

Laboratory

Sri Daakshyaani Energy Solutions, D. No. 36-12-14 A, 5 A, Classic Circle, Mogalrajpuram, Vijayawada, Andhra Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number

CC-2288

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Validity

18.05.2018 to 17.05.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability ( $\pm$ )	Remarks
<b><u>ELECTRO TECHNICAL CALIBRATION</u></b>				
<b>I.</b>	<b>SOURCE</b>			
1.	AC Voltage #	50 Hz 40 V to 520 V	0.014%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
2.	AC Current #	50 Hz 1 mA to 120 A	0.030 % to 0.024 %	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
3.	Power Factor #	50 Hz (-)1 PF to (+)1 PF	0.0007%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
4.	Frequency #	45 Hz to 65 Hz	0.033%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
<b>II.</b>	<b>MEASURE</b>			
1.	AC Voltage #	50 Hz 40 V to 520 V	0.014%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method

Vishal Shukla  
Convenor

Avijit Das  
Program Director

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2.	AC Current #	50 Hz 1 mA to 120 A	0.030 % to 0.024 %	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
3.	Power Factor #	50 Hz (-)1 PF to (+)1 PF	0.0007%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
4.	Frequency #	45 Hz to 65 Hz	0.033%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
5.	AC Energy # 1 $\emptyset$ , 3 $\emptyset$ Active & Reactive Cos $\emptyset$ $\pm$ 0.25 to $\pm$ 1 Sin $\emptyset$ $\pm$ 0.25 to $\pm$ 1 Apparent	50 Hz 40 V to 300 V 1mA to 120A  <b>Active Energy</b> 0.01 Wh to 108kWh  <b>Reactive Energy</b> 0.01 to 108 kVArh  <b>Apparent Energy</b> 0.01 to 108 kVAh	    0.055%  0.055%  0.055%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method

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6.	AC Power # 1 $\emptyset$ , 3 $\emptyset$ Active & Reactive Cos $\emptyset$ , Sin $\emptyset$ $\pm 0.1$ to $\pm 1$ Apparent	<b>50 Hz</b> 63.5 V to 240 V 1 mA to 50 mA  <b>Active &amp; Reactive Power</b> 0.0 6mW/ mVar to 36 W / VAr  <b>Apparent Power</b> 0.63 mVA to 36 VA	   0.058 % to 0.028%   0.058% to 0.028%	Using MTE, K2006/PRS600.3 Reference with PPS400.3 Source by Direct & Comparison Method
7.	Current Transformer # (Primary Injection)	<b>5 A-2000 A</b> Primary, <b>5 A</b> Secondary  to  <b>5A-2000A</b> Primary, <b>1A</b> Secondary  (120%,100%,20%, 5%,1%)	<b>Ratio Error</b> : 0.024 % <b>Phase Error</b> : 1.03 min   <b>Ratio Error</b> : 0.021 % <b>Phase Error</b> : 2.45 min	Using Standard Current Transformer & Automatic Instrument Transformer Test Set by Comparison method
8.	Potential / Voltage Transformer # (Primary Injection)	<b>6.6kV- 6.6kV/<math>\sqrt{3}</math></b> Primary <b>110V-110V/<math>\sqrt{3}</math></b> Secondary  to	<b>Ratio Error</b> :- 0.065 % <b>Phase Error</b> :- 2.67 min	Using Standard Potential / Voltage Transformer & Automatic Instrument Transformer Test Set by Comparison Method

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		11 kV-11 kV/ $\sqrt{3}$ Primary 110V-110V/ $\sqrt{3}$ Secondary  (120%, 100%, 80%)	Ratio Error :- 0.065% Phase Error :- 2.67min	
9.	Potential / Voltage Transformer #  (Primary Injection)	22 kV- 22 kV/ $\sqrt{3}$ Primary 110V-110V/ $\sqrt{3}$ Secondary  to  33 kV- 33 kV/ $\sqrt{3}$ Primary 110V-110V/ $\sqrt{3}$ Secondary  (120%, 100%, 80%)	Ratio Error :- 0.07 % Phase Error :- 2.82 min   Ratio Error :- 0.07% Phase Error :- 2.82 min	Using Standard Potential / Voltage Transformer & Automatic Instrument Transformer Test Set by Comparison Method

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

# The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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