National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	1 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 µA to 100 mA	0.24 % to 0.17 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 mA to 1 A	0.17%
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 A to 10 A	0.17 % to 0.25 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	30 µA to 100 µA	0.41 % to 0.24 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Validity	31/08/2023 to 30/08/2025

Last Amended on 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using 6½ Digit Precision Multimeter & CT by Direct Method	10 A to 1000 A	0.82 % to 0.60 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage (50 Hz)	AC High Voltage PT with 6½ DMM By Direct Method	1 kV to 20 kV	0.61 % to 0.31 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage (50 Hz)	HV Voltage Divider with kV meter By Direct Method	1 kV to 60 kV	1.52 % to 1.30 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 mV to 1 V	0.12 % to 0.11 %
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 V to 10 V	0.11%

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	3 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	10 V to 1000 V	0.11 % to 0.10 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 mV to 100 mV	4.80 % to 0.12 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Energy (3Phase) (230 V to 300 V, 3 A to 6 A, 0.5 (Lag/Lead) to UPF, 50 Hz)	Using Three Phase Power Energy meter Calibrator by Direct Method or Comparison Method	1.035 kWh to 5.40 kWh	0.92 % to 0.22 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Power (40 V to 1000 V, 0.2 A to 20 A , 50 Hz, 0.1 Lag/Lead to UPF)	Using Multi Product Calibrator with 50 Turns Current Coil by Direct Method	40 W to 1000 kW	3.85 % to 0.39 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Power (40 V to 600 V and 0.01 A to 20 A , 50 Hz, 0.1 (Lag/Lead) to UPF)	Using Multi Product Calibrator by Direct Method	40 mW to 12 kW	3.41 % to 0.18 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 4 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.08 % to 0.07 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.07 % to 0.09 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	10 A to 20 A	0.09 % to 0.17 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator with 50 Turns coil by Direct Method	20 A to 1000 A	0.86 % to 0.79 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	30 µA to 100 mA	0.53 % to 0.07 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 mV to 100 mV	2.81 % to 0.06 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 5 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.04%
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.04 % to 0.06 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.06 % to 0.04 %
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @1kHz	Using Decade Capacitance Box by Direct Method	100 pF to 100 µF	1.17 % to 1.23 %
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Decade Inductance Box by Direct method	100 µH to 10 H	1.20 % to 1.16 %
26	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor / Phase Angle at 240 V, 5 A, and 50 Hz	Using Multi Product Calibrator by Direct Method	0.1 (Lag / Lead) to UPF	0.004 PF to 0.002 PF

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	6 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter By Direct Method	1 A to 10 A	0.08 % to 0.18 %
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by direct Method	10 µA to 100 µA	0.35 % to 0.09 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by Direct Method	10 mA to 100 mA	0.08 % to 0.06 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by Direct Method	100 µA to 10 mA	0.09 % to 0.08 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter By Direct Method	100 mA to 1 A	0.06 % to 0.08 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM with Direct Method	1 kV to 5 kV	2.81%

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Validity	31/08/2023 to 30/08/2025

Last Amended on 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Divider with kV meter By Direct Method	1 kV to 95 kV	2.37 % to 1.98 %
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM With Direct Method	5 kV to 39 kV	2.81%
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	1 mV to 100 mV	0.41 % to 0.009 %
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	1 V to 10 V	0.004%
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	10 V to 1000 V	0.004 % to 0.007 %
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter by Direct Method	100 mV to 1 V	0.01 % to 0.004 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Page No	8 of 46
Validity	31/08/2023 to 30/08/2025
Last Amended on	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (2 wire)	Using 6½ Digit Precision Multimeter With Direct Method	100 k Ohm to 100 M Ohm	0.013 % to 0.94 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (2 wire)	Using 6½ Digit Precision Multimeter By Direct Method	100 Mohm to 1000 Mohm	0.94 % to 2.33 %
41	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 wire)	Using 6½ Digit Precision Multimeter With Direct Method	1 Ohm to 10 Ohm	0.37 % to 0.05 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 wire)	Using 6½ Digit Precision Multimeter With Direct Method	10 Ohm to 100 k Ohm	0.05 % to 0.013 %
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.05 % to 0.075 %
44	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 mA to 100 mA	0.02%

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 9 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 µA to 100 µA	0.35 % to 0.04 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 A to 20 A	0.08 % to 0.12 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.02 % to 0.05 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 µA to 1 mA	0.04 % to 0.02 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator with 50 Turns coil by Direct Method	20 A to 1000 A	0.87 % to 0.82 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Power (1.5 V to 600 V, 0.1A to 20 A)	Using Multi Product Calibrator by Direct Method	150 mW to 12 kW	0.76 % to 0.14 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Validity	31/08/2023 to 30/08/2025

Last Amended on 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
51	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 mV to 100 mV	0.94 % to 0.011 %
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.007%
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.007 % to 0.009 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.011 % to 0.007 %
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 500 V)	Using High Value Decade Mega Box By Direct Method	1 Mohm to 10 Mohm	1.16 % to 2.14 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 5kV)	Using High Value Decade Mega Box By Direct Method	1 Gohm to 10 Gohm	2.14 % to 2.93 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 11 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 5kV)	Using High Value Decade Mega Box By Direct Method	1 Tohm to 10 Tohm	6.12 % to 9.63 %
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 5kV)	Using High Value Decade Mega Box By Direct Method	10 Gohm to 100 Gohm	2.93 % to 4.0 %
59	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 5kV)	Using High Value Decade Mega Box By Direct Method	10 Mohm to 1 Gohm	2.14%
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	High Resistance (upto 5kV)	Using High Value Decade Mega Box By Direct Method	100 Gohm to 1 Tohm	4.0 % to 6.12 %
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm meter Calibrator by Direct Method	1 Ohm to 1.8 Ohm	0.07 % to 0.06 %
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm meter Calibrator by Direct Method	10 µohm to 18 mohm	0.65 % to 0.28 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 12 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
63	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm Meter Calibrator by Direct Method	100 mohm to 180 mohm	0.07%
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	10 Mohm to 300 Mohm	0.07 % to 0.61 %
65	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	100 kohm to 10 Mohm	0.02 % to 0.07 %
66	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	300 Mohm to 1000 Mohm	0.61 % to 1.75 %
67	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Decade Resistance Box by Direct or Comparison Method	0.01 Ohm to 1 Ohm	2.38 % to 0.07 %
68	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	1 Ohm to 10 Ohm	2.38 % to 0.016 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	13 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
69	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Decade Resistance Box by Direct or Comparison Method	1 Ohm to 100 kohm	0.07 % to 0.06 %
70	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	10 Ohm to 100 Ohm	0.016 % to 0.014 %
71	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	100 Ohm to 100 k Ohm	0.014 % to 0.02 %
72	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Measure)	Transformer Turns Ratio Meter	Using Std. CT & Std. PT, Two 6.5 digit multimeters by V/V Method	1 to 2000	0.09%
73	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	AC Voltage Oscilloscope Amplitude @1Mohm (Square wave signal) at 1kHz	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 80 V	5.19 % to 0.14 %
74	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	AC Voltage Oscilloscope Amplitude @50ohm (Square Wave Signal) at 1 kHz	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 6.5 V	4.97 % to 0.36 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	14 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
75	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	DC Voltage Oscilloscope Amplitude @1Mohm	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 80 V	4.92 % to 0.09 %
76	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	DC Voltage Oscilloscope Amplitude @50 ohm	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 6.5 V	5.11 % to 0.30 %
77	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope - Bandwidth (Amplitude Characteristic: 100 mV to 5.0 V p-p) Flatness: 50kHz to 300 MHz (Relative to 50 kHz)	Using Multi Product Calibrator with Scope Option By Direct Method	50 kHz to 300 MHz	5.73 % to 7.08 %
78	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Time Marker	Using Multi Product Calibrator with Scope Option By Direct Method	2 ns to 5 s	0.09 % to 0.58 %
79	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B-Type Thermocouple	Using Multi Product Calibrator By Direct Method	600 °C to 1800 °C	0.78 °C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Page No	15 of 46
Validity	31/08/2023 to 30/08/2025
Last Amended on	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
80	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 950 °C	0.67 °C
81	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1200 °C	0.42 °C
82	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1370 °C	0.67°C
83	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1300 °C	0.50 °C
84	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R-Type Thermocouple	Using Multi Product Calibrator By Direct Method	3 °C to 1750 °C	0.88 °C
85	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD PT 100	Using 6½ Digit Precision Multimeter By Direct Method	(-)200 °C to 0 °C	0.12°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Page No	16 of 46
Validity	31/08/2023 to 30/08/2025
Last Amended on	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
86	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD PT 100	Using 6½ Digit Precision Multimeter By Direct Method	0 °C to 600 °C	0.27°C
87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S-Type Thermocouple	Using Multi Product Calibrator By Direct Method	3 °C to 1750 °C	0.80 °C
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 400 °C	0.74°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	B-Type Thermocouple	Using Multi Product Calibrator by Direct Method	600 °C to 1800 °C	0.7 °C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	E-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 950 °C	0.61°C
91	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1199 °C	0.37 °C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	17 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
92	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1370 °C	0.50 °C
93	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1299 °C	0.48°C
94	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R-Type Thermocouple	Using Multi Product Calibrator by Direct Method	3 °C to 1750 °C	0.88 °C
95	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD PT 100	Using Multi Product Calibrator by Direct Method	(-)200 °C to 0 °C	0.070°C
96	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD PT 100	Using Multi Product Calibrator by Direct Method	0 °C to 799 °C	0.31°C
97	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S-Type Thermocouple	Using Multi Product Calibrator by Direct Method	3 °C to 1750 °C	0.56°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	18 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
98	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 399 °C	0.73°C
99	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Precision Multimeter By Direct Method	10 Hz to 1 MHz	0.082 % to 0.013 %
100	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter by Comparison Method	0.01 s to 1 s	0.0012 s to 0.0061 s
101	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Digital Bench Timer By Comparison Method	1 Hr to 24 Hr	4.34 s to 100.02 s
102	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter / Digital Bench Timer by Comparison Method	1 s to 60 s	0.0061 s to 0.088 s
103	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Timer interval meter / Digital Bench Timer By Comparison Method	60 s to 600 s	0.088 s to 0.73 s

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 19 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
104	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter / Digital Bench Timer By Comparison Method	600 s to 3600 s	0.73 s to 4.34 s
105	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct Method	10 Hz to 50 Hz	0.015 % to 0.006 %
106	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct Method	50 Hz to 1 MHz	0.006%
107	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	>100 rpm to 5000 rpm	2.76rpm
108	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	10 rpm to 100 rpm	0.56rpm
109	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	5001 rpm to 8000 rpm	3.65rpm

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	20 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
110	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	Using Standard Tachometer & Tachometer Calibrator by Comparison Method	>5000 rpm to 10000 rpm	3.43rpm
111	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	10 rpm to 100 rpm	0.56rpm
112	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	101 rpm to 5000 rpm	2.38rpm
113	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	Using Standard Tachometer &Tachometer Calibrator by Comparison Method	Above 10000 rpm to 50000 rpm	10.12rpm
114	MECHANICAL-ACOUSTICS	Sound Level Meter @ 1kHz	Using Sound Level Calibrator by Direct Method	94dB, 114 dB	0.77dB
115	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure, Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of pressure switches	Using Digital Pressure Gauge, Digital multimeter & Comparator Pump by comparison Method (DKD-R-6-1)	0 bar to 700 bar	0.19bar

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	21 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
116	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Using Digital Pressure Gauge, Comparator Pump and Digital Multimeter by comparison Method (DKD-R-6-1)	0 bar to 70 bar	0.018bar
117	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method (DKD-R-6-1)	0 bar to 35 bar	0.013bar
118	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Using Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method (DKD R-6-1)	0 bar to 7 bar	0.002bar
119	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum: Digital / Dial Vacuum Gauges, Transmitter, Transducer, Indicator of vacuum Switches	Using Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method	(-)0.8 bar to 0 bar	0.004bar

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	22 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
120	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-Hygrometer, Humidity Sensor with Indicator/Controller/ Data Logger/Recorder	Using Temperature & Humidity Meter with Sensor and Temperature & Humidity Generator Chamber By Comparison Method	20 % rh to 90 % rh @ 25 °C	1.97% rh
121	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-Hygrometer, Temperature & Humidity Sensor with Indicator/Controller/ Data Logger/Recorder	Using Temperature & Humidity Meter with Sensor and Temperature & Humidity Generator Chamber By Comparison Method	10 °C to 50 °C @ 50% rh	1.30°C
122	THERMAL-TEMPERATURE	Hot Air Oven, Furnace, Temperature Chamber (Multiposition)	Using RTD PT100 Sensors - 9 Nos. With Temperature Datalogger/Scanner By Spatial Mapping Method as per DKD R5-7	30 °C to 200 °C	6.57°C
123	THERMAL-TEMPERATURE	Infrared Thermometer/ Thermal Imager / Thermal Radiation Pyrometer @ emissivity 0.95°C	Using IR Thermometer with Black body source of emissivity 0.95 By Comparison Method	250 °C to 500 °C	2.26°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	23 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
124	THERMAL-TEMPERATURE	Infrared Thermometer/ Thermal Imager / Thermal Radiation Pyrometer emissivity @0.95	Using IR Thermometer with Black body source of emissivity 0.95 By Comparison Method	50 °C to 250 °C	2.16°C
125	THERMAL-TEMPERATURE	Liquid in Glass Thermometer	Using RTD PT100 Sensor with Precision Temp. indicator & Low Temp. Liquid Bath By Comparison Method	(-)80 °C to 50 °C	1.22°C
126	THERMAL-TEMPERATURE	Temperature Indicator of Oven / Dry Block, Temperature Calibrator / Furnace / Temperature Chamber (Single Position)	Using S-Type Thermocouple with Precision Temp. Indicator, By Direct Method	400 °C to 1200 °C	3.54°C
127	THERMAL-TEMPERATURE	Temperature Indicator With Sensor Of Liquid Baths, Dry Well Block bath, Water bath, Oven (Single Position)	Using RTD PT100 Sensors with Precision Temperature Indicator by Comparison Method(Single Position)	0 °C to 50 °C	0.87°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	24 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
128	THERMAL-TEMPERATURE	Temperature Indicator With Sensors Of Dry Well Baths, Dry block Temperature Calibrator, Oven, Furnace, Temperature Chamber	Using RTD PT100 Sensors with Precision Temperature Indicator, by Comparison Method (Single position)	50 °C to 400 °C	1.3°C
129	THERMAL-TEMPERATURE	Temperature Indicators With Sensors Of Low Temperature Liquid Bath, Freezer (Single Position)	Using RTD PT100 Sensors with Precision Temperature Indicator by Comparison Method (Single position)	(-)80 °C to 0 °C	1.04°C
130	THERMAL-TEMPERATURE	Thermometer, Temperature Gauge, RTD Sensor / Thermocouple - with or without Temperature Indicators / Controller / Temperature Scanner / Data Logger /	Using RTD PT100 Sensor with Precision Temp. indicator, 6 ½ Digital Multimeter. & Dry Well block calibrator By Comparison Method	50 °C to 400 °C	1.2°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	25 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
131	THERMAL-TEMPERATURE	Thermometer, Temperature Gauge, RTD Sensor / Thermocouple - with or without Temperature Indicators / Controller / Temperature Scanner / Data Logger.	Using RTD PT100 Sensor with Precision Temp. indicator, 6 ½ Digital Multimeter & Low Temp. Liquid Bath By Comparison Method	(-)80 °C to 0 °C	1.21°C
132	THERMAL-TEMPERATURE	Thermometer, Temperature Gauge, RTD Sensor / Thermocouple with or without Temperature Indicators / Controller / Temperature Scanner / Data Logger	Using RTD PT100 Sensor with Precision Temp. indicator, 6 ½ Digital Multimeter & Low Temp. Liquid Bath By Comparison Method	0 °C to 50 °C	0.87°C
133	THERMAL-TEMPERATURE	Thermometer, Thermocouple, Temperature Gauge, Temperature Sensor with or Without Indicator / Controller / Scanner / Data Logger	Using S-Type Thermocouple with Precision Temp. Indicator, 6 ½ Digital Multimeter and Dry Well Bath By Comparison Method	400 °C to 1200 °C	1.36°C

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 26 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 µA to 100 mA	0.24 % to 0.17 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 mA to 1 A	0.17%
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 A to 10 A	0.17 % to 0.25 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	30 µA to 100 µA	0.41 % to 0.24 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 27 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current @ 50 Hz	Using 6½ Digit Precision Multimeter & CT by Direct Method	10 A to 1000 A	0.82 % to 0.60 %
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage (50 Hz)	HV Voltage Divider with kV meter By Direct Method	1 kV to 100 kV	1.52 % to 1.30 %
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	100 mV to 1 V	0.12 % to 0.11 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 V to 10 V	0.11%
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	10 V to 1000 V	0.11 % to 0.10 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 28 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage (50 Hz to 1 kHz)	Using 6½ Digit Precision Multimeter By Direct Method	1 mV to 100 mV	4.80 % to 0.12 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Energy (3Phase) (230 V to 300 V, 3 A to 6 A, 0.5 (Lag/Lead) to UPF, 50 Hz)	Using Three Phase Power Energy meter Calibrator by Direct Method or Comparison Method	1.035 kWh to 5.40 kWh	0.92 % to 0.22 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Power (40 V to 1000 V, 0.2 A to 20 A , 50 Hz, 0.1 Lag/Lead to UPF)	Using Multi Product Calibrator with 50 Turns Current Coil by Direct Method	40 W to 1000 kW	3.85 % to 0.39 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Active Power (40 V to 600 V and 0.01 A to 20 A , 50 Hz, 0.1 (Lag/Lead) to UPF)	Using Multi Product Calibrator by Direct Method	40 mW to 12 kW	3.41 % to 0.18 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.08 % to 0.07 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 29 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
15	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.07 % to 0.09 %
16	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	10 A to 20 A	0.09 % to 0.17 %
17	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator with 50 Turns coil by Direct Method	20 A to 1000 A	0.86 % to 0.79 %
18	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	30 µA to 100 mA	0.53 % to 0.07 %
19	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 mV to 100 mV	2.81 % to 0.06 %
20	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.04%

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	30 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
21	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.04 % to 0.06 %
22	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Voltage (50 Hz to 1 kHz)	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.06 % to 0.04 %
23	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Capacitance @1kHz	Using Decade Capacitance Box by Direct Method	100 pF to 100 µF	1.17 % to 1.23 %
24	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance @ 1kHz	Using Decade Inductance Box by Direct method	100 µH to 10 H	1.20 % to 1.16 %
25	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Power Factor / Phase Angle at 240 V, 5 A, and 50 Hz	Using Multi Product Calibrator by Direct Method	0.1 (Lag / Lead) to UPF	0.004 PF to 0.002 PF
26	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter By Direct Method	1 A to 10 A	0.08 % to 0.18 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 31 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by direct Method	10 µA to 100 µA	0.35 % to 0.09 %
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by Direct Method	10 mA to 100 mA	0.08 % to 0.06 %
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter by Direct Method	100 µA to 10 mA	0.09 % to 0.08 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 6½ Digit Precision Multimeter By Direct Method	100 mA to 1 A	0.06 % to 0.08 %
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM with Direct Method	1 kV to 5 kV	2.81%
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using High Voltage Divider with kV meter By Direct Method	1 kV to 95 kV	2.37 % to 1.98 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 32 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with DMM With Direct Method	5 kV to 39 kV	2.81%
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	1 mV to 100 mV	0.41 % to 0.009 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	1 V to 10 V	0.004%
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter By Direct Method	10 V to 1000 V	0.004 % to 0.007 %
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6½ Digit Precision Multimeter by Direct Method	100 mV to 1 V	0.01 % to 0.004 %
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (2 wire)	Using 6½ Digit Precision Multimeter With Direct Method	100 k Ohm to 100 M Ohm	0.013 % to 0.94 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 33 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (2 wire)	Using 6½ Digit Precision Multimeter By Direct Method	100 Mohm to 1000 Mohm	0.94 % to 2.33 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 wire)	Using 6½ Digit Precision Multimeter With Direct Method	1 Ohm to 10 Ohm	0.37 % to 0.05 %
41	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance (4 wire)	Using 6½ Digit Precision Multimeter With Direct Method	10 Ohm to 100 k Ohm	0.05 % to 0.013 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 A to 10 A	0.05 % to 0.075 %
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	1 mA to 100 mA	0.02%
44	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 µA to 100 µA	0.35 % to 0.04 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 34 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	10 A to 20 A	0.08 % to 0.12 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 mA to 1 A	0.02 % to 0.05 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator by Direct Method	100 µA to 1 mA	0.04 % to 0.02 %
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multi Product Calibrator with 50 Turns coil by Direct Method	20 A to 1000 A	0.87 % to 0.82 %
49	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Power (1.5 V to 600 V, 0.1A to 20 A)	Using Multi Product Calibrator by Direct Method	150 mW to 12 kW	0.76 % to 0.14 %
50	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 mV to 100 mV	0.94 % to 0.011 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 35 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
51	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	1 V to 10 V	0.007%
52	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	10 V to 1000 V	0.007 % to 0.009 %
53	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multi Product Calibrator by Direct Method	100 mV to 1 V	0.011 % to 0.007 %
54	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm meter Calibrator by Direct Method	1 Ohm to 1.8 Ohm	0.07 % to 0.06 %
55	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm meter Calibrator by Direct Method	10 µohm to 18 mohm	0.65 % to 0.28 %
56	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Low Resistance (4 wire)	Using Micro Milli Ohm Meter Calibrator by Direct Method	100 mohm to 180 mohm	0.07%

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 36 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
57	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	10 Mohm to 300 Mohm	0.07 % to 0.61 %
58	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	100 kohm to 10 Mohm	0.02 % to 0.07 %
59	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (2 wire)	Using Multi Product Calibrator by Direct Method	300 Mohm to 1000 Mohm	0.61 % to 1.75 %
60	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Decade Resistance Box by Direct or Comparison Method	0.01 Ohm to 1 Ohm	2.38 % to 0.07 %
61	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	1 Ohm to 10 Ohm	2.38 % to 0.016 %
62	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Decade Resistance Box by Direct or Comparison Method	1 Ohm to 100 kohm	0.07 % to 0.06 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 37 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
63	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	10 Ohm to 100 Ohm	0.016 % to 0.014 %
64	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance (4 wire)	Using Multi Product Calibrator by Direct Method	100 Ohm to 100 k Ohm	0.014 % to 0.02 %
65	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	AC Voltage Oscilloscope Amplitude @1Mohm (Square wave signal) at 1kHz	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 80 V	5.19 % to 0.14 %
66	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	AC Voltage Oscilloscope Amplitude @50ohm (Square Wave Signal) at 1 kHz	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 6.5 V	4.97 % to 0.36 %
67	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	DC Voltage Oscilloscope Amplitude @1Mohm	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 80 V	4.92 % to 0.09 %
68	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	DC Voltage Oscilloscope Amplitude @50 ohm	Using Multi Product Calibrator with Scope Option By Direct Method	1.0 mV to 6.5 V	5.11 % to 0.30 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	38 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
69	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope - Bandwidth (Amplitude Characteristic: 100 mV to 5.0 V p-p) Flatness: 50kHz to 300 MHz (Relative to 50 kHz)	Using Multi Product Calibrator with Scope Option By Direct Method	50 kHz to 300 MHz	5.73 % to 7.08 %
70	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Time Marker	Using Multi Product Calibrator with Scope Option By Direct Method	2 ns to 5 s	0.09 % to 0.58 %
71	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	B-Type Thermocouple	Using Multi Product Calibrator By Direct Method	600 °C to 1800 °C	0.78 °C
72	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	E-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 950 °C	0.67 °C
73	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	J-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1200 °C	0.42 °C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA
Accreditation Standard	ISO/IEC 17025:2017
Certificate Number	CC-3274
Validity	31/08/2023 to 30/08/2025

Last Amended on 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
74	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	K-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1370 °C	0.67°C
75	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	N-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 1300 °C	0.50 °C
76	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	R-Type Thermocouple	Using Multi Product Calibrator By Direct Method	3 °C to 1750 °C	0.88 °C
77	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD PT 100	Using 6½ Digit Precision Multimeter By Direct Method	(-)200 °C to 0 °C	0.12°C
78	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	RTD PT 100	Using 6½ Digit Precision Multimeter By Direct Method	0 °C to 600 °C	0.27°C
79	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	S-Type Thermocouple	Using Multi Product Calibrator By Direct Method	3 °C to 1750 °C	0.80 °C

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 40 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
80	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	T-Type Thermocouple	Using Multi Product Calibrator By Direct Method	(-)200 °C to 400 °C	0.74°C
81	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	B-Type Thermocouple	Using Multi Product Calibrator by Direct Method	600 °C to 1800 °C	0.7 °C
82	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	E-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 950 °C	0.61°C
83	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	J-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1199 °C	0.37 °C
84	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	K-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1370 °C	0.50 °C
85	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	N-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 1299 °C	0.48°C

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 41 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
86	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	R-Type Thermocouple	Using Multi Product Calibrator by Direct Method	3 °C to 1750 °C	0.88 °C
87	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD PT 100	Using Multi Product Calibrator by Direct Method	(-)200 °C to 0 °C	0.070°C
88	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD PT 100	Using Multi Product Calibrator by Direct Method	0 °C to 799 °C	0.31°C
89	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	S-Type Thermocouple	Using Multi Product Calibrator by Direct Method	3 °C to 1750 °C	0.56°C
90	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	T-Type Thermocouple	Using Multi Product Calibrator by Direct Method	(-)200 °C to 399 °C	0.73°C
91	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6½ Digit Precision Multimeter By Direct Method	10 Hz to 1 MHz	0.082 % to 0.013 %

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 42 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
92	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter by Comparison Method	0.01 s to 1 s	0.0012 s to 0.0061 s
93	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Digital Bench Timer By Comparison Method	1 Hr to 24 Hr	4.34 s to 100.02 s
94	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter / Digital Bench Timer by Comparison Method	1 s to 60 s	0.0061 s to 0.088 s
95	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Timer interval meter / Digital Bench Timer By Comparison Method	60 s to 600 s	0.088 s to 0.73 s
96	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time	Using Time Interval Meter / Digital Bench Timer By Comparison Method	600 s to 3600 s	0.73 s to 4.34 s
97	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct Method	10 Hz to 50 Hz	0.015 % to 0.006 %

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	43 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
98	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multi Product Calibrator by Direct Method	50 Hz to 1 MHz	0.006%
99	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure, Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of pressure switches	Using Digital Pressure Gauge, Digital multimeter & Comparator Pump by comparison Method (DKD-R-6-1)	0 bar to 700 bar	0.19bar
100	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Using Digital Pressure Gauge, Comparator Pump and Digital Multimeter by comparison Method (DKD-R-6-1)	0 bar to 70 bar	0.018bar
101	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method (DKD-R-6-1)	0 bar to 35 bar	0.013bar

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	44 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
102	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure: Digital / Dial Pressure Gauges, Transmitter, Transducer, Indicator of Pressure Switches	Using Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method (DKD R-6-1)	0 bar to 7 bar	0.002bar
103	MECHANICAL-PRESSURE INDICATING DEVICES	Vacuum: Digital / Dial Vacuum Gauges, Transmitter, Transducer, Indicator of vacuum Switches	Using Digital Pressure Gauge, Digital multimeter & Pneumatic Pump by comparison Method	(-)0.8 bar to 0 bar	0.004bar
104	THERMAL-TEMPERATURE	Hot Air Oven, Furnace, Temperature Chamber (Multiposition)	Using RTD PT100 Sensors - 9 Nos. With Temperature Datalogger/Scanner By Spatial Mapping Method as per DKD R5-7	30 °C to 200 °C	6.57°C
105	THERMAL-TEMPERATURE	Temperature Indicator of Oven / Dry Block, Temperature Calibrator / Furnace / Temperature Chamber (Single Position)	Using S-Type Thermocouple with Precision Temp. Indicator, By Direct Method	400 °C to 1200 °C	3.54°C

SCOPE OF ACCREDITATION

Laboratory Name :	SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-3274	**Page No**	45 of 46
Validity	31/08/2023 to 30/08/2025	**Last Amended on**	11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
106	THERMAL-TEMPERATURE	Temperature Indicator With Sensor Of Liquid Baths, Dry Well Block bath, Water bath, Oven (Single Position)	Using RTD PT100 Sensors with Precision Temperature Indicator by Comparison Method(Single Position)	0 °C to 50 °C	0.87°C
107	THERMAL-TEMPERATURE	Temperature Indicator With Sensors Of Dry Well Baths, Dry block Temperature Calibrator, Oven, Furnace, Temperature Chamber	Using RTD PT100 Sensors with Precision Temperature Indicator, by Comparison Method (Single position)	50 °C to 400 °C	1.3°C
108	THERMAL-TEMPERATURE	Temperature Indicators With Sensors Of Low Temperature Liquid Bath, Freezer (Single Position)	Using RTD PT100 Sensors with Precision Temperature Indicator by Comparison Method (Single position)	(-)80 °C to 0 °C	1.04°C

SCOPE OF ACCREDITATION

Laboratory Name : SHYAM INSTRUMENTS & CALIBRATION SERVICES, 681/1, GIDC, MAKARPURA, VADODARA-390010, VADODARA, GUJARAT, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-3274 **Page No** 46 of 46

Validity 31/08/2023 to 30/08/2025 **Last Amended on** 11/09/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
109	THERMAL-TEMPERATURE	Thermometer, Temperature Gauge, RTD Sensor / Thermocouple - with or without Temperature Indicators / Controller / Temperature Scanner / Data Logger /	Using RTD PT100 Sensor with Precision Temp. indicator, 6 ½ Digital Multimeter. & Dry Well block calibrator By Comparison Method	50 °C to 400 °C	1.2°C
110	THERMAL-TEMPERATURE	Thermometer, Thermocouple, Temperature Gauge, Temperature Sensor with or Without Indicator / Controller / Scanner / Data Logger	Using S-Type Thermocouple with Precision Temp. Indicator, 6 ½ Digital Multimeter and Dry Well Bath By Comparison Method	400 °C to 1200 °C	1.36°C

*** CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.**