

Laboratory **Electrical Stampings Manufacturers (Department of Electrical Laboratory), B-16A, Industrial Area, Site No. 3, Meerut Road, Ghaziabad, Uttar Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6654**

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Validity **18.12.2017 to 17.12.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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ELECTRICAL TESTING

I.	TRANSMISSION LINE EQUIPMENT AND ACCESSORIES			
1.	Current Transformers up to 400kV Class	Power frequency voltage withstand on primary terminals	IS 16227 (Part 1 & 2): 2016 Cl. 7.3.1 IEC 61869-1: 2007 IEC 61869-2: 2012 Cl. 7.3.1	Up to 700 kV
		Partial Discharge	IS 16227 (Part 1): 2016 Cl. 7.3.2 IEC 61869-1: 2007 Cl. 7.3.2	1.0 pC to 100 pC
		Power frequency voltage withstand between sections	IS 16227 (Part 1 & 2): 2016 Cl. 7.3.3 IEC 61869-1: 2007 Cl. 7.3.3 & 5.3.4	Up to 5 kV
		Power frequency voltage withstand on Secondary terminals	IS 16227 (Part 1 & 2): 2016 Cl. 7.3.4 IEC 61869-1: 2007 Cl. 7.3.4 & 5.3.5	Up to 5 kV
		Ratio Error & Phase Displacement		
		Measuring CT - Metering Class	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.201	0.1 0.2S 0.5S 0.2 0.5 1 3
		Protective CT - Class P & PR	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.202	5P 10P 5PR 10PR

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		Protective CT - Protection Class	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.204	TPX TPY TPZ
		Composite Error - Protection Class P & PR	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.203	1 mA to 10 A 1 V to 5 kV
		Error at limiting conditions - Protection Class	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.205	TPX TPY TPZ
		Turn Ratio Error - Class PX & PXR	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.5.206	PX PXR
		Verification of marking	IS 16227 (Part 2): 2016 IEC 61869-1: 2007 Cl. 7.3.6	Qualitative
		Secondary Winding Resistance	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.201	1 mΩ to 1.0 kΩ
		Rated Knee-Point Voltage E.M.F (Ek) and Exciting Current at Ek	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.203	1 V to 5 kV 1 mA to 10 A
		Over voltage inter turn	IS 16227 (Part 2): 2016 IEC 61869-2: 2012 Cl. 7.3.204	1 V to 5 kV 1 mA to 10 A
		Instrument Security Current Instrument Security factor	IS 16227 (Part 2):2016 IEC 61869-2:2012 Cl. 7.2.6.202	1 mA to 10 A 1 to 100
		Capacitance Tan Delta	IS 16227 (Part 2):2016 IEC 61869-1:2007 IEC 61869-2:2012 Cl. 7.4.3	Up to 100 0.01 pF to 1000 pF
		Temperature Rise	IS 16227 (Part 2):2016 IEC 61869-1: 2007 IEC 61869-2:2012 Cl. 7.2.2	1 A to 4000 A Up to 300°C

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		Thermal Stability	ESM/LAB/SOP/01 Issue No. 2 Dt 04.09.2017 Rev No. 0	1 A to 4000 A 1 kV to 700 kV Up to 300 °C
		Temperature Coefficient	ESM/LAB/SOP/01 Issue No. 2 Dt 04.09.2017 Rev No. 0	Up to 300 °C
2.	Potential Transformer up to 220kV Class (Single Phase)	Power frequency voltage withstand on Primary Terminals	IS 16227 (Part 3):2015 IEC 61869-1:2007 IEC 61869-2:2012 Cl. 7.3.1	Up to 5 kV
		Partial Discharge	IS 16227 (Part 3):2015 IEC 61869-3:2011 IEC 61869-1:2007 Cl. 7.3.2	1.0 pC to 100 pC
		Power frequency voltage withstand on between sections	IS 16227 (Part 3):2015 IEC 61869-1:2007 Cl. 7.3.3	Up to 5 kV
		Power frequency voltage withstand on Secondary terminals	IS 16227 (Part 3):2015 IEC 61869-1:2007 Cl. 7.3.4	Up to 5 kV
		Ratio Error & Phase Displacement		
		Measuring PT - Metering Class	IS 16227 (Part 3): 2015 IEC 61869-1:2007 & Part 3: 2011 Cl. 7.3.5.301	0.1 0.2 0.5 1 3
		Protective PT - Protection Class	IS 16227 (Part 3): 2015 IEC 61869-1:2007 & Part 3: 2011 Cl. 7.3.5.302	3 P 6 P 5 PR 10 PR
		Verification of marking	IS 16227 (Part 3): 2015 IEC 61869-1:2007 & Part 3: 2011 Cl. 7.3.6	Qualitative
		Induced A.C. voltage withstand on primary winding	IS 16227 (Part 3): 2015 IEC 61869-3:2011 Cl. 7.3.1.303	1 kV to 460 kV

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		Dielectric Dissipation Factor Capacitance	IS:16227 (Part 3): 2015 IEC 61869-3:2011 IEC 61869-1:2007 & Part-3:2011 Cl. 7.4.3	Up to 100 0.01 pF to 1000 pF
		Temperature Rise	IS 16227 (Part 3): 2015 IEC 61869-3: 2011 Cl. 7.2.2 IEC 61869-1: 2007 Cl. 7.2.2 & 6.4.1	Up to 300 °C
		Short circuit withstand capability	IEC 61869-3: 2011 IS 16227 (Part 3): 2015 Cl. 7.2.301 & 6.301	Up to 750 V Up to 300 A