

Laboratory

Siemens Limited, DG PRO-Calibration Laboratory, L-6, Verna Industrial Estate, Verna-Salcete, Goa

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number CC-2871

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Validity 26.10.2018 o 25.10.2020

Last Amended on -

	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>ELECTRO TECHNICAL CALIBRATION</u>				
I.	SOURCE			
1.	DC Voltage ^s	10 mV to 0.33 V 0.33 V to 3.3 V 3.3 V to 33 V 33 V to 330 V 330 V to 1000 V	0.02% to 0.0028% 0.0028% to 0.0023% 0.0023% to 0.0028% 0.0028% 0.0028% to 0.0025%	Using Multiproduct Calibrator Fluke 5522A By Direct Method
2.	AC Voltage ^s	50 Hz to 1 kHz 10 mV to 300 mV 330 mV to 30 V 33 V to 300 V 330 V to 1000 V	0.22% to 0.021% 0.021% 0.030% to 0.024% 0.04% to 0.037%	Using Multiproduct Calibrator Fluke 5522A By Direct Method
3.	DC Current ^s	330 μ A to 33 mA 33 mA to 330 mA 330 mA to 1 A 3 A to 10 A 10 A to 20 A 100 A to 1000 A	0.03% to 0.022% 0.022% to 0.038% 0.038% to 0.028% 0.082% to 0.064% 0.064% to 0.23% 1.47% to 1.04%	Using Multiproduct Calibrator Fluke 5522A By Direct Method Using Multiproduct Calibrator Fluke 5522A with Current coil 5500A By Direct Method
4.	Frequency ^s	10 Hz to 1 kHz 1 kHz to 10 kHz	0.061% to 0.0078% 0.0078%	Using Multiproduct Calibrator Fluke 5522A By Direct Method

Shally Sharma
Convenor

Anuja Anand
Program Manager

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5.	AC Current ^s	50 Hz to 1kHz 100 μ A to 330 μ A 330 μ A to 33 mA 33 mA to 1 A 3 A to 10 A 50Hz to 440Hz 11A to 20A 50Hz 100A to 1000A	0.27% to 0.18% 0.18% to 0.12% 0.12% to 0.081% 0.19% to 0.14% 0.43% to 0.32% 1.95% to 1.05%	Using Multiproduct Calibrator Fluke 5522A By Direct Method Using Multiproduct Calibrator Fluke 5522A , Current coil 5500A by Direct Method
6.	Resistance ^s	1 Ω to 100 Ω 100 Ω to 1k Ω 1k Ω to 10k Ω 10k Ω to 100k Ω 100k Ω to 10M Ω 10M Ω to 100M Ω	0.13% to 0.0053% 0.0053% to 0.004% 0.004% 0.004% 0.004% to 0.017% 0.017% to 0.08%	Using Multiproduct Calibrator Fluke 5522A By Direct Method
II.	MEASURE			
1.	DC Voltage ^s	10 mV to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 1000 V	0.0048% to 0.0016% 0.0016% to 0.0011% 0.0011% to 0.0016% 0.0016% to 0.0014%	Using Digital Multimeter 8 ½ Digit Agilent 3458A By Direct Method
2.	DC High Voltage ^s	1.1kV to 6.0 kV	1.71% to 1.68%	Using High Voltage Multimeter 94-8A By Direct Method
3.	AC Voltage ^s	50Hz to 1kHz 10 mV to 100 mV 100 mV to 1 V 1 V to 10 V 10 V to 600 V	0.050% to 0.040% 0.040% to 0.02% 0.02% to 0.046% 0.046% to 0.093%	Using Digital Multimeter 8 ½ Digit Agilent 3458A By Direct Method

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4.	AC High Voltage ^s	50Hz 1.1 kV to 5.0 kV	1.76% to 1.66%	Using High Voltage Multimeter 94-8A By Direct Method
5.	DC Current ^s	10 μ A to 100 μ A 100 μ A to 10 mA 10 mA to 1 A 1.25 A to 5 A 5 A to 20 A 50 A to 126 A	0.015% to 0.0086% 0.0086% to 0.010% 0.010% 0.025% 0.012 % 0.022% 0.025% to 0.04%	Using Digital Multimeter 8 ½ Digit Agilent 3458A by Direct Method Using Digital Multimeter 8 ½ Digit Agilent 3458A & Current shunt CS-5 By V/R method Using Digital Multimeter 8 ½ Digit Agilent 3458A & Current shunt CS-20 By V/R method Using Digital Multimeter 8 ½ digit Agilent 3458A & Current shunt CS-200 by V/R method
6.	AC Current ^s	50Hz to 1 kHz 30 μ A to 100 μ A 100 μ A to 1 mA 1 mA to 100 mA 100 mA to 1 A 50Hz 5 A to 20 A 50Hz 50 A to 118 A	0.19% to 0.30% 0.30% to 0.09% 0.1% to 0.35% 0.14% 0.03% 0.044%	Using Digital Multimeter 8 ½ Digit Agilent 3458A By Direct Method Using Digital Multimeter 8 ½ digit Agilent 3458A & Current shunt CS-20 By V/R method Using Digital Multimeter 8 ½ digit Agilent 3458A & Current shunt CS-200 By V/R Method

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7.	Resistance [§]	1 Ω to 100 Ω 100 Ω to 1k Ω 1k Ω to 10k Ω 10k Ω to 100k Ω 100k Ω to 1M Ω 1M Ω to 10M Ω 10M Ω to 100M Ω 100M Ω to 1G Ω	0.0077% to 0.0022% 0.0022% to 0.0027% 0.0027% to 0.0018% 0.0018% to 0.0045% 0.0045% to 0.58% 0.58% 0.58% to 0.59% 0.59% to 0.66%	Using Digital Multimeter 8 ½ digit Agilent 3458A By Direct Method
8.	Frequency [§]	10Hz to 100kHz	0.00016%	Using Universal counter Agilent 53220A by Direct Method
9.	Time Interval [§]	1 ms to 20 s	0.00073ms to 0.0093s	Using Universal counter Agilent 53220A by Direct Method

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%

§ Only in Permanent Laboratory

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