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|  <p>Reflecting the Truth</p> | <p align="center"><b>CERTIFICATE OF CALIBRATION</b></p> <p>Issued By :<br/> <b>YADAV MEASUREMENTS PVT. LTD.</b><br/> PLOT No. 19-20, HARIDAS JI KI MAGRI<br/> TRIDENT ROAD, UDAIPUR (RAJ.), INDIA 313004<br/> Email # yadav.measurements@ymllabs.com<br/> Phone No. : 0294-2434050 Telefax : 0294-2434067</p> |  <p align="center">C-035<br/>Electro- Technical</p> |  <p align="center">UKAS<br/>CALIBRATION<br/>0616</p> |
|---|---|--|---|

Certificate number:-YMPL/91673/11414

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1. Name and address of client :- SONAA ENGINEERS PVT. LTD.  
308-310 SUBHAM COMPLEX  
NEW FETEHPURA, UDAIPUR (RAJ.)

2. Reference:  
Service request form number: 2006-2007/1609  
Date: 17<sup>th</sup> February, 2007  
Date of the receipt of the equipment: 17<sup>th</sup> February, 2007  
Condition on item: Satisfactory

3. Calibration certificate:  
Date of issue: 22<sup>nd</sup> February, 2007  
Date of calibration: 17<sup>th</sup> February, 2007  
Calibration due date: 17<sup>th</sup> February, 2010

4. Description of equipment under calibration: -  
Name: Digital clamp meter  
Serial number: W0103725  
Model: KEW SNAP 2017  
Make: KYORITSU

5. Environmental conditions of measurements:  
Temperature 25±2°C  
Relative humidity: ≤70%

6. Description of reference standards used :

| S. No | Reference standard  | Calibration valid upto           | Traceability                       | Parameters    |
|-------|---|----------------------------------|------------------------------------|---------------|
| a.    | Multi product calibrator, Model:5500A, Make: Fluke I/S No. 745                        | 6 <sup>th</sup> December, 2007   | ETDC, Bangalore via YMPL Standards | a.c. voltage, |
| b.    | Three phase precision measuring instrument (TPZ-303) IS 1055 with precision CT IS 814 | 27 <sup>th</sup> September, 2007 | DKD Germany via YMPL Standards     | a.c. current  |

**Remarks :-**

- For k=2  
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS/NABL requirements.
- For k≠2  
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, which for a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
- This report is specific for E.U.C. for environmental and other conditions mentioned in this report.
- The reported uncertainty applies only to the measured value and gives no indication of the long term stability of the device.
- The instrument has been calibrated for calibration points required by customer.
- The calibration due date has been mentioned as requested by customer in writing.

This Certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service and the NABL (Govt. of India). It provides traceability of measurement to recognized national standards, and to units of measurement realized at the National Physical Laboratory or other recognized national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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| <p>Checked by : <u>RNP</u> <u>RSD</u></p> | <p>Approved by : <u>Dinesh Palival</u><br/> Sign. : <u>[Signature]</u><br/> Name : <u>[Signature]</u></p> |
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# CERTIFICATE OF CALIBRATION

UKAS Accredited calibration laboratory No. 0616

NABL Accredited calibration laboratory No. C-035

Issued by :

Yadav Measurements Pvt. Ltd., Udaipur

Certificate number: YMPL/91673/11414

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7. Calibration procedure :OP/YMPL/03

Equipment under calibration was calibrated for a.c. voltage by injecting it from Multi product calibrator. For a.c. current measurement, electronic source VCS-320 with C.B.S. setup was used and fed to reference TPZ-303 and EUC.

At least 6 measurements were made for each value and an average was reported. EUC was powered up from its internal supply source (i.e. 9 Volt battery) and warmed up for at least 15 Minute.

8. Results: The Digital clamp multimeter has been calibrated for a.c. voltage and current measurement. The expanded uncertainty of our measurement is given in front of each measurement & calculated at 95 % CL. The results are as following.

9. Calibration results:-

| Parameter                          | Range | Measured value | Standard value | ± Expanded uncertainty (%) | Coverage factor(k) |
|------------------------------------|-------|----------------|----------------|----------------------------|--------------------|
| A.C. voltage:<br>(50Hz, sine wave) | 200V  | 19.8V          | 19.99V         | 0.33                       | 2.00               |
|                                    |       | 99.2V          | 100.00V        | 0.09                       | 2.00               |
|                                    |       | 178.7V         | 180.01V        | 0.07                       | 2.00               |
|                                    | 600V  | 59V            | 60.0V          | 0.92                       | 2.00 *             |
|                                    |       | 297V           | 300.0V         | 0.21                       | 2.00               |
|                                    |       | 536V           | 540.3V         | 0.20                       | 2.00               |

| Parameter                          | Range | Measured value | Standard value | Number of turns | ± Expanded uncertainty (%) | Coverage factor(k) |
|------------------------------------|-------|----------------|----------------|-----------------|----------------------------|--------------------|
| A.C. current:<br>(50Hz, sine wave) | 200A  | 0.9            | 1.00           | 1               | 5.58                       | 2.00 *             |
|                                    |       | 1.9            | 2.00           | 1               | 2.65                       | 2.00 *             |
|                                    |       | 4.8            | 5.01           | 1               | 1.06                       | 2.00 *             |
|                                    |       | 9.6            | 9.92           | 1               | 0.56                       | 2.00 *             |
|                                    |       | 24.2           | 25.02          | 1               | 0.24                       | 2.00               |
|                                    |       | 49.2           | 50.08          | 1               | 0.12                       | 2.00               |
|                                    |       | 97.8           | 99.17          | 1               | 0.06                       | 2.00               |
|                                    | 177.7 | 89.39          | 2              | 0.05            | 2.00                       |                    |
|                                    | 400A  | 177            | 89.4           | 2               | 0.33                       | 2.00               |
| 396                                |       | 99.2           | 4              | 0.15            | 2.00                       |                    |

**REMARKS:**

1. "\*" indicates that the uncertainty quoted is dominated by the uncertainty due to resolution of the instrument being calibrated, for which a rectangular probability distribution has been assumed.
2. For measurement >100 amp. In clamp multimeter number of turns are used.

Checked by :

RMP RSD

Approved by :

YPL