National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8266 **Page No** 1 of 13

Validity 10/01/2022 to 09/01/2024 **Last Amended on** 04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Leakage current measurement	IEC 60898-1
2	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Leakage current measurement	IS/IEC 60898-1
3	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Power Frequency Withstand / Dielectric test	IEC 60898-1
4	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Power Frequency Withstand / Dielectric test	IS/IEC 60898-1
5	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60898-1
6	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS/IEC 60898-1
7	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Test of Tripping limits / Operating limits / Characteristics	IEC 60898-1
8	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit Breakers for over current protection for household and similar installations (MCB)	Test of Tripping limits / Operating limits / Characteristics	IS/IEC 60898-1
9	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Impulse voltage withstand / Dielectric Test	IEC 60947-2
10	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Impulse voltage withstand / Dielectric Test	IS/IEC 60947-2
11	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Leakage current measurement	IEC 60947-2
12	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Leakage current measurement	IS/IEC 60947-2
13	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Marking requirements	IEC 60947-2

SCOPE OF ACCREDITATION

Laboratory Name : TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8266 **Page No** 2 of 13

Validity 10/01/2022 to 09/01/2024 **Last Amended on** 04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
14	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Marking requirements	IS/IEC 60947-2
15	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Measurement of clearance and creepage distance	IEC 60947-2
16	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Measurement of clearance and creepage distance	IS/IEC 60947-2
17	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 60947-2
18	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Operational Performance without current / Mechanical Operation / Mechanical Durability	IS/IEC 60947-2
19	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Overload Performance, Operational Performance with current	IEC 60947-2
20	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Overload Performance, Operational Performance with current	IS/IEC 60947-2
21	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Power Frequency Withstand / Dielectric test	IEC 60947-2
22	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Power Frequency Withstand / Dielectric test	IS/IEC 60947-2
23	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60947-2
24	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS/IEC 60947-2
25	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Temperature rise / Heating (upto 6300A)	IEC 60947-2
26	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Temperature rise / Heating (upto 6300A)	IS/IEC 60947-2

SCOPE OF ACCREDITATION

Laboratory Name : TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8266 **Page No** 3 of 13

Validity 10/01/2022 to 09/01/2024 **Last Amended on** 04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
27	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Test of Tripping limits / Operating limits / Characteristics	IEC 60947-2
28	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Test of Tripping limits / Operating limits / Characteristics	IS/IEC 60947-2
29	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Undervoltage & shunt release	IEC 60947-2
30	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Undervoltage & shunt release	IS/IEC 60947-2
31	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Verification of main contact position	IEC 60947-2
32	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Circuit-breakers	Verification of main contact position	IS/IEC 60947-2
33	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrical Emergency stop device with mechanical latching function	Testing of the mechanical design	IEC 60947-5-5
34	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrical Emergency stop device with mechanical latching function	Testing of the mechanical design	IS/IEC 60947-5-5
35	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Impulse voltage withstand / Dielectric Test	IEC 60947-4-1
36	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Impulse voltage withstand / Dielectric Test	IS/IEC 60947-4-1
37	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Leakage current measurement	IEC 60947-4-1
38	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Leakage current measurement	IS/IEC 60947-4-1
39	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Limits of electronic overload relay	IEC 60947-4-1
40	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Limits of electronic overload relay	IS/IEC 60947-4-1

SCOPE OF ACCREDITATION

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Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8266 **Page No** 4 of 13

Validity 10/01/2022 to 09/01/2024 **Last Amended on** 04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
41	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 60947-4-1
42	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IS/IEC 60947-4-1
43	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Marking requirements	IEC 60947-4-1
44	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Marking requirements	IS/IEC 60947-4-1
45	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Measurement of clearance and creepage distance	IEC 60947-4-1
46	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Measurement of clearance and creepage distance	IS/IEC 60947-4-1
47	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Mechanical properties / Strength / Terminations test of terminals	IEC 60947-4-1
48	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Mechanical properties / Strength / Terminations test of terminals	IS/IEC 60947-4-1
49	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Operation and operating limits / Basic Operating Function - ac/dc voltage	IEC 60947-4-1
50	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Operation and operating limits / Basic Operating Function - ac/dc voltage	IS/IEC 60947-4-1
51	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 60947-4-1
52	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Operational Performance without current / Mechanical Operation / Mechanical Durability	IS/IEC 60947-4-1
53	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Power Frequency Withstand / Dielectric test	IEC 60947-4-1

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	5 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
54	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Power Frequency Withstand / Dielectric test	IS/IEC 60947-4-1
55	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60947-4-1
56	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS/IEC 60947-4-1
57	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Short-time / Overload Withstand (10 s)	IEC 60947-4-1
58	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Short-time / Overload Withstand (10 s)	IS/IEC 60947-4-1
59	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Temperature rise / Heating (upto 6300A)	IEC 60947-4-1
60	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Temperature rise / Heating (upto 6300A)	IS/IEC 60947-4-1
61	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Test of Tripping limits / Operating limits / Characteristics	IEC 60947-4-1
62	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical contactors and motor-starters, Overload Relays, MPSD	Test of Tripping limits / Operating limits / Characteristics	IS/IEC 60947-4-1
63	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Impulse voltage withstand / Dielectric Test	IEC 60947-5-1
64	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Impulse voltage withstand / Dielectric Test	IS/IEC 60947-5-1
65	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Leakage current measurement	IEC 60947-5-1
66	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Leakage current measurement	IS/IEC 60947-5-1
67	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 60947-5-1

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	6 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
68	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IS/IEC 60947-5-1
69	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Marking requirements	IEC 60947-5-1
70	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Marking requirements	IS/IEC 60947-5-1
71	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Measurement of clearance and creepage distance	IEC 60947-5-1
72	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Measurement of clearance and creepage distance	IS/IEC 60947-5-1
73	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Mechanical properties / Strength / Terminations test of terminals	IEC 60947-5-1
74	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Mechanical properties / Strength / Terminations test of terminals	IS/IEC 60947-5-1
75	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Operation and operating limits / Basic Operating Function - ac/dc voltage	IEC 60947-5-1
76	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Operation and operating limits / Basic Operating Function - ac/dc voltage	IS/IEC 60947-5-1
77	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 60947-5-1
78	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Operational Performance without current / Mechanical Operation / Mechanical Durability	IS/IEC 60947-5-1
79	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Power Frequency Withstand / Dielectric test	IEC 60947-5-1
80	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Power Frequency Withstand / Dielectric test	IS/IEC 60947-5-1

SCOPE OF ACCREDITATION

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Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	7 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

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81	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Shock	IEC 60947-5-1
82	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Shock	IS/IEC 60947-5-1
83	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60947-5-1
84	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS/IEC 60947-5-1
85	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Temperature rise / Heating (upto 6300A)	IEC 60947-5-1
86	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Temperature rise / Heating (upto 6300A)	IS/IEC 60947-5-1
87	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Verification of limitation of rotation / actuation force / strength of actuator mechanism	IEC 60947-5-1
88	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Verification of limitation of rotation / actuation force / strength of actuator mechanism	IS/IEC 60947-5-1
89	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Vibration (At 5-2300Hz)	IS/IEC 60947-5-1
90	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical control circuit devices	Vibration (At 5-2300Hz.)	IEC 60947-5-1
91	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 61810-1
92	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Measurement of clearance and creepage distance	IEC 61810-1
93	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Mechanical properties / Strength / Terminations test of terminals	IEC 61810-1

SCOPE OF ACCREDITATION

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Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	TC-8266
Page No	8 of 13
Validity	10/01/2022 to 09/01/2024
Last Amended on	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
94	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Operation and operating limits / Basic Operating Function - ac/dc voltage	IEC 61810-1
95	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 61810-1
96	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Power Frequency Withstand / Dielectric test	IEC 61810-1
97	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electromechanical elementary relays	Temperature rise / Heating (upto 6300A)	IEC 61810-1
98	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Impulse voltage withstand / Dielectric Test	IEC 60077-2
99	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 60077-2
100	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Operation and operating limits / Basic Operating Function - ac/dc voltage	IEC 60077-2
101	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 60077-2
102	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Power Frequency Withstand / Dielectric test	IEC 60077-2
103	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Shock	IEC 60077-2
104	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60077-2
105	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Short-time / Overload Withstand (10 s)	IEC 60077-2
106	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Temperature rise / Heating (upto 6300A)	IEC 60077-2

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	9 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
107	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Electrotechnical components - Railway applications	Vibration (at 5-2300Hz.)	IEC 60077-2
108	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Impulse voltage withstand / Dielectric Test	IEC 60947-1
109	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Impulse voltage withstand / Dielectric Test	IS/IEC 60947-1
110	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Mechanical properties / Strength / Terminations test of terminals	IEC 60947-1
111	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Mechanical properties / Strength / Terminations test of terminals	IS/IEC 60947-1
112	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Power Frequency Withstand / Dielectric test	IEC 60947-1
113	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Low-voltage switchgear and controlgear	Power Frequency Withstand / Dielectric test	IS/IEC 60947-1
114	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Leakage current measurement	IEC 61009-1
115	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Leakage current measurement	IS 12640 (Part 2)
116	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 61009-1
117	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IS 12640 (Part 2)
118	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Power Frequency Withstand / Dielectric test	IEC 61009-1
119	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Power Frequency Withstand / Dielectric test	IS 12640 (Part 2)
120	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 61009-1

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	10 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
121	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS 12640 (Part 2)
122	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Test of Tripping limits / Operating limits / Characteristics	IEC 61009-1
123	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Test of Tripping limits / Operating limits / Characteristics	IS 12640 (Part 2)
124	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Verification of correct operation	IEC 61009-1
125	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	Verification of correct operation	IS 12640 (Part 2)
126	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Leakage current measurement	IEC 61008-1
127	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Leakage current measurement	IS 12640 (Part 1)
128	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 61008-1
129	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IS 12640 (Part 1)
130	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Power Frequency Withstand / Dielectric test	IEC 61008-1
131	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Power Frequency Withstand / Dielectric test	IS 12640 (Part 1)
132	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 61008-1
133	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS 12640 (Part 1)
134	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Verification of correct operation	IEC 61008-1

SCOPE OF ACCREDITATION

Laboratory Name : TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-8266 **Page No** 11 of 13

Validity 10/01/2022 to 09/01/2024 **Last Amended on** 04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
135	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	Verification of correct operation	IS 12640 (Part 1)
136	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Impulse voltage withstand / Dielectric Test	IEC 60947-3
137	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Impulse voltage withstand / Dielectric Test	IS/IEC 60947-3
138	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Leakage current measurement	IEC 60947-3
139	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Leakage current measurement	IS/IEC 60947-3
140	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 60947-3
141	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IS/IEC 60947-3
142	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Marking requirements	IEC 60947-3
143	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Marking requirements	IS/IEC 60947-3
144	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Measurement of clearance and creepage distance	IEC 60947-3
145	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Measurement of clearance and creepage distance	IS/IEC 60947-3
146	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Operational Performance without current / Mechanical Operation / Mechanical Durability	IEC 60947-3
147	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Operational Performance without current / Mechanical Operation / Mechanical Durability	IS/IEC 60947-3

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	12 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
148	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Overload Test	IEC 60947-3
149	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Overload Test	IS/IEC 60947-3
150	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Power Frequency Withstand / Dielectric test	IEC 60947-3
151	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Power Frequency Withstand / Dielectric test	IS/IEC 60947-3
152	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 60947-3
153	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Short Circuit - Making/Breaking/Withstand (0.1 s)	IS/IEC 60947-3
154	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Short-time / Overload Withstand (10 s)	IEC 60947-3
155	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Short-time / Overload Withstand (10 s)	IS/IEC 60947-3
156	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Temperature rise / Heating (upto 6300A)	IEC 60947-3
157	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Temperature rise / Heating (upto 6300A)	IS/IEC 60947-3
158	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Verification of limitation of rotation / actuation force / strength of actuator mechanism	IEC 60947-3
159	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Switches, disconnectors, switch-disconnectors and fuse-combination units	Verification of limitation of rotation / actuation force / strength of actuator mechanism	IS/IEC 60947-3
160	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Impulse voltage withstand / Dielectric Test	IEC 61812-1

SCOPE OF ACCREDITATION

Laboratory Name :	TYPE TEST CENTER SIEMENS LIMITED KALWA, SIEMENS LIMITED KALWA WORKS, THANE BELAPUR ROAD, AIROLI, THANE, THANE, MAHARASHTRA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-8266	**Page No**	13 of 13
Validity	10/01/2022 to 09/01/2024	**Last Amended on**	04/02/2022

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
161	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Making and Breaking Capacity / Operational Performance with current / Electrical Durability	IEC 61812-1
162	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Measurement of clearance and creepage distance	IEC 61812-1
163	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Mechanical properties / Strength / Terminations test of terminals	IEC 61812-1
164	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Operation and operating limits / Basic Operating Function - ac/dc voltage	IEC 61812-1
165	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Power Frequency Withstand / Dielectric test	IEC 61812-1
166	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Shock	IEC 61812-1
167	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Short Circuit - Making/Breaking/Withstand (0.1 s)	IEC 61812-1
168	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Temperature rise / Heating (upto 6300A)	IEC 61812-1
169	ELECTRICAL-SWITCHGEAR & PROTECTIVE EQUIPMENT	Time relays for industrial and residential use	Vibration (At 5-2300Hz)	IEC 61812-1