

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

Certificate number: YMPL/91683/11419 PAGE 1 OF 2

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 detail :-	Date of issue : 22 <sup>nd</sup> February, 2007 Date of calibration : 17 <sup>th</sup> February, 2007 Due date of calibration: 17 <sup>th</sup> February, 2010								
4. Description of equipment under calibration:-	Name: Earth resistance tester Serial number: 988840 Model/Type: N/A Make: WACO								
5. Environmental conditions of measurements:	Temperature: 25±2°C Relative humidity: ≤70%								
6. Description of reference standards used :-	<table border="1"> <thead> <tr> <th>Reference standard</th> <th>Calibration valid upto</th> <th>Traceability</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>Digital multimeter (6 1/2 digit) Model:34401A Make: Hewlett Packard I/S No. 731</td> <td>7<sup>th</sup> December, 2007</td> <td>ETDC, Bangalore via YMPL Standards</td> <td>Resistance</td> </tr> </tbody> </table>	Reference standard	Calibration valid upto	Traceability	Parameters	Digital multimeter (6 1/2 digit) Model:34401A Make: Hewlett Packard I/S No. 731	7 <sup>th</sup> December, 2007	ETDC, Bangalore via YMPL Standards	Resistance
Reference standard	Calibration valid upto	Traceability	Parameters						
Digital multimeter (6 1/2 digit) Model:34401A Make: Hewlett Packard I/S No. 731	7 <sup>th</sup> December, 2007	ETDC, Bangalore via YMPL Standards	Resistance						
7. Results: The results and calibration procedure are given on the next page.									

**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.

Checked by : <u>RMP</u> <u>RSD</u>	Approved by : <u>Cinsh Palival</u> Sign. : <u>SPS</u> Name : <u>SPS</u>
------------------------------------	---

# 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/91683/11419

PAGE 2 OF 2

7(a). **Calibration procedure:-OP/YMPL/14**

Equipment under calibration has been calibrated for resistance by feeding the same from precision decade  $\Omega$  resistance box and same resistance fed to reference standard. At least 6 measurements are made for each value and an average of these has been reported in the results. EUC was powered up from its internal supply source and warmed up for at least 15 Minute.

7(b). **Result:** - The Earth resistance tester has been calibrated for resistance measurement. The expanded uncertainty of our measurement is given in front of each measurement & calculated at 95 % CL. The results are as following.

8. **Accuracy calibration results:-**

Range	Measured value ( $\Omega$ )	Standard value ( $\Omega$ )	%Expanded uncertainty( $\pm$ )	Coverage factor(k)
10 $\Omega$	1.05	1.063	0.72	2.00
	5.04	5.058	0.21	2.00
	9.02	9.058	0.15	2.00
1000 $\Omega$	103	100.3	0.58	2.00
	503	500.6	0.18	2.00
	784	800.6	0.14	2.00

Checked by :

*RMP*      *RSD*

Approved by :

*DPZ*