National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

TRANSCAL

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

#100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA, INDIA

in the field of

CALIBRATION

Certificate Number: CC-2231

Issue Date: 14/06/2019 **Valid Until:** 13/06/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	1 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
Permanent Facility					
1	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 1 kHz to 10 KHz	1 A to 10 A	0.09% to 0.3%	Using 8.5 digit DMM fluke 8508A
2	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 1 kHz to 10 KHz	10 mA to 1 A	0.05% to 0.09%	Using 8.5 digit DMM fluke 8508 A
3	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz	30 A to 1000 A	0.5% to 1.35%	Using Shunt with DMM .by direct method
4	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 1 kHz	100 µA to 20 A	0.05% to 0.1%	Using 8½ DMM 8508 A Fluke, by Direct Method
5	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 1 kHz	20 µA to 100 µA	0.18% to 0.05%	Using 8½ DMM 8508A Fluke, Direct Method
6	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 5 kHz	1 A to 30 A	0.37% to 0.5%	Using Shunt with DMM by V-I Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	2 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
7	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.2 Lag120V to 240 V, 0.1 A to 20 A	2.4 W to 960 W	0.5%	Using Digital Power Meter WT 210 by Direct Method
8	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.5 Lag120V to 240 V, 0.1 A to 20 A	6 W to 2.4 kW	0.5%	Using Digital Power Meter WT 210 by Direct Method
9	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.8 Lead120V to 240 V, 0.1 A to 20 A	9.6 W to 3.8 kW	0.23%	Using Digital Power Meter WT 210 by Direct Method
10	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ UPF120V to 240 V, 0.01 A to 20 A	1.2 W to 4.8 kW	0.25%	Using Digital Power Meter WT 210 by Direct Method
11	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 1 KHz to 20 kHz	100 V to 1000 V	0.016% to 0.16%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
12	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 100 KHz to 1 MHz	1 V to 10 V	0.08% to 3.4%	Using 8½ DMM 8508A , by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	3 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
13	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 20 Hz to 100 kHz	1 V to 100 V	0.016% to 0.08%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
14	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 20 Hz to 100 kHz	100 mV to 1 V	0.02% to 0.08%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
15	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 50 Hz to 1 kHz	1 mV to 10 V	0.47% to 0.01%	Using 8½ DMM 8508A/HP 3458A, by Direct Method
16	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 50 Hz to 1 kHz	10 V to 1000 V	0.01% to 0.02%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
17	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	1 kV to 5 kV	0.2%	Using HV Divider with DMM's, Sources and HV Probe with DMM by Direct Method/Comparison Method
18	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	28 kV to 100 kV	2.3%	Using HV Divider with DMM's , Source & HV Probe with DMM by Direct Method / comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	4 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
19	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	5 kV to 28 kV	1.6% to 2.8%	Using HV Divider with DMM's , Source & HV Probe with DMM by Direct Method / comparison Method
20	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 µA to 200 mA	0.26% to 0.09%	Using Calibrator Fluke 5700A with 50 Turns current coil
21	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 mA to 3 A	0.09% to 3%	Using Calibrator Fluke 5520A with 50 Turns current coil
22	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 10 Hz to 40 Hz	200 µA to 200 mA	0.12% to 0.019%	Using Calibrator Fluke 5700A By Direct Method
23	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 1 KHz	20 µA to 200 µA	0.11% to 0.09%	Using Calibrator Fluke 5700A, By Direct Method
24	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 5 KHz	200 µA to 200 mA	0.09% to 0.019%	Using Calibrator Fluke 5700A, By Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	5 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
25	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 5 KHz	200 mA to 2 A	0.019% to 0.13%	Using Calibrator Fluke 5700A, By Direct Method
26	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 45 Hz to 5 kHz	2 A to 20 A	0.07% to 3.5%	Using Calibrator Fluke 5520A with 50 Turns current coil
27	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 mA to 330 mA	0.093% to 0.45%	Using Calibrator Fluke 5520A with 50 Turns current coil
28	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz	120 A to 3000 A	0.5% to 0.62%	Using current source current coil
29	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz	20 A to 120 A	0.5%	Using current source omicron
30	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz to 1kHz	20 µA to 200 µA	0.5% to 0.23%	Using Calibrator Fluke 5700A with 50 Turns current coil

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	6 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
31	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Energy Active / Reactive Single & Three Phase, 40 V to 300 V, 0.05A to 20 A, 40 Hz to 70 Hz,0.25(lead/lag) to UPF	0.5 W to 6 kW	0.25% to 0.3%	Using Three Phase Energy Source Direct Method
32	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.2 PF, 120V to 1000 V, 0.1 A to 20 A	2.4 W to 200 kW	1%	Using Calibrator Fluke 5520 A Direct Method
33	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.5 PF, 120V to 1000 V, 0.1 A to 20 A	6 W to 500 kW	0.5%	Using Calibrator Fluke 5520A Direct Method
34	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.8 PF, 120V to 1000 V, 0.1 A to 20 A	9.6 W to 800 kW	0.23%	Using Calibrator Fluke 5520A Direct Method
35	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ UPF, 120V to 1000 V, 0.01 A to 20 A	0.01 w to 4.8 kW	0.12%	Using Calibrator Fluke 5520A Direct Method
36	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power,Single Phase, 50Hz @ UPF, 120 V to 1000 V, 0.01 A to 20 A	4.8 kW to 1 MW	0.8%	Using Calibrator Fluke 5520A Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	7 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
37	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 1 kHz	200 V to 1000 V	0.06% to 0.02%	Using Calibrator Fluke 5520A Direct Method
38	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	2 mV to 20 mV	0.33% to 0.041%	Using Calibrator fluke 5700A by Direct Method
39	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	20 mV to 200 mV	0.09% to 0.043%	Using calibrator fluke 5700A by direct method
40	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	200 mV to 100 V	0.07%	Using calibrator fluke 5700 A by Direct Method
41	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	2 mV to 20 mV	2.11% to 0.2%	Using Calibrator Fluke 5700A by Direct Method
42	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	20 mV to 200 mV	0.54% to 0.5%	Using Calibrator Fluke 5700 A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	8 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
43	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	200 mV to 20 V	0.5% to 0.4%	Using Calibrator Fluke 5700A by direct method
44	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 500 kHz	20 V to 30 V	0.9%	Using Calibrator Fluke 5700 A by Direct Method
45	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 Hz to 1 kHz	50 µV to 2 mV	1% to 0.33%	Using Calibrator Fluke 5700A by V I Method
46	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	2 mV to 20 mV	0.88% to 0.071%	Using Calibrator Fluke 5700A by Direct Method
47	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	20 mV to 200 mV	0.071% to 0.043%	Using Calibrator Fluke 5700A by Direct Method
48	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	200 mV to 20 V	0.043% to 0.4%	Using Calibrator Fluke 5700A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	9 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
49	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Hormonics @ 50 Hz	1 order to 39 order	0.2%	FLUKE 5520A Source, Direct Method
50	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	10 nA to 100 nA	0.46% to 0.08%	Using Shunt with DMM V-I Method
51	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	10µA to 100µA	0.0045%	Uisng 8½ DMM HP 3458A, by Direct Method
52	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100 A to 800 A	0.6% to 1%	Usinh Shunt with DMM V-I Method
53	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100 mA to 1 A	0.006% to 0.016%	Using 8½ DMM HP 3458A by Direct Method
54	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100µA to 100 mA	0.0045% to 0.0060%	Using 8½ DMM HP 3458A by Direct Method
55	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100nA to 10µA	0.08% to 0.00049%	Using Shunt with DMM V-I Method
56	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	1A to 75A	0.016% to 0.08%	Using Shunt with DMM V-I Method
57	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	75 A to 100 A	0.08% to 0.6%	Using Shunt with DMM V-I Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	10 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
58	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1V to 600V, 1 mA to 20 A	1 kW to 12 kW	0.45% to 0.65%	Using Digital Power Meter WT 210 by Direct Method
59	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1v to 600V, 1 mA to 20 A	1 mW to 10 W	0.1% to 0.08%	Using Digital Power Meter WT 210 by Direct Method
60	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1V to 600V, 1 mA to 20 A	10 W to 1 kW	0.08% to 0.45%	Using Digital Power Meter WT 210 by Direct Method
61	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	0.5 mV to 100 mV	0.83% to 0.0011%	Using 8½ DMM HP 3458A by Direct Method
62	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	1 kV to 5 kV	0.2%	Using HV Divider with DMMs by Direct Method
63	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	100 mV to 1 V	0.0011% to 0.00061%	Using 8½ DMM HP 3458A by Direct Method
64	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	10V to 1000V	0.00050% to 0.00080%	Using 8½ DMM HP 3458A by Direct Method
65	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	1V to 10V	0.00061% to 0.00050%	Using 8½DMM HP 3458A by Direct Method
66	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	40 kV to 100 kV	1.7%	Using HV Divider with DMM by Direct Method
67	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	5 kV to 40 kV	2%	Using Source & HV Probe with DMM by Direct/Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	11 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
68	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	50 µV to 0.5 mV	0.7% to 0.83%	Divider Method,Using 8½ DMM HP 3458A /8508A,
69	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	Power @ HF 400 kHz	100 mW to 400 W	4%	Using Differential probe in combination with Oscilloscope by comparison method
70	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	1 mA to 100 mA	0.0070% to 0.0079%	Using Fluke 5700A
71	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 µA to 100 µA	0.1% to 0.015%	Using Fluke 5700A
72	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 A to 20 A	0.064% to 0.012%	Using Fluke 5520
73	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 nA to 10 µA	0.15%	Using Reference 732B Decade meha Ohm Box by Direct Method
74	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	100 µA to 1 mA	0.015% to 0.0070%	Using Fluke 5700A
75	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	100 mA to 2 A	0.0079% to 0.012%	Using Fluke 5700A
76	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	120A to 3000A	0.65% to 1.2%	Using Current Source with current coil
77	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	2 A to 10 A	0.012% to 0.064%	Using Fluke 5520

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	12 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
78	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	20A to 120A	0.6% to	Using Current Source
79	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1 mA to 1000 A	1 kW to 1 MW	0.45% to 0.65%	Using Calibrator Fluke 5520A with 50 Turns Current Coil Direct Method
80	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1mA to 1000 A	10 W to 1 kW	0.08% to 0.45%	Using Calibrator Fluke 5520A with 50 Turns Current Coil Direct Method
81	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1mA to 1000 A	1mW to 10 W	0.1% to 0.08%	Using Calibrator Fluke 5520A with 50 TUrns Current Coil Direct Method
82	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	0.5 mV to 100 mV	0.19 % to 0.0016%	Using Calibrator Fluke 5700A by Direct Method
83	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	1.018 V, 10 V	0.0003%	Using 732B Reference Standard by Direct Method
84	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	10 V to 100 V	0.0009% to 0.0010%	Using Calibrator Fluke 5700A by direct method
85	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	100 mV to 10 V	0.0016% to 0.0009%	Using Calibrator Fluke 5700A by Direct Method
86	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	100 V to 1000 V	0.0010% to 0.0011%	Using Calibrator Fluke 5700A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	13 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
87	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	50 µV to 0.5 mV	0.1% to 0.19%	Using Calibrator Fluke 5700A by Direct Method
88	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	0.001 Ohm to 0.1 Ohm	0.6% to 0.025%	Using Std. Resistors & Shunts by VI Method
89	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	0.1 Ohm to 1 Ohm	0.025 % to 0.1 %	Using Standard Resistors & Shunts by VI Method
90	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 G ohm to 1 T ohm	1%	Using Calibrator Fluke 5520A and DMM 3458 by VI Method
91	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 MOhm to 10 MOhm	0.004% to 0.02%	Using Calibrator Fluke 5520A by Direct Method
92	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 ohm to 10 ohm	0.1% to 00.02%	Using Calibrator Fluke 5520 A by Direct Method
93	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	10 MOhm to 300 MOhm	0.02% to 0.5%	Using Calibrator Fluke 5520A by Direct Method
94	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	10 Ohm to 100 Ohm	0.02% to 0.005%	Using Calibrator Fluke 5520A by Direct Method
95	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	100 kOhm to 1 MOhm	0.004%	Using Calibrator Fluke 5520A by Direct method
96	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	100 Ohm to 100 kOhm	0.005% to 0.004%	Using Calibrator Fluke 5520A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	14 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
97	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	300 MOhm to 1 GOhm	0.5% to 1.8%	Using Calibrator Fluke 5520 A by Direct Method
98	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	75 µohm	1%	Using Standard Resistors & Shunts by VI method
99	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, 0 to 130V (DC Signal)	1 mV to 55 Vp-p	0.2%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct Method
100	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, 0 to 130V (DC Signal)	1 mV to 130 V	0.2%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct Method
101	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Band Width @ 50 kHz ref	50 kHz to 1 GHz	0.07%	Using Calibrator Fluke 5520A with 1.1GHz Option by Direct Method
102	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Scope Amplitude Square Wave Signal, 10 Hz to 10 k Hz	1 mV to 55 V	0.2%	Using Calibrator Fluke 5520A with 1.1GHz option by Direct Method
103	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Scope Amplitude Square Wave Signal, 10 Hz to 10 k Hz	1 mV to 55 V	0.2%	Using Calibrator Fluke 5520A with 1.1GHz option by Direct Method
104	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Time Marker	1 ns to 1000 sec	0.0006% to 0.1%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	15 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
105	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	1 pF to 100 pF	0.41% to 0.06%	Using LCR Meter by Direct / Comparison Method
106	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100 nF to 100µF	0.06%	Using LCR Meter by Direct/Comparison Method
107	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100 pF to 100 nF	0.06%	Using LCR Meter by Direct / Comparison Method
108	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100µF to 100mF	0.5%	Using LCR Meter by Direct / Comparison Method
109	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Inductance, 1 kHz	100 mH to 10 H	0.06% to 0.3%	Using LCR Meter by Direct / Comparison Method
110	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Inductance, 1 kHz	100µH to 100mH	0.24% to 0.06%	Using LCR Meter by Direct / Comparison Method
111	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1 ohm to 10 ohm	0.0017% to 0.0021%	Using DMM 81/2 8508A by Direct method
112	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1 MOhm to 10 MOhm	0.002%	Using DMM 8½ 8508 A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	16 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
113	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 ohm to 100 ohm	0.0021% to 0.0019%	Using DMM 8½ 8508A by Direct Method
114	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 k Ohm to 100 k ohm	0.0010% to 0.0011%	Using DMM 8½ 8508A by Direct Method
115	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 MOhm to 100 MOhm	0.002% to 0.012%	Using DMM 8½ 8508A by Direct Method
116	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 kOhm to 1 MOhm	0.0011% to 0.002%	Using 8½ DMM 8508A by Direct Method
117	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 ohm to 10 k Ohm	0.0019% to 0.001%	Using DMM 8½ 8508A by Direct Method
118	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 MOhm to 20 G ohm	0.012% to 0.121%	Using DMM 8½ 8508A by Direct method
119	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1mOhm to 10 Ohm	0.08% to 0.0025%	Using DMM 8½ , Calibrator Fluke 5520A, V/I method
120	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	20 G ohm to 1 TOhm	1%	Using Fluke Calibrator & 8½ DMM by VI Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	17 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
121	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	75 µOhm to 1 mOhm	0.5%	Using DMM 8½ calibrator fluke 5520A V/I Method
122	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	1 Ohm to 10 Ohm	0.1% to 0.025%	Using LCR Meter
123	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	10 Ohm to 100 Ohm	0.025% to 0.1%	Using LCR Meter
124	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	100 Ohm to 10 kOhm	0.1% to 0.02%	Using LCR Meter
125	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz - 100 kHz	100 ohm to 10 k ohm	0.05%	Using LCR Meter
126	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance, 1 kHz	10 µF to 110 mF	0.5% to 1.3%	Using Calibrator Fluke 5520A, DCB by Direct Method
127	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance, 1 kHz	220 pF to 10 µF	6% to 0.5%	Using Calibrator Fluke 5520A,DCB by direct metjod
128	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 kOhm	0.0015%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	18 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
129	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 MOhm	0.0023%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
130	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 Ohm	0.011%	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
131	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 kOhm	0.0016%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
132	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 MOhm	0.0024%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
133	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 Ohm	0.0059%	Using Calibrator Fluke 5700 with DMM 3458A by Direct method
134	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 kOhm	0.0014%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
135	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 MOhm	0.0047%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
136	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 Ohm	0.0028%	Using calibrator Fluke 5700 with DMM 3458 A by Direct method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	19 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
137	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 kOhm	0.0016%	Using Calibrator 5700 with DMM 3458A by Direct Method
138	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 MOhm	0.0134%	Using Calibrator Fluke 5700 with DMM 3458A by Direct
139	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 Ohm	0.002 %	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
140	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 kOhm	0.0014%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
141	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 MOhm	0.0055%	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
142	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 Ohm	0.0032 %	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
143	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	190 kOhm	0.0016%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
144	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	190 Ohm	0.002%	Using Calibtrator Fluke 5700 with DMM 3458A vy Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	20 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
145	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Single phase	0.2 Lag to Unity	0.002 pF	Using Calibrator Fluke 5520 A by Direct Method
146	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Single phase	0.2 lead to unity	0.002 pF	Using Calibrator Fluke 5520A by Direct Method
147	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Three phase	0.25 Lag to Unity	0.008 pF	Using Edutech Energy source by direct method
148	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Three phase	0.25 Lead to Unity	0.008 pF	Using Edutech energy source by direct method
149	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation (Attenuator/Signal Generator) 1 kHz to 18 GHz	1 dB to 70 dB	0.086dB to 0.14dB	Using Multimeter & Power Meter method
150	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation (Attenuator/Signal Generator) 10 MHz to 18 GHz	70 dB to 110 dB	0.14dB to 0.50dB	Using Power Meter , Spectrum Analyzer Method
151	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation, 1 kHz to 18 GHz	1 dB to 70 dB	0.026 dB to 0.14 dB	Using RF Reference Source 9640A LPNX Signal Generator-Attenuator-8494B, 8496B Multimeter & Power Meter Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	21 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
152	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Frequency	1 mHz to 10 Hz	10µHz to 90µHz	Using Signal Generator , RF Reference Source by Direct Method
153	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Comparison)	Power (Signal Generator , RF Reference Source) 1 kHz to 18 GHz	-60 dBm to 13 dBm	0.17dB to 0.24dB	Using Multimeter , Power Meter , Spectrum Analyzer Method
154	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Power (Signal Generator , RF Reference Source) 10 MHz to 18 GHz	-60 dBm to -100 dBm	0.17dB to 0.65dB	Using Power Meter , Spectrum Analyzer Method
155	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Frequency, Signal Generator , RF Reference Source	10 Hz to 29.999 GHz	190µHz to 17Hz	Using Rubidium Frequency Standard locking to other Equipment Frequency Counter 5350B, Spectrum Analyzer by Direct Method Locked to rubidium frequency standard
156	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Reflection Coefficient Maury Microwave Mismatch Test Set 1 kHz to 18 GHz	0.024 to 0.33	0.032 rho	Using Network Analyzer - ZVB20 by direct method using Cal kit Z270 by Network Analyzer Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	22 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
157	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Spectral Purity(THD) No. of harmonics (n=3 to 10), frequency 10 Hz to 2.9GHz	0.17 % to 3.19 %	0.03% to 0.2%	Using Spectrum Analyzer FSV-30 Upto 30 GHz by Direct Method
158	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Messure)	3 dB Bandwidth, (Filter, Power meter, Power Sensor - E 4412A)	Upto 18 GHz	0.5%	Using RF Reference Source - 9640ALPNX Signal Generator by Direct Method
159	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (source)	Frequency	10 Hz to 40 GHz	90µHz to 16Hz	Using Rubidium Frequency Standard , Signal Generator , RF Reference Source by Direct Method
160	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Modulation AM CW: 100 kHz to 3.9GHz Modulation Rate 1 kHz to 10 kHz AM Depth	1 % to 98 %	0.2% to 2%	Using Rhode & Schwarz Signal/ Spectrum Analyzer FSV 30, Modulation analyzer HP 8901B as transfer by Relative Sideband Amplitude Method
161	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (source)	Modulation FM CW : 100 kHz to 25 GHz Modulation Rate 50 Hz to 267 kHz FM Deviation	50 Hz to 4 MHz	0.1%	Using Rohde & Schwarz Signal/ Spectrum Analyzer FSV30 by Bessel Function Method
162	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Modulation, FM , CW : 100 kHz to 25 GHz, Modeulation Rate : 50 Hz to 267 kHz, FM Deviation		0.1%	By Bessel Function Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	23 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
163	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - L Type	-200°C to 900°C	0.08°C	Using DMM 8½ 3458A DC mV Measurement method
164	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - N Type	-200°C to 1300°C	0.07°C	Using 8½ DMM 3458 A DC mC measurement method
165	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - RTD	-200°C to 800°C	0.02°C	Resistance method
166	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - U Type	-200°C to 400°C	0.07°C	Using 8½ DMM HP 3458A DC mV Measurement Method
167	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - B Type	600°C to 1800°C	0.5°C	Using DMM 8½ 3458A DC mV measurement method
168	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - E Type	-200°C to 1000°C	0.08°C	Uisng DMM 8½ 3458A DC mV Measurement Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	24 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
169	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - J Type	-200°C to 1200°C	0.06°C	Using DMM 8½ 3458A DC mV measurement method
170	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - K Type	-200°C to 1372°C	0.05°C	Using DMM 8½3458A DC mV Measurement Method
171	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - R & S Type	0 to 1750°C	0.07°C	Using DMM 8½ 3458A DC mV measurement method
172	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - T Type	-200°C to 400°C	0.1°C	Using 8½ DMM 3458A DC mV measurement method
173	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - B Type	600°C to 1800°C	0.5°C	Using 5700 Calibrator DC mV Measurement Method
174	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - E Type	-200°C to 1000°C	0.08°C	Using 5700 Calibrator DC mV measurement method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	25 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
175	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - J Type	-200 °C to 1200°C	0.06°C	Using 5700 Calibrator DC mV measurement method
176	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - K Type	-200 °C to 1372°C	0.06°C	Using 5700 Calibrator DC mV measurement Method
177	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - L Type	-200°C to 900°C	0.08°C	Using 5700 calibrator DC mV Measurement Method
178	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - N Type	-200°C to 1300°C	0.07°C	Using 5700 Calibrator DC mV Measurement Method
179	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - R Type & S Type	0°C to 1750°C	0.07°C	Using 5700 Calibrator DC mV Measurement method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	26 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
180	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - RTD	-200°C to 800°C	0.07°C	Using Resistance Method
181	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - T Type	-200 °C to 400°C	0.1°C	Using 5700 Calibrator DC mV Measurement method
182	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - U Type	-200°C to 400°C	0.07°C	Using 5700 calibrator DC mV measurement method
183	ELECTRO-TECHNICAL- TIME & FREQUENCY (Measure)	Time Interval	100 msec to 9999 sec	0.1m sec to 0.08sec	Using Timer by Direct method
184	ELECTRO-TECHNICAL- TIME & FREQUENCY (Measure)	Time Interval	9999 sec to 86400 sec	0.08 sec to 50 sec	Using Timer by Direct Method
185	FLUID FLOW- FLOW MEASURING DEVICES	Flow Meters (Air)	0.1 LPM to 5 LPM	0.4%	Using Mass Flow Meter by Comparison Method
186	FLUID FLOW- FLOW MEASURING DEVICES	Flow Meters (Air)	5 LPM to 500 LPM	1.0% to 1.6%	Using Mass Flow Meter by Comparison method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	27 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
187	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	10000 to 90000 rpm	0.03 % to 0.06 %	Digital Tachometer with VFD Source. Procedure based on SANAS TR 45-1 & 2.
188	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	12 to 1000 rpm	1.5 % to 0.09 %	Digital Tachometer with VFD source. Procedure based on SANAS TR 45-1 & 2.
189	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Contact Type)	12 to 3000 rpm	1.5 % to 0.06 %	Digital Tachometer and VFD source. Procedure based on SANAS TR 45 - 1 & 2.
190	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	1000 to 10000 rpm	0.09 % to 0.03 %	Digital Tachometer with VFD source. Procedure based on SANAS TR 45 -1 & 2.
191	MECHANICAL-ACCELERATION AND SPEED	Vibration testerAcceleration (Frequency range:10 Hz to 1 kHz)	1 to 100 m/s²	12.9 % to 2.5 %	Digital Vibration tester with Transducer. Procedure based on ISO 16063.
192	MECHANICAL-ACCELERATION AND SPEED	Vibration TesterDisplacement (Frequency range 10 Hz to 250 Hz)	0.01 to 2 mm	10.5 % to 2.5 %	Digital Vibration Tester with Transducer.Procedure based on ISO 16063.
193	MECHANICAL-ACCELERATION AND SPEED	Vibration TesterVelocity (Frequency range: 10 Hz - 1 kHz)	1 to 100 mm/s	2.6 % to 3.8 %	Digital Vibration Testerwith Transducer.Procedure based on ISO 16063.

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	28 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
194	MECHANICAL-ACOUSTICS	Sound Level MeterFrequency range: 1 kHz.	30 to 130 dB	0.3 dB	Sound level Calibrator, Calibration points at 94 & 114 dB. Procedure based on TSC/CAL/612.
195	MECHANICAL-DENSITY AND VISCOSITY	Hydrometers	0.6 g/ml to 1.000 g/ml	0.00014g/ml	Calibration of Hydrometers by cuckows method
196	MECHANICAL-DENSITY AND VISCOSITY	Hydrometers	1.000 g/ml to 2.000 g/ml	0.00014g/ml	Calibration of Hydrometers by cuckows method
197	MECHANICAL-DENSITY AND VISCOSITY	Viscosity Cups, Zahn Cups	30 cst to 240 cst	0.33%	Using liquid of known Kinematic viscosity and Timer as per IS 3944
198	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Graticule	0 to 360 deg	1.8min	Using Vision System, Comparison method
199	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Plate	180 x 120 x 110 mm	10.8µm	Using Liver Dial Gauge, IS 2554, IS 6973
200	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bench Center (Co-axility)	0 to 500 mm	8.9µm	Using Straight & Taper Mandrels, Dial Gauge. IS 5980

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	29 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
201	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bevel Protractor / Combination Set LC : 5 '	0-90-0 °	2.9arc min	Using Angle Block Set
202	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bore Dial Gauge for Transmission Accuracy check LC : 1 µm	0 to 2 mm	1.8µm	Using Length Measuring Machine
203	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) LC : 10 µm	0 to 1000 mm	10.3µm	Using Gauge Block Set , Caliper Checker
204	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) LC : 10 µm	0 to 600 mm	9.8µm	Using Gauge Block Set , Caliper Checker
205	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (vernier, dial, digital) L.C. 0.01 mm	0 to 2000 mm	12µm	Using Gauge Block Set , Caliper Checker
206	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge with Foils LC:1.0 µm	0 to 2000 mm	4.3µm	Using Standard Thickness Foils

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	30 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
207	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Comparator Stand (Flatness of work Table)	200 x 200 mm	2.4µm	Using Lever Dial Gauge
208	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Cylindrical Measuring Pin	0.1 to 26 mm	0.9µm	Electronic Probe with Comparator Stand.
209	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Caliper LC : 10 µm	0 to 300 mm	6.4µm	Using Gauge Block Set
210	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Caliper, L.C.: 10 µm	0 to 600 mm	13.1µm	Using Gauge Block Set
211	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer LC : 1 µm	0 to 300 mm	6.0µm	Using Gauge Block Set
212	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Micrometer, L.C.: 1 µm	0 to 600 mm	11.4µm	Using Gauge Block Set

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	31 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
213	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge (Lever Type) LC : 1 µm	0 to 2 mm	0.5µm	Using Length Measuring Machine
214	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Gauge (Plunger /Digital/ Dial Thickness Gauge) LC : 1 µm	0 to 100 mm	2.9µm	Using Length Measuring Machine
215	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Electronic Probe	0 to 25 mm to 0 to 50 mm	0.9µm to 1.4um	Using Gauge Blocks
216	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Elongation Gauge	0 to 100 mm	5.9um	using 2D Height Gauge, Comparison Method
217	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineering Square (Squareness)	Up to 400 mm	6.2µm	Using Granite Square & Slip Gauge
218	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 0.1µm	0 to 25 mm	0.4µm	Using gauge blocks

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	32 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
219	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	0 to 150 mm	1.7µm	Using Gauge Block Set
220	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	> 150 to 450 mm	2.0µm	Using Gauge Block Set
221	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	0 mm to 1000 mm	8.1µm	Using Gauge Block Set
222	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 10 µm	0 to 2000 mm	9.0µm	Using Gauge blocks
223	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Up to 1 mm	1.4µm	Using Electronic Probe with Comparator Stand
224	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Fillet Gauge/ Form Gauge	0 ° to 90 °	2.2min	Using Vision System

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	33 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
225	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Fillet Gauge/ Form Gauge	0 mm to 150 mm	3.1µm	Using Vision System
226	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Flankiness Gauge	0 to 100 mm	5.9um	Using Vision System & 2D Height Gauge, Comparison Method
227	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Hegman Gauge	up to 1 mm	2.3µm	Using Plunger Dial gauge
228	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/Dial/Digital) LC: 10 µm	0 mm to 1000 mm	8.7µm	Using Gauge Block Set and Caliper Checker
229	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/Dial/Digital) L.C:10µm	0 to 600	8.0um	Gauge blocks/ Caliper Checker
230	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inclinometer	0 to 90 deg	1.7 min	Using Angle Gauge Blocks, Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	34 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
231	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Inside/ Outside Dial Caliper LC: 10 µm	0 to 150 mm	8.6µm	Using Gauge Block Set
232	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Internal / Stick Micrometer (2 Point) LC : 10 µm	50 mm to 2100 mm	(1.25+3.27L)µm L is length in m	Using Gauge Block Set
233	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Laser Distance Meter L.C.0.10 mm	0 to 2000 mm	350µm	Using Slip Gauge, Comparison Method
234	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Length Bars	50 mm to 500 mm	2.9µm	Using Length Measuring Machine
235	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Length,Radius/Diameter,Angle) Angle	360 °	2.4min	Using Vision System
236	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Length,Radius/Diameter,Angle) Diameter	Up to 100 mm	2.7µm	Using Vision System

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	35 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
237	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Limit Gauge (Length,Radius/Diameter,Angle) Length	0 mm to 150 mm	4.6µm	Using Vision System
238	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Scales LC : 0.5 mm	Up to 2000 mm	114vL L is in Mtrµm	Using Length Measuring Machine
239	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Tape/Pi Tape LC : 0.5 mm	Up to 50 mtr	114 v Lµm Where L in mtr	Using Length Measuring Method
240	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Head LC: 1 µm	0 to 50 mm	0.8µm	Using Length Measuring Machine
241	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Rod	1000 to 1950 mm	7.9µm	Using Gauge Block Set
242	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer Setting Rod	12.5 to 1000 mm	4.7µm	Using Gauge Block Set

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	36 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
243	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Pistol Caliper LC: 100.0 µm	0 to 100 mm	60.4µm	Using Gauge Block Set
244	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	0 to 100 mm	1.0µm	Using Length Measuring Machine
245	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	100 to 400 mm	1.6µm	Using Length Measuring Machine
246	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge	100 mm to 325 mm	2.6µm	Using Length Measuring Machine , Master Ring
247	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge	3 to 100 mm	1.8µm	Using Length Measuring Machine, Master Ring
248	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge	0.4 to 50 mm	9.5µm	Using Vision System

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	37 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
249	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Sine Bar/ Sine Centre / Sine Table	0 ° to 45 °	2.82sec	Using Gauge Blocks , Angle Blocks, Lever Dial Gauge
250	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge	3 to 500 mm	2.7µm	Using Gauge Block Set
251	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Spirit Level (Type 1, 2 & 3) Sensitivity : 0.01 mm/m	Up to 4 mm/m	7.9µm/m	Using Electronic Level
252	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge/Parallels	Up to 2000 mm	16.8µm	Using Electronic Level
253	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	3 m X 2 m	1.3 (Sqrt (L+W)/100)L = Length in mm, W = Width in mmL = Length in mm, W = Width in mm	Using Electronic Level
254	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Plain Plug Gauge	Taper Half Angle	0.01098min	Using Length Measuring Machine

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	38 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
255	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Plain Plug Gauge	Up to 100 mm	0.9µm	Using Length Measuring Machine
256	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Plain Ring Gauge	Taper Half Angle	5.5sec	Using Length Measuring machine
257	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Plain Ring Gauge	Up to 100 mm	0.9µm	Using Length Measuring machine
258	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Scale	Up to 15 mm	9.5µm	Using Vision System
259	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Plug Gauge	Taper Half Angle	3.2sec	Using Length Measuring Machine,Master Disc,FCDM
260	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Plug Gauge	Up to 100 mm	1.4µm	Using Length Measuring Machine

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	39 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
261	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Taper Thread Ring Gauge	Up to 100 mm	0.9µm	Using Length Measuring Machine
262	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves	0.03 mm to 125 mm	9.4µm	Using Vision System
263	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thickness Foils	Up to 2.5 mm	1.6µm	Using Electronic Probe With Comparator Stand
264	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge Angle	55 & 60 °	2.2min	Using Vision System
265	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Pitch Gauge Pitch	0.25 to 6.35 mm	9.4µm	Using Vision System
266	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major Dia , Effective Dia)	100 to 400 mm	1.7µm	Using Length Measuring Machine , Master Disc

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	40 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
267	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Major Dia , Effective Dia)	3 to 100 mm	2.3µm	FCDM
268	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (For Effective Dia)	100 to 325 mm	1.9µm	Using Length Measuring Machine , Master Ring
269	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (For Effective Dia)	3 to 100 mm	1.9µm	Using Length Measuring Machine , Master Ring
270	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Three Point Micrometer LC: 1.0 µm	2.5 mm to 100 mm	2.0µm	Using Setting Ring Gauge
271	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Ultrasonic Thickness Gauge LC: 100 µm	0 to 300 mm	52.1µm	Using Gauge Block Set
272	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V- Block (Parallelism,Symmetricity)	300 x 125 x 200 mm	4.4µm	Using Lever Dial Gauge & Mandrel

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	41 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
273	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Wet Film Thickness Gauge	0.025 to 5 mm	9.4µm	Vision System
274	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Wire Gauge	0.19 to 7.62 mm	8.0µm	Using Video Measuring M/c
275	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Cylindrical Setting Master (Diameter and Concentricity)	3 to 100 mm	1.1 um for Diameter to 1.3 um for Concentricity	Electronic Probe with DRO, & FCDM
276	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Dial Calibration Tester L.C. 0.1 um	0 to 25 mm	0.7µm	Using Electronic Probe with DRO, Comparison Method
277	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Floating Carriage Micrometer L.C. 0.0001 mm	0 to 100 mm	2.2µm	Using Mandrels & Master Cylinders, MOY/SCMI/9
278	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block (Carbide)	> 25 to 50 mm	0.10µm	Slip Gauge Calibrator & K Grade Slip Gauge, IS 2984, ISO 3650
279	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block (Carbide)	> 50 to 75 mm	0.12µm	Slip gauge Calibrator & K grade Slip Gauges, IS 2984, ISO 3650

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	42 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
280	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block (Carbide)	> 75 to 100 mm	0.15µm	Slip Gauge Calibrator & K grade Slip Gauges
281	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block (Carbide)	up to 25 mm	0.08µm	Gauge block Calibrator & k Grade Gauges, IS 2984, ISO 3650
282	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block Comparators	0 to 100 mm	0.03µm	Using K grade Gauge Blocks by Direct Method
283	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Thread Measuring Wire	0.170 to 6.350 mm	0.5µm	using Electronic Probe with DRO, Comparison Method
284	MECHANICAL-DUROMETER	Spring force Calibration of Rubber Hardness Tester Shore A, B, E, O	Shore A, B, E,O (0 to 100 units)	0.12 Shore A	Using Load Cell with Indicator
285	MECHANICAL-DUROMETER	Spring Force Calibration of Rubber Hardness Tester Shore C, D, DO	Shore C, D, DO (0 to 100 units)	0.09 Shore D	Using Load Cell with Indicator
286	MECHANICAL-MOBILE FORCE MEASURING SYSTEM	Load cells / Force proving Instrument	100 N* to 2000 N	0.15%	Using Newton weights as per ISO 376
287	MECHANICAL-MOBILE FORCE MEASURING SYSTEM	Push Pull Gauge	1 N to 2000 N	0.21 %rdg.	Using Newtonian Weights And frame fixtureVDI/VDE 2624-part2.1

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	43 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
288	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters & Switches	20 to 40 bar	0.016 %	Digital Pressure Gauge with pressure pump. Procedure based on DKD-R 6-1.
289	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges , Transducers/Transmitters & Switches	35 to 1200 bar	0.017 % rdg.	Hydraulic (oil operated) Dead Weight Tester, procedure based on DKD-R 6-1.
290	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges , Transducers/Transmitters & Switches	4 to 35 bar	0.026 % rdg.	Hydraulic (oil operated) Dead Weight Tester, Procedure based on DKD-R 6-1.
291	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges ,Differential Pressure Gauges, Transducers/Transmitters & Switches.	40 to 700 bar	0.023 % rdg.	Digital Pressure Gauge using hydraulic comparator pump Based on DKD-R6-1
292	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (Absolute)Pressure Gauges.	200 to 915 mbar (abs)	0.26 % rdg.	Digital Barometer with uncertainty of 0.31 mbarProcedure based on DKD-R 6-1.
293	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (hydraulic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters & Switches	700 to 1000 bar	0.02 %	Digital Pressure Gauge with hydraulic comparator pump. Procedure based on. DKD-R 6-1.

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	44 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
294	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital /Analogue Pressure Gauges , Differential Pressure Gauge, Transducers/Transmitters, Switches	2 to 20 bar	0.043 % rdg.	Digital Pressure Gauge with uncertainty of 0.0031 bar and pneumatic pump. Procedure based on DKD-R 6-1
295	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital /Analogue Pressure Gauges ,Differential Pressure Gauge, Transducers/Transmitters, Switches	100 mbar to 2 bar	0.045 % rdg.	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1
296	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters , Switches	0 to 10 mbar	0.93 %	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1.
297	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters , Switches	10 to 100 mbar	0.06 %	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1
298	MECHANICAL-PRESSURE INDICATING DEVICES	VacuumDigital/Analogue Vacuum Gauges , Transducers/Transmitters, Switches	0 to (-) 0.9 bar	0.22 % rdg.	Digital Pressure Gauge with pneumatic pressure pump. Procedure based on ISO 3567 & ISO 27893.

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	45 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
299	MECHANICAL-TORQUE GENERATING DEVICES	Torque Sensors	>10 Nm to 500 Nm	0.30 %	Using Dead Weight Torque Calibration System as per BS 7882:2017
300	MECHANICAL-TORQUE GENERATING DEVICES	Torque Sensors	1 Nm to 10 Nm	0.30 %	Using Dead Weight Torque Calibration System as per BS 7882:2017
301	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,E Type II, Class A,B,D,E	0.1 Nm to 10 Nm	0.89%	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789
302	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,E Type II, Class A,B,D,E	20 Nm to 200 Nm	0.43% rdg	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789
303	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,E Type II, Class A,B,D,E	200 Nm to 1000 Nm	0.62% rdg.	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789
304	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,EType II, Class A,B,D,E	10 Nm to 20 Nm	0.35% rdg	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	46 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
305	MECHANICAL-VOLUME	Glassware (Pipette , Burette ,Measuring Cylinder, Volumetric flask)	1 ml to 10 ml	0.00018ml	Using Weighing Balance with d = 0.1 mg , 1 mg, 10 mg Respectively and Distilled water by Gravimetric method as per ISO 4787
306	MECHANICAL-VOLUME	Glassware (Pipette , Burette ,Measuring Cylinder, Volumetric flask)	100 ml to 1000 ml	0.005ml	Using Weighing Balance with d = 0.1 mg , 1 mg, 10 mg Respectively and Distilled water by Gravimetric method as per ISO 4787
307	MECHANICAL-VOLUME	Glassware (Pipette , Burette ,Measuring Cylinder, Volumetric flask)	1000 ml to 5000 ml	0.017ml	Using Weighing Balance with d = 0.1 mg , 1 mg, 10 mg Respectively and Distilled water by Gravimetric method as per ISO 4787
308	MECHANICAL-VOLUME	Glassware (Pipette , Burette, Measuring Cylinder, Volumetric flask)	10 ml to 100 ml	0.0004ml	Using Weighing Balance with d = 0.1 mg , 1 mg, 10 mg Respectively and Distilled water by Gravimetric method as per ISO 4787

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	47 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
309	MECHANICAL-VOLUME	Micropipettes, Syringes	1 µl to 10 µl	0.02µl	Using Weighing Balance of d=0.001 mg & 0.01 mg and distilled water by Gravimetric method as per ISO 8655
310	MECHANICAL-VOLUME	Micropipettes, Syringes	100 µl to 1 ml	0.11µl	Using Weighing Balance of d=0.001 mg & 0.01 mg and distilled water by Gravimetric method as per ISO 8655
311	MECHANICAL-VOLUME	Micropipettes,Syringes	1 ml to 5 ml	1.92µl	Using Weighing Balance of d=0.001 mg & 0.01 mg and distilled water by Gravimetric method as per ISO 8655
312	MECHANICAL-VOLUME	Micropipettes,Syringes	10 µl to 100 µl	0.04µl	Using Weighing Balance of d=0.001 mg & 0.01 mg and distilled water by Gravimetric method as per ISO 8655
313	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.0001 mg	1 mg to 2 g	0.0035mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
314	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.001 mg	1 mg to 20 g	0.007mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	48 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
315	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.001 mg	1 mg to 5 g	0.005mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
316	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 1 kg	0.2mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
317	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 200 g	0.03mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
318	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 50 g	0.02mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
319	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 500 g	0.1mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
320	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 1 mg	500 mg to 20 kg	7mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
321	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 1 mg	500 mg to 5 kg	1mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
322	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 1 g	500 mg to 150 kg	1g	Using E2 and F1 class up to 1000 kg as per OIML R-76

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	49 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
323	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 g	1 kg to 1000 kg	100g	Using E2 and F1 class up to 1000 kg as per OIML R-76
324	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 g	2 kg to 3000 kg	500g	Using E2 and F1 class up to 1000 kg as per OIML R-76
325	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 mg	500 mg to 50 kg	100mg	Using E2 and F1 class up to 1000 kg as per OIML R-76
326	MECHANICAL-WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 20 g	1 kg to 300 kg	20g	Using E2 and F1 class up to 1000 kg as per OIML R-76
327	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance	> 1500 g to 100 kg	0.1% of applied load	Using F1 class Weights , as per OIML R-76
328	MECHANICAL-WEIGHING SCALE AND BALANCE	Spring Balance	0 g to 1500 g	0.28% of applied load	Using F1 class Weights , as per OIML R-76
329	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	1 g	0.0030mg	Using Mass Comparator of d = 1 µg
330	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	1 kg	0.2mg	Using Mass Comparator of d = 0.01 mg
331	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	1 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	50 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
332	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	10 g	0.006mg	Using Mass Comparator of d = 1 µg
333	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	10 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
334	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	100 g	0.02mg	Using Mass Comparator of d = 0.01 mg
335	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	100 mg	0.0013mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
336	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	2 g	0.0040mg	Using Mass Comparator of d = 1 µg
337	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	2 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	51 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
338	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	20 g	0.007mg	Using Mass Comparator of d = 0.01 mg
339	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	20 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
340	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	200 g	0.03mg	Using Mass Comparator of d = 0.01 mg
341	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	200 mg	0.0014mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
342	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	5 g	0.005mg	Using Mass Comparator of d = 1 µg
343	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	5 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	52 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
344	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	50 g	0.01mg	Using Mass Comparator of d = 0.01 mg
345	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	50 mg	0.0010mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
346	MECHANICAL-WEIGHTS	Weights E1 class and Coarser	500 g	0.1mg	Using Mass Comparator of d = 0.01 mg
347	MECHANICAL-WEIGHTS	Weights E1 Class and coarser	500 mg	0.0016mg	Using E1 class Standard weights 1 mg to 20 kg and Mass comparator of d= 0.1 µg as per OIML R-111 by Subdivision & Substitution methods Through ABBA cycles
348	MECHANICAL-WEIGHTS	Weights E2 class and Coarser	10 kg	3mg	Using Mass Comparator of d = 1 mg upto 20 kg and 100 mg upto 50 kg by Substitution Methods through ABBA cycles as per OIML R-111

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	53 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
349	MECHANICAL- WEIGHTS	Weights E2 class and Coarser	2 kg	1mg	Using Mass Comparator of d = 1 mg upto 20 kg and 100 mg upto 50 kg by Substitution Methods through ABBA cycles as per OIML R-111
350	MECHANICAL- WEIGHTS	Weights E2 class and Coarser	20 kg	7mg	Using Mass Comparator of d = 1 mg upto 20 kg and 100 mg upto 50 kg by Substitution Methods through ABBA cycles as per OIML R-111
351	MECHANICAL- WEIGHTS	Weights E2 class and Coarser	5 kg	2mg	Using Mass Comparator of d = 1 mg upto 20 kg and 100 mg upto 50 kg by Substitution Methods through ABBA cycles as per OIML R-111
352	MECHANICAL- WEIGHTS	Weights E2 class and Coarser	50 kg	100mg	Using Mass Comparator of d = 1 mg upto 20 kg and 100 mg upto 50 kg by Substitution Methods through ABBA cycles as per OIML R-111
353	OPTICAL- OPTICAL	Lux Meter / Light Meter	100 lux to 10000 lux	3.0 %Rdg	Using Standard Lux Meter by Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	54 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
354	OPTICAL- OPTICAL	Lux Meter / Light Meter	10000 lux to 20,000 lux	3.0%Rdg	Using Standard Lux Meter by Comparison Method
355	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chambers, Dry cabinet, De-humidifier @ ambient temperature	5 % to 10 %	1.3%	Using Temperature & Humidity Meter by Direct Method
356	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Dial / Digital Meters (@ 10 °C to 60 ° C)	30 % RH to 95 % RH	0.8% RH	Using Temperature & Humidity Meter with Humidity Chamber by Comparison Method
357	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Dial / Digital Meters (@ 20 °C to 60 ° C)	10 % RH to 95 % RH	0.80% RH	Using Temperature & Humidity Meter with Humidity chamber by comparison Method
358	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	0.5 % RH	0.33% RH	Using Humidity standard solution by direct method
359	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	5 % RH	0.33% RH	Using Humidity standard solution by direct method
360	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	95 % RH	0.81% RH	Using Humidity standard solution by direct method
361	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Transmitter / Digital Humidity Meters	0 ° C to 60 ° C	0.18° C	Using Class A RTD Sensor with Digital Indicator by Comparison Method
362	THERMAL- TEMPERATURE	Glass Thermometer	-40 ° C to 200 ° C	0.18° C	Using Liquid Bath , SPRT with Digital Indicator by Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	55 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
363	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	-100 ° C to 140 ° C	0.072° C	Using SPRT with Digital Indicator by Direct Method
364	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	140 ° C to 650 ° C	0.08° C	Using SPRT with Digital Indicator by Direct Method
365	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	650 ° C to 1200 ° C	1.49° C	Using S- Type Thermo couple with Digital Indicator by Direct Method
366	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	1000 ° C to 1200 ° C	1.45° C	Using Dry Temperature Bath, S Type Thermo couple with Digital Indicator by Comparison Method
367	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	140 ° C to 650 **° C**	0.08**° C**	Using Dry Bath , SPRT with Digital Indicator by Comparison Method
368	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	-45 ° C to 140 ° C	0.02**° C**	Using Dry Temperature Bath, SPRT with Digital Indicator by comparison Method
369	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	650 ° C to 1000 ° C	0.43**° C**	Using Dry Temperature Bath , S- Type Thermo couple with Digital Indicator by Comparison Method
370	THERMAL-TEMPERATURE	RTD, Thermocouples, Indicator with sensor	-100 ° C to -45 **° C**	0.07**° C**	Using Dry Temperature bath , SPRT with Digital indicator by comparison method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	56 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
371	THERMAL-TEMPERATURE	RTD, Thermocouples, Indicator with sensor	-196 ° C	0.07° C	Using LN2 and cryo bath by comparison method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	57 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
Site Facility					
1	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 1 kHz to 10 KHz	1 A to 10 A	0.09% to 0.3%	Using 8.5 digit DMM fluke 8508A
2	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 1 kHz to 10 KHz	10 mA to 1 A	0.05% to 0.09%	Using 8.5 digit DMM fluke 8508 A
3	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz	30 A to 1000 A	0.5% to 1.35%	Using Shunt with DMM .by direct method
4	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 1 kHz	100 µA to 20 A	0.05% to 0.1%	Using 8½ DMM 8508 A Fluke, by Direct Method
5	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 1 kHz	20 µA to 100 µA	0.18% to 0.05%	Using 8½ DMM 8508A Fluke, Direct Method
6	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Current, 50 Hz to 5 kHz	1 A to 30 A	0.37% to 0.5%	Using Shunt with DMM by V-I Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	58 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
7	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.2 Lag120V to 240 V, 0.1 A to 20 A	2.4 W to 960 W	0.5%	Using Digital Power Meter WT 210 by Direct Method
8	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.5 Lag120V to 240 V, 0.1 A to 20 A	6 W to 2.4 kW	0.5%	Using Digital Power Meter WT 210 by Direct Method
9	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ 0.8 Lead120V to 240 V, 0.1 A to 20 A	9.6 W to 3.8 kW	0.23%	Using Digital Power Meter WT 210 by Direct Method
10	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Power, 1 Phase , 50 Hz @ UPF120V to 240 V, 0.01 A to 20 A	1.2 W to 4.8 kW	0.25%	Using Digital Power Meter WT 210 by Direct Method
11	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 1 KHz to 20 kHz	100 V to 1000 V	0.016% to 0.16%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
12	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 100 KHz to 1 MHz	1 V to 10 V	0.08% to 3.4%	Using 8½ DMM 8508A , by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	59 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
13	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 20 Hz to 100 kHz	1 V to 100 V	0.016% to 0.08%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
14	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 20 Hz to 100 kHz	100 mV to 1 V	0.02% to 0.08%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
15	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 50 Hz to 1 kHz	1 mV to 10 V	0.47% to 0.01%	Using 8½ DMM 8508A/HP 3458A, by Direct Method
16	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage, 50 Hz to 1 kHz	10 V to 1000 V	0.01% to 0.02%	Using 8½ DMM 8508A/HP 3458 A , by Direct Method
17	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	1 kV to 5 kV	0.2%	Using HV Divider with DMM's, Sources and HV Probe with DMM by Direct Method/Comparison Method
18	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	28 kV to 100 kV	2.3%	Using HV Divider with DMM's , Source & HV Probe with DMM by Direct Method / comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	60 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
19	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Measure)	AC Voltage,50 Hz	5 kV to 28 kV	1.6% to 2.8%	Using HV Divider with DMM's , Source & HV Probe with DMM by Direct Method / comparison Method
20	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 µA to 200 mA	0.26% to 0.09%	Using Calibrator Fluke 5700A with 50 Turns current coil
21	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 mA to 3 A	0.09% to 3%	Using Calibrator Fluke 5520A with 50 Turns current coil
22	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 10 Hz to 40 Hz	200 µA to 200 mA	0.12% to 0.019%	Using Calibrator Fluke 5700A By Direct Method
23	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 1 KHz	20 µA to 200 µA	0.11% to 0.09%	Using Calibrator Fluke 5700A, By Direct Method
24	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 5 KHz	200 µA to 200 mA	0.09% to 0.019%	Using Calibrator Fluke 5700A, By Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	61 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
25	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 40 Hz to 5 KHz	200 mA to 2 A	0.019% to 0.13%	Using Calibrator Fluke 5700A, By Direct Method
26	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 45 Hz to 5 kHz	2 A to 20 A	0.07% to 3.5%	Using Calibrator Fluke 5520A with 50 Turns current coil
27	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 5 kHz to 10 kHz	200 mA to 330 mA	0.093% to 0.45%	Using Calibrator Fluke 5520A with 50 Turns current coil
28	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz	120 A to 3000 A	0.5% to 0.62%	Using current source current coil
29	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz	20 A to 120 A	0.5%	Using current source omicron
30	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Current, 50 Hz to 1kHz	20 µA to 200 µA	0.5% to 0.23%	Using Calibrator Fluke 5700A with 50 Turns current coil

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	62 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
31	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Energy Active / Reactive Single & Three Phase, 40 V to 300 V, 0.05A to 20 A, 40 Hz to 70 Hz,0.25(lead/lag) to UPF	0.5 W to 6 kW	0.25% to 0.3%	Using Three Phase Energy Source Direct Method
32	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.2 PF, 120V to 1000 V, 0.1 A to 20 A	2.4 W to 200 kW	1%	Using Calibrator Fluke 5520 A Direct Method
33	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.5 PF, 120V to 1000 V, 0.1 A to 20 A	6 W to 500 kW	0.5%	Using Calibrator Fluke 5520A Direct Method
34	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ 0.8 PF, 120V to 1000 V, 0.1 A to 20 A	9.6 W to 800 kW	0.23%	Using Calibrator Fluke 5520A Direct Method
35	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power, Single Phase, 50Hz @ UPF, 120V to 1000 V, 0.01 A to 20 A	0.01 w to 4.8 kW	0.12%	Using Calibrator Fluke 5520A Direct Method
36	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Power,Single Phase, 50Hz @ UPF, 120 V to 1000 V, 0.01 A to 20 A	4.8 kW to 1 MW	0.8%	Using Calibrator Fluke 5520A Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	63 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
37	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 1 kHz	200 V to 1000 V	0.06% to 0.02%	Using Calibrator Fluke 5520A Direct Method
38	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	2 mV to 20 mV	0.33% to 0.041%	Using Calibrator fluke 5700A by Direct Method
39	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	20 mV to 200 mV	0.09% to 0.043%	Using calibrator fluke 5700A by direct method
40	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 10 Hz to 50 kHz	200 mV to 100 V	0.07%	Using calibrator fluke 5700 A by Direct Method
41	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	2 mV to 20 mV	2.11% to 0.2%	Using Calibrator Fluke 5700A by Direct Method
42	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	20 mV to 200 mV	0.54% to 0.5%	Using Calibrator Fluke 5700 A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	64 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
43	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 1 MHz	200 mV to 20 V	0.5% to 0.4%	Using Calibrator Fluke 5700A by direct method
44	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 300 kHz to 500 kHz	20 V to 30 V	0.9%	Using Calibrator Fluke 5700 A by Direct Method
45	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 Hz to 1 kHz	50 µV to 2 mV	1% to 0.33%	Using Calibrator Fluke 5700A by V I Method
46	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	2 mV to 20 mV	0.88% to 0.071%	Using Calibrator Fluke 5700A by Direct Method
47	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	20 mV to 200 mV	0.071% to 0.043%	Using Calibrator Fluke 5700A by Direct Method
48	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	AC Voltage, 50 kHz to 300 kHz	200 mV to 20 V	0.043% to 0.4%	Using Calibrator Fluke 5700A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	65 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
49	ELECTRO-TECHNICAL-ALTERNATING CURRENT (< 1 GHZ) (Source)	Hormonics @ 50 Hz	1 order to 39 order	0.2%	FLUKE 5520A Source, Direct Method
50	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	10 nA to 100 nA	0.46% to 0.08%	Using Shunt with DMM V-I Method
51	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	10µA to 100µA	0.0045%	Uisng 8½ DMM HP 3458A, by Direct Method
52	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100 A to 800 A	0.6% to 1%	Usinh Shunt with DMM V-I Method
53	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100 mA to 1 A	0.006% to 0.016%	Using 8½ DMM HP 3458A by Direct Method
54	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100µA to 100 mA	0.0045% to 0.0060%	Using 8½ DMM HP 3458A by Direct Method
55	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	100nA to 10µA	0.08% to 0.00049%	Using Shunt with DMM V-I Method
56	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	1A to 75A	0.016% to 0.08%	Using Shunt with DMM V-I Method
57	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	75 A to 100 A	0.08% to 0.6%	Using Shunt with DMM V-I Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	66 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
58	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1V to 600V, 1 mA to 20 A	1 kW to 12 kW	0.45% to 0.65%	Using Digital Power Meter WT 210 by Direct Method
59	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1v to 600V, 1 mA to 20 A	1 mW to 10 W	0.1% to 0.08%	Using Digital Power Meter WT 210 by Direct Method
60	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Power, 1V to 600V, 1 mA to 20 A	10 W to 1 kW	0.08% to 0.45%	Using Digital Power Meter WT 210 by Direct Method
61	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	0.5 mV to 100 mV	0.83% to 0.0011%	Using 8½ DMM HP 3458A by Direct Method
62	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	1 kV to 5 kV	0.2%	Using HV Divider with DMMs by Direct Method
63	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	100 mV to 1 V	0.0011% to 0.00061%	Using 8½ DMM HP 3458A by Direct Method
64	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	10V to 1000V	0.00050% to 0.00080%	Using 8½ DMM HP 3458A by Direct Method
65	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	1V to 10V	0.00061% to 0.00050%	Using 8½DMM HP 3458A by Direct Method
66	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	40 kV to 100 kV	1.7%	Using HV Divider with DMM by Direct Method
67	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	5 kV to 40 kV	2%	Using Source & HV Probe with DMM by Direct/Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	67 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
68	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Voltage	50 µV to 0.5 mV	0.7% to 0.83%	Divider Method,Using 8½ DMM HP 3458A /8508A,
69	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	1 mA to 100 mA	0.0070% to 0.0079%	Using Fluke 5700A
70	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 µA to 100 µA	0.1% to 0.015%	Using Fluke 5700A
71	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 A to 20 A	0.064% to 0.012%	Using Fluke 5520
72	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	10 nA to 10 µA	0.15%	Using Reference 732B Decade meha Ohm Box by Direct Method
73	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	100 µA to 1 mA	0.015% to 0.0070%	Using Fluke 5700A
74	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	100 mA to 2 A	0.0079% to 0.012%	Using Fluke 5700A
75	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	120A to 3000A	0.65% to 1.2%	Using Current Source with current coil
76	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	2 A to 10 A	0.012% to 0.064%	Using Fluke 5520
77	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Current	20A to 120A	0.6% to	Using Current Source

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	68 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
78	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1 mA to 1000 A	1 kW to 1 MW	0.45% to 0.65%	Using Calibrator Fluke 5520A with 50 Turns Current Coil Direct Method
79	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1mA to 1000 A	10 W to 1 kW	0.08% to 0.45%	Using Calibrator Fluke 5520A with 50 Turns Current Coil Direct Method
80	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Power, 1V to 1000 V, 1mA to 1000 A	1mW to 10 W	0.1% to 0.08%	Using Calibrator Fluke 5520A with 50 TUrns Current Coil Direct Method
81	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	0.5 mV to 100 mV	0.19 % to 0.0016%	Using Calibrator Fluke 5700A by Direct Method
82	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	10 V to 100 V	0.0009% to 0.0010%	Using Calibrator Fluke 5700A by direct method
83	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	100 mV to 10 V	0.0016% to 0.0009%	Using Calibrator Fluke 5700A by Direct Method
84	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	DC Voltage	100 V to 1000 V	0.0010% to 0.0011%	Using Calibrator Fluke 5700A by Direct Method
85	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	0.001 Ohm to 0.1 Ohm	0.6% to 0.025%	Using Std. Resistors & Shunts by VI Method
86	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	0.1 Ohm to 1 Ohm	0.025 % to 0.1 %	Using Standard Resistors & Shunts by VI Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	69 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
87	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 G ohm to 1 T ohm	1%	Using Calibrator Fluke 5520A and DMM 3458 by VI Method
88	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 MOhm to 10 MOhm	0.004% to 0.02%	Using Calibrator Fluke 5520A by Direct Method
89	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	1 ohm to 10 ohm	0.1% to 00.02%	Using Calibrator Fluke 5520 A by Direct Method
90	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	10 MOhm to 300 MOhm	0.02% to 0.5%	Using Calibrator Fluke 5520A by Direct Method
91	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	10 Ohm to 100 Ohm	0.02% to 0.005%	Using Calibrator Fluke 5520A by Direct Method
92	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	100 kOhm to 1 MOhm	0.004%	Using Calibrator Fluke 5520A by Direct method
93	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	100 Ohm to 100 kOhm	0.005% to 0.004%	Using Calibrator Fluke 5520A by Direct Method
94	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	300 MOhm to 1 GOhm	0.5% to 1.8%	Using Calibrator Fluke 5520 A by Direct Method
95	ELECTRO-TECHNICAL- DIRECT CURRENT (Source)	Resistance	75 µohm	1%	Using Standard Resistors & Shunts by VI method
96	ELECTRO-TECHNICAL- ELECTRICAL EQUIPMENT (Source)	Oscilloscope, 0 to 130V (DC Signal)	1 mV to 55 Vp-p	0.2%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	70 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
97	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, 0 to 130V (DC Signal)	1 mV to 130 V	0.2%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct Method
98	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Band Width @ 50 kHz ref	50 kHz to 1 GHz	0.07%	Using Calibrator Fluke 5520A with 1.1GHz Option by Direct Method
99	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Scope Amplitude Square Wave Signal, 10 Hz to 10 k Hz	1 mV to 55 V	0.2%	Using Calibrator Fluke 5520A with 1.1GHz option by Direct Method
100	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Scope Amplitude Square Wave Signal, 10 Hz to 10 k Hz	1 mV to 55 V	0.2%	Using Calibrator Fluke 5520A with 1.1GHz option by Direct Method
101	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope, Time Marker	1 ns to 1000 sec	0.0006% to 0.1%	Using Calibrator Fluke 5520A with 1.1 GHz option by Direct method
102	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	1 pF to 100 pF	0.41% to 0.06%	Using LCR Meter by Direct / Comparison Method
103	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100 nF to 100µF	0.06%	Using LCR Meter by Direct/Comparison Method
104	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100 pF to 100 nF	0.06%	Using LCR Meter by Direct / Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	71 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
105	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Capacitance, 1 kHz	100µF to 100mF	0.5%	Using LCR Meter by Direct / Comparison Method
106	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Inductance, 1 kHz	100 mH to 10 H	0.06% to 0.3%	Using LCR Meter by Direct / Comparison Method
107	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Inductance, 1 kHz	100µH to 100mH	0.24% to 0.06%	Using LCR Meter by Direct / Comparison Method
108	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1 ohm to 10 ohm	0.0017% to 0.0021%	Using DMM 81/2 8508A by Direct method
109	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1 MOhm to 10 MOhm	0.002%	Using DMM 8½ 8508 A by Direct Method
110	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 ohm to 100 ohm	0.0021% to 0.0019%	Using DMM 8½ 8508A by Direct Method
111	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 k Ohm to 100 k ohm	0.0010% to 0.0011%	Using DMM 8½ 8508A by Direct Method
112	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	10 MOhm to 100 MOhm	0.002% to 0.012%	Using DMM 8½ 8508A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	72 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
113	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 kOhm to 1 MOhm	0.0011% to 0.002%	Using 8½ DMM 8508A by Direct Method
114	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 ohm to 10 k Ohm	0.0019% to 0.001%	Using DMM 8½ 8508A by Direct Method
115	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	100 MOhm to 20 G ohm	0.012% to 0.121%	Using DMM 8½ 8508A by Direct method
116	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	1mOhm to 10 Ohm	0.08% to 0.0025%	Using DMM 8½ , Calibrator Fluke 5520A, V/I method
117	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	20 G ohm to 1 TOhm	1%	Using Fluke Calibrator & 8½ DMM by VI Method
118	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance	75 µOhm to 1 mOhm	0.5%	Using DMM 8½ calibrator fluke 5520A V/I Method
119	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	1 Ohm to 10 Ohm	0.1% to 0.025%	Using LCR Meter
120	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	10 Ohm to 100 Ohm	0.025% to 0.1%	Using LCR Meter

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	73 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
121	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz	100 Ohm to 10 kOhm	0.1% to 0.02%	Using LCR Meter
122	ELECTRO-TECHNICAL-MISCELLANEOUS (Measure)	Resistance, 1 kHz - 100 kHz	100 ohm to 10 k ohm	0.05%	Using LCR Meter
123	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance, 1 kHz	10 µF to 110 mF	0.5% to 1.3%	Using Calibrator Fluke 5520A, DCB by Direct Method
124	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Capacitance, 1 kHz	220 pF to 10 µF	6% to 0.5%	Using Calibrator Fluke 5520A,DCB by direct metjod
125	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 kOhm	0.0015%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
126	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 MOhm	0.0023%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
127	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1 Ohm	0.011%	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
128	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 kOhm	0.0016%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	74 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
129	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 MOhm	0.0024%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
130	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	1.9 Ohm	0.0059%	Using Calibrator Fluke 5700 with DMM 3458A by Direct method
131	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 kOhm	0.0014%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
132	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 MOhm	0.0047%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
133	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	10 Ohm	0.0028%	Using calibrator Fluke 5700 with DMM 3458 A by Direct method
134	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 kOhm	0.0016%	Using Calibrator 5700 with DMM 3458A by Direct Method
135	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 MOhm	0.0134%	Using Calibrator Fluke 5700 with DMM 3458A by Direct
136	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	100 Ohm	0.002 %	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	75 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
137	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 kOhm	0.0014%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
138	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 MOhm	0.0055%	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
139	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	19 Ohm	0.0032 %	Using Calibrator Fluke 5700 with DMM 3458 A by Direct Method
140	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	190 kOhm	0.0016%	Using Calibrator Fluke 5700 with DMM 3458A by Direct Method
141	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Discrete Resistance	190 Ohm	0.002%	Using Calibtrator Fluke 5700 with DMM 3458A vy Direct Method
142	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Single phase	0.2 Lag to Unity	0.002 pF	Using Calibrator Fluke 5520 A by Direct Method
143	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Single phase	0.2 lead to unity	0.002 pF	Using Calibrator Fluke 5520A by Direct Method
144	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Three phase	0.25 Lag to Unity	0.008 pF	Using Edutech Energy source by direct method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	76 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
145	ELECTRO-TECHNICAL-MISCELLANEOUS (Source)	Power Factor , Three phase	0.25 Lead to Unity	0.008 pF	Using Edutech energy source by direct method
146	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation (Attenuator/Signal Generator) 1 kHz to 18 GHz	1 dB to 70 dB	0.086dB to 0.14dB	Using Multimeter & Power Meter method
147	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation (Attenuator/Signal Generator) 10 MHz to 18 GHz	70 dB to 110 dB	0.14dB to 0.50dB	Using Power Meter , Spectrum Analyzer Method
148	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Attenuation, 1 kHz to 18 GHz	1 dB to 70 dB	0.026 dB to 0.14 dB	Using RF Reference Source 9640A LPNX Signal Generator-Attenuator-8494B, 8496B Multimeter & Power Meter Method
149	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Frequency	1 mHz to 10 Hz	10µHz to 90µHz	Using Signal Generator , RF Reference Source by Direct Method
150	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Comparison)	Power (Signal Generator , RF Reference Source) 1 kHz to 18 GHz	-60 dBm to 13 dBm	0.17dB to 0.24dB	Using Multimeter , Power Meter , Spectrum Analyzer Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	77 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
151	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (comparison)	Power (Signal Generator , RF Reference Source) 10 MHz to 18 GHz	-60 dBm to -100 dBm	0.17dB to 0.65dB	Using Power Meter , Spectrum Analyzer Method
152	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Frequency (Signal Generator , RF Reference Source)	10 Hz to 29.999 GHz	90µHz to 500Hz	Using Frequency counter, signal Analyzer,Direct Method without locking to Rubidium Standard
153	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Reflection Coefficient Maury Microwave Mismatch Test Set 1 kHz to 18 GHz	0.024 to 0.33	0.032 rho	Using Network Analyzer - ZVB20 by direct method using Cal kit Z270 by Network Analyzer Method
154	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Measure)	Spectral Purity(THD) No. of harmonics (n=3 to 10), frequency 10 Hz to 2.9GHz	0.17 % to 3.19 %	0.03% to 0.2%	Using Spectrum Analyzer FSV-30 Upto 30 GHz by Direct Method
155	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Messure)	3 dB Bandwidth, (Filter, Power meter, Power Sensor - E 4412A)	Upto 18 GHz	0.5%	Using RF Reference Source - 9640ALPNX Signal Generator by Direct Method
156	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Modulation AM CW: 100 kHz to 3.9GHz Modulation Rate 1 kHz to 10 kHz AM Depth	1 % to 98 %	0.2% to 2%	Using Rhode & Schwarz Signal/ Spectrum Analyzer FSV 30, Modulation analyzer HP 8901B as transfer by Relative Sideband Amplitude Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	78 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
157	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (source)	Modulation FM CW : 100 kHz to 25 GHz Modulation Rate 50 Hz to 267 kHz FM Deviation	50 Hz to 4 MHz	0.1%	Using Rohde & Schwarz Signal/ Spectrum Analyzer FSV30 by Bessel Function Method
158	ELECTRO-TECHNICAL-RF/MICROWAVE (1 GHZ AND ABOVE) (Source)	Modulation, FM , CW : 100 kHz to 25 GHz, Modeulation Rate : 50 Hz to 267 kHz, FM Deviation		0.1%	By Bessel Function Method
159	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - L Type	-200°C to 900°C	0.08°C	Using DMM 8½ 3458A DC mV Measurement method
160	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - N Type	-200°C to 1300°C	0.07°C	Using 8½ DMM 3458 A DC mC measurement method
161	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - RTD	-200°C to 800°C	0.02°C	Resistance method
162	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - U Type	-200°C to 400°C	0.07°C	Using 8½ DMM HP 3458A DC mV Measurement Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	79 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
163	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - B Type	600°C to 1800°C	0.5°C	Using DMM 8½ 3458A DC mV measurement method
164	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - E Type	-200°C to 1000°C	0.08°C	Uisng DMM 8½ 3458A DC mV Measurement Method
165	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - J Type	-200°C to 1200°C	0.06°C	Using DMM 8½ 3458A DC mV measurement method
166	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - K Type	-200°C to 1372°C	0.05°C	Using DMM 8½3458A DC mV Measurement Method
167	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - R & S Type	0 to 1750°C	0.07°C	Using DMM 8½ 3458A DC mV measurement method
168	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Measure)	Calibration of temperature indicator / controller / recorder - T Type	-200°C to 400°C	0.1°C	Using 8½ DMM 3458A DC mV measurement method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	80 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
169	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - B Type	600°C to 1800°C	0.5°C	Using 5700 Calibrator DC mV Measurement Method
170	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - E Type	-200°C to 1000°C	0.08°C	Using 5700 Calibrator DC mV measurement method
171	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - J Type	-200 °C to 1200°C	0.06°C	Using 5700 Calibrator DC mV measurement method
172	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - K Type	-200 °C to 1372°C	0.06°C	Using 5700 Calibrator DC mV measurement Method
173	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - L Type	-200°C to 900°C	0.08°C	Using 5700 calibrator DC mV Measurement Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	81 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
174	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - N Type	-200°C to 1300°C	0.07°C	Using 5700 Calibrator DC mV Measurement Method
175	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - R Type & S Type	0°C to 1750°C	0.07°C	Using 5700 Calibrator DC mV Measurement method
176	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - RTD	-200°C to 800°C	0.07°C	Using Resistance Method
177	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - T Type	-200 °C to 400°C	0.1°C	Using 5700 Calibrator DC mV Measurement method
178	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	(Calibration of temperature indicator/controller / recorder)Thermocouple - U Type	-200°C to 400°C	0.07°C	Using 5700 calibrator DC mV measurement method
179	ELECTRO-TECHNICAL- TIME & FREQUENCY (Measure)	Time Interval	100 msec to 9999 sec	0.1m sec to 0.08sec	Using Timer by Direct method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	82 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
180	ELECTRO-TECHNICAL- TIME & FREQUENCY (Measure)	Time Interval	9999 sec to 86400 sec	0.08 sec to 50 sec	Using Timer by Direct Method
181	FLUID FLOW- FLOW MEASURING DEVICES	Liquid Flow Meter	1.0 m3/hr to 350 m3/ hr	0.62%	Using Ultra Sonic Flow Meter by Comparison Method
182	MECHANICAL- ACCELERATION AND SPEED	Speed (Non contact)Centrifuge	10000 to 20000 rpm	0.06 %	Digital Tachometer, Procedure based on SANAS TR 45-1 & 2.
183	MECHANICAL- ACCELERATION AND SPEED	Speed (Centrifuge)	12 to 10000 rpm	1.5 % to 0.06 %	Digital tachometer, Procedure based on SANAS TR 45-1 & 2.
184	MECHANICAL- ACCELERATION AND SPEED	Vibration Tester / ShakerFrequency range: 10 Hz to 6800 Hz	1 to 40 g	3.2 %	Accelerometer, Procedure based on ISO 16063.
185	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Angle Plate	180 x 120 x 110 mm	10.8µm	Using Liver Dial Gauge, IS 2554, IS 6973
186	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Bench Center (Co-axility)	0 to 500 mm	8.9µm	Using Straight & Taper Mandrels, Dial Gauge. IS 5980
187	MECHANICAL- DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) LC : 10 µm	0 to 1000 mm	10.3µm	Using Gauge Block Set , Caliper Checker

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	83 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
188	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) LC : 10 µm	0 to 600 mm	9.8µm	Using Gauge Block Set , Caliper Checker
189	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (vernier, dial, digital) L.C. 0.01 mm	0 to 2000 mm	12µm	Using Gauge Block Set , Caliper Checker
190	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Engineering Square (Squareness)	Up to 400 mm	6.2µm	Using Granite Square & Slip Gauge
191	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	0 to 150 mm	1.7µm	Using Gauge Block Set
192	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	> 150 to 450 mm	2.0µm	Using Gauge Block Set
193	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 1 µm	0 mm to 1000 mm	8.1µm	Using Gauge Block Set

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	84 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
194	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	External Micrometer (Mech / Electronic / Digital) LC : 10 µm	0 to 2000 mm	9.0µm	Using Gauge blocks
195	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/Dial/Digital) LC: 0.1 µm	0 to 1000 mm	8.9µm	Using Gauge Blocks/Caliper Checker
196	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/Dial/Digital) LC: 10 µm	0 mm to 1000 mm	8.7µm	Using Gauge Block Set and Caliper Checker
197	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/Dial/Digital) L.C:10µm	0 to 600	8.0um	Gauge blocks/ Caliper Checker
198	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Straight Edge/Parallels	Up to 2000 mm	16.8µm	Using Electronic Level
199	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Surface Plate	3 m X 2 m	1.3 (Sqrt (L+W)/100)L = Length in mm, W = Width in mmL = Length in mm, W = Width in mm	Using Electronic Level

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	85 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
200	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	V- Block (Parallelism,Symmetricity)	300 x 125 x 200 mm	4.4µm	Using Lever Dial Gauge & Mandrel
201	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Floating Carriage Micrometer L.C. 0.0001 mm	0 to 100 mm	2.2µm	Using Mandrels & Master Cylinders, MOY/SCMI/9
202	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Gauge Block Comparators	0 to 100 mm	0.03µm	Using K grade Gauge Blocks by Direct Method
203	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Angle LC : 14 sec	0 ° to 360 °	3.4min	Using Angle Gauge Blocks
204	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Length LC : 1µm	0 - 300 mm	6.0µm	Using Glass Scale
205	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Profile Projector Magnification	10 X to 100 X	0.1%	Using Angle Gauge Blocks/Glass Scale
206	MECHANICAL-PRESSURE INDICATING DEVICES	Altimeter Chamber	30 to 915 mbar	3.0 mbar	Digital Barometer, Procedure based on OIML R 97 guidelines & AN 4528. (published paper)

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	86 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
207	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters & Switches	20 to 40 bar	0.016 %	Digital Pressure Gauge with pressure pump. Procedure based on DKD-R 6-1.
208	MECHANICAL-PRESSURE INDICATING DEVICES	Digital/Analogue Pressure Gauges ,Differential Pressure Gauges, Transducers/Transmitters & Switches.	40 to 700 bar	0.023 % rdg.	Digital Pressure Gauge using hydraulic comparator pump Based on DKD-R6-1
209	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (hydraulic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters & Switches	700 to 1000 bar	0.02 %	Digital Pressure Gauge with hydraulic comparator pump. Procedure based on. DKD-R 6-1.
210	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital /Analogue Pressure Gauges , Differential Pressure Gauge, Transducers/Transmitters, Switches	2 to 20 bar	0.043 % rdg.	Digital Pressure Gauge with uncertainty of 0.0031 bar and pneumatic pump. Procedure based on DKD-R 6-1
211	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital /Analogue Pressure Gauges ,Differential Pressure Gauge, Transducers/Transmitters, Switches	100 mbar to 2 bar	0.045 % rdg.	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	87 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
212	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters , Switches	0 to 10 mbar	0.93 %	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1.
213	MECHANICAL-PRESSURE INDICATING DEVICES	Pressure (pneumatic)Digital/Analogue Pressure Gauges , Differential Pressure Gauges,Transducers/Transmitters , Switches	10 to 100 mbar	0.06 %	Digital Pressure Gauge with pneumatic pump. Procedure based on DKD-R 6-1
214	MECHANICAL-PRESSURE INDICATING DEVICES	VacuumDigital/Analogue Vacuum Gauges , Transducers/Transmitters, Switches	0 to (-) 0.9 bar	0.22 % rdg.	Digital Pressure Gauge with pneumatic pressure pump. Procedure based on ISO 3567 & ISO 27893.
215	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,E Type II, Class A,B,D,E	0.1 Nm to 10 Nm	0.89%	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789
216	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,E Type II, Class A,B,D,E	20 Nm to 200 Nm	0.43% rdg	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789
217	MECHANICAL-TORQUE GENERATING DEVICES	Torque, Torque Wrench , Torque Driver, Type-I Class B,C,D,EType II, Class A,B,D,E	10 Nm to 20 Nm	0.35% rdg	Using Torque sensors of Various capacities, Torque Calibration ring as per Based on ISO6789

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	88 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
218	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine Compression	20N to 10 kN and to 20 kN to 1000 kN	0.52%	Using Force Proving Instruments as per IS 1828-1
219	MECHANICAL- UTM, TENSION CREEP AND TORSION TESTING MACHINE	Uniaxial Testing Machine Tension	20 N to 10 kN and to 20 kN to 100 kN	0.29%	Using Force Proving Instruments as per IS 1828-1
220	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.0001 mg	1 mg to 2 g	0.0035mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
221	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.001 mg	1 mg to 20 g	0.007mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
222	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.001 mg	1 mg to 5 g	0.005mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
223	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 1 kg	0.2mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
224	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 200 g	0.03mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
225	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 50 g	0.02mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	89 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
226	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 0.01 mg	1 mg to 500 g	0.1mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
227	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 1 mg	500 mg to 20 kg	7mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
228	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 1 and Coarser d>= 1 mg	500 mg to 5 kg	1mg	Using E1 Class Standard Weights 1 mg to 20 kg as per OIML R-76
229	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 1 g	500 mg to 150 kg	1g	Using E2 and F1 class up to 1000 kg as per OIML R-76
230	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 g	1 kg to 1000 kg	100g	Using E2 and F1 class up to 1000 kg as per OIML R-76
231	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 g	2 kg to 3000 kg	500g	Using E2 and F1 class up to 1000 kg as per OIML R-76
232	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 100 mg	500 mg to 50 kg	100mg	Using E2 and F1 class up to 1000 kg as per OIML R-76
233	MECHANICAL- WEIGHING SCALE AND BALANCE	Electronic Weighing Balance Class 2 and Coarser d>= 20 g	1 kg to 300 kg	20g	Using E2 and F1 class up to 1000 kg as per OIML R-76
234	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chambers , Climatic Chambers (At Temp : 10 ° C to 60 ° C)	10 % RH to 95 % RH	0.98% RH	Using Temperature & Humidity Meter by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	90 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
235	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Chambers, Dry cabinet, De-humidifier @ ambient temperature	5 % to 10 %	1.3%	Using Temperature & Humidity Meter by Direct Method
236	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Dial / Digital Meters (@ 10 °C to 60 ° C)	30 % RH to 95 % RH	0.8% RH	Using Temperature & Humidity Meter with Humidity Chamber by Comparison Method
237	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Dial / Digital Meters (@ 20 °C to 60 ° C)	10 % RH to 95 % RH	0.80% RH	Using Temperature & Humidity Meter with Humidity chamber by comparison Method
238	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	0.5 % RH	0.33% RH	Using Humidity standard solution by direct method
239	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	5 % RH	0.33% RH	Using Humidity standard solution by direct method
240	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Meters (Dial / Digital)	95 % RH	0.81% RH	Using Humidity standard solution by direct method
241	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Transmitter / Digital Humidity Meters	0 ° C to 60 ° C	0.18° C	Using Class A RTD Sensor with Digital Indicator by Comparison Method
242	THERMAL- TEMPERATURE	Incubators & Autoclave (for Non Medical purpose) Thermal Chambers / Ovens , Water Bath , Furnace	650 ° C to 1000 ° C	1.96° C	Using S Type Thermo couple with Digital Indicator by Direct Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	91 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
243	THERMAL-TEMPERATURE	Incubators & Autoclave (for Non Medical purpose), Thermal Chambers / Ovens , Water Bath , Furnace	1000 ° C to 1200 ° C	1.96° C	Using S Type Thermo couple with Digital Indicator by Direct Method
244	THERMAL-TEMPERATURE	Incubators & Autoclave (for Non Medical purpose), Thermal Chambers / Ovens , Water Bath , Furnace	200 ° C to 650 ° C	0.55° C	Using SPRT with Digital Indicator by Direct Method
245	THERMAL-TEMPERATURE	Incubators & Autoclave(for Non Medical purpose), Thermal Chambers / Ovens , Water Bath , Furnace	-100 ° C to 200 ° C	0.56° C	Using SPRT with Digital Indicator by Direct Method
246	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	-100 ° C to 140 ° C	0.072° C	Using SPRT with Digital Indicator by Direct Method
247	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	140 ° C to 650 ° C	0.08° C	Using SPRT with Digital Indicator by Direct Method
248	THERMAL-TEMPERATURE	Oil Bath , Low & High Temperature Bath,Dry Bath	650 ° C to 1200 ° C	1.49° C	Using S- Type Thermo couple with Digital Indicator by Direct Method
249	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	1000 ° C to 1200 ° C	1.45° C	Using Dry Temperature Bath, S Type Thermo couple with Digital Indicator by Comparison Method

SCOPE OF ACCREDITATION

Laboratory Name	TRANSCAL, #100, 10TH CROSS, BETWEEN SAMPIGE & MARGOSA ROAD,, BENGALURU, BANGALORE, KARNATAKA , INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2231	Page No. :	92 / 92
Validity	14/06/2019 to 13/06/2021	Last Amended on	17/07/2019

S.No	Discipline / Group	Quantity Measured/ Instrument	Range / Frequency	* Calibration Measurement Capability(±)	Remarks
250	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	140 ° C to 650 **° C**	0.08**° C**	Using Dry Bath , SPRT with Digital Indicator by Comparison Method
251	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	-45 ° C to 140 ° C	0.02**° C**	Using Dry Temperature Bath, SPRT with Digital Indicator by comparison Method
252	THERMAL-TEMPERATURE	RTD , Thermocouples , Indicator with Sensor	650 ° C to 1000 ° C	0.43**° C**	Using Dry Temperature Bath , S- Type Thermo couple with Digital Indicator by Comparison Method
253	THERMAL-TEMPERATURE	RTD, Thermocouples, Indicator with sensor	-100 ° C to -45 **° C**	0.07**° C**	Using Dry Temperature bath , SPRT with Digital indicator by comparison method
254	THERMAL-TEMPERATURE	RTD, Thermocouples, Indicator with sensor	-196 ° C	0.07° C	Using LN2 and cryo bath by comparison method