</b>	<b>ELECTRICAL AND ELECTRONIC (STATIC) ENERGY METERS</b>			
<b>1.</b>	<b>AC Static Watthour Meters, Class 1 and 2</b>	Insulation resistance	Cl. No. 12.7.6.4 (Table No. 22) IS 13779 : 1999 (Amd.1,2,3,4)	Resistance: 0 to 200 M Ohm, 500 V DC
		AC high voltage	Cl. No. 12.7.6.3 (Table No. 21) IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 0 to 5 kV Current: 0 to 30mA,
		Starting Condition	Cl. No. 11.5 (Table No. 19) IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		No Load Condition	Cl. No. 11.4.2 IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 40V to 320V,
		Limits of Error due to variation of the current	Cl. No. 11.1 (Table No. 15&16) IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Limits of Error due to other influence quantities, as shown below;	Cl. No. 11.2	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		(a) Voltage variation	Table No. 17 Item (i)	
		(b) Frequency Variation	Table NO. 17 Item (ii)	
		(c) Wave form: 10 % of 3 <sup>rd</sup> Harmonics in the current	Table No. 17 item (iii)	
		(d) Reversed phase sequence	Table No. 17 item (iv)	
		(e) Voltage Unbalance	Table No. 17 item (v)	
			IS 13779 : 1999 (Amd.1,2,3,4)	

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	<b>AC Static Watthour Meters, Class 1 and 2</b>	Repeatability of error	Cl. No. 11.7 IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Meter Constant	Cl. No.11.6 IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Power consumption	Cl. No. 12.7.1 Cl. No 9.1.1 (Table No.9) Cl. No 9.1.2 (Table No.10) IS 13779 : 1999 (Amd.1,2,3,4)	Voltage: 100mV to 300V, Current: 1 mA to 12A (For direct measurement), 5 mA to 120A (With Clip on CT) Power Factor: 0.5 to upf to (-)0.5
		Tamper & Fraud Monitoring	Cl. No. 6.7(a),(b) & (g) CBIP- 304 : 2008	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
<b>2.</b>	<b>Static Meter for Active Energy</b>	No Load Condition	Cl. No. 8.3.2 IEC 62053-21-2003	Voltage: 40V to 320V,
<b>3.</b>	<b>AC Static Transformer operated Watthour and VAR-hour Meters, Class 0.2s, 0.5s and 1.0s</b>	Insulation resistance	Cl. No. 12.7.6.4 (Table No. 18) IS 14697 : 1999 (Amd.1,2,3,)	Resistance: 0 to 200 M Ohm, 500 V DC
		AC high voltage	Cl. No. 12.7.6.3 ( Table No. 17) Of IS 14697 : 1999(Amd.1,2,3,)	Voltage: 0 to 5 kV Current: 0 to 30mA
		Starting Condition	Cl. No. 11.5 (Table No. 15) Of IS 14697 : 1999(Amd.1,2,3,)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5

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<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
	<b>AC Static Transformer operated Watthour and VAR-hour Meters, Class 0.2s, 0.5s and 1.0s</b>	No Load Condition	Cl. No.11.4.2 IS 14697 : 1999 (Amd.1,2,3,)	Voltage: 40V to 320V,
		Limits of Error due to variation of the current	Cl. No. 11.1 (Table No. 11&12) Of IS 14697 : 1999 (Amd.1,2,3,) \	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Limits of Error due to other influence quantities, as shown below; (a) Voltage variation (b) Frequency Variation (c) Wave form:10% of 3rd Harmonics in the current (d) Reversed phase sequence (e) Voltage Unbalance	Cl. No. 11.2  Table No. 13 Item (i) Table NO. 13 Item (ii) Table No. 13 item (iii)  Table No. 13 item (iv) Table No. 13 item (v) IS 14697 : 1999 (Amd.1,2,3,)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Repeatability of error	Cl. No. 11.7 IS 14697 : 1999 (Amd.1,2,3,)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Meter Constant	Cl. No. 11.6 IS 14697 : 1999 (Amd.1,2,3,)	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5
		Power consumption	Cl. No. 12.7.1 Cl. No 9.1.1 (Table No. 6) Cl. No 9.1.2 (Table No. 7) IS 14697 : 1999 (Amd.1,2,3,)	Voltage: 100mV to 300V, Current: 1 mA to 12A (For direct measurement), 5 mA to 120A (With Clip on CT) Power Factor: 0.5 to upf to (-)0.5

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	<b>AC Static Transformer operated Watthour and VAR-hour Meters , Class0.2s, 0.5s and 1.0s</b>	Tamper & Fraud Monitoring	Cl. No. 6.7(a),(b ) & (g) CBIP- 304 : 2008	Voltage: 40V to 320V, Current: 5 mA to 100A, Power Factor: 0.5 to upf to (-)0.5

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