CERTIFICATE OF CALIBRATION

Issued By :

YADAV MEASUREMENTS PVT. LTD.

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Reflecting the Truth

C-035
Electro- Technical

UKAS CALIBRATION
0616

Certificate number:-YMPL/91675/11415

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: 17th February, 2007
   - Date of the receipt of the equipment: 17th February, 2007
   - Condition on item: Satisfactory

3. Calibration certificate:
   - Date of issue: 22nd February, 2007
   - Date of calibration: 17th February, 2007
   - Calibration due date: 17th February, 2010

4. Description of equipment under calibration: -
   - Name: ACA LEAKAGE TESTER
   - Serial number: C53471
   - Model: DL-650
   - Make : LUTRON

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

6. Description of reference standards used :

Reference standard	Calibration valid upto	Traceability	Parameters
Three phase precision measuring Instrument (TPZ-303) IS 1055 with precision CT IS 814	27th September, 2007	DKD Germany via YMPL Standards	a.c. current

Remarks :-

1. 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. ✓
2. 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. X
3. This report is specific for E.U.C. for environmental and other conditions mentioned in this report. ✓
4. The reported uncertainty applies only to the measured value and gives no indication of the long term stability of the device. ✓
5. The instrument has been calibrated for calibration points required by customer. ✓
6. The calibration due date has been mentioned as requested by customer in writing. ✓

Checked by : RNP RSD

Approved by : Dinesh Paliwal

Sign. :

Name : DPL

CERTIFICATE OF CALIBRATION

UKAS Accredited calibration laboratory No. 0616
NABL Accredited calibration laboratory No. C-035

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Yadav Measurements Pvt. Ltd., Udaipur

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7. Calibration procedure :
Equipment under calibration was calibrated 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. 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. current: (50Hz, sine wave)	200mA	19.7mA	20.05mA	0.27	2.00 *
		99.5mA	100.42mA	0.06	2.00
		178.5mA	180.64mA	0.04	2.00
	20A	0.98A	1.001A	0.53	2.00 *
		4.99A	5.010A	0.12	2.00
		9.88A	9.916A	0.07	2.00
		14.84A	15.015A	0.05	2.00
	200A	9.8A	9.92A	0.53	2.00 *
		25.1A	25.02A	0.23	2.00
		50.0A	50.04A	0.12	2.00
		98.8A	99.26A	0.07	2.00
		118.0A	118.97A	0.06	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.

Checked by : RNP RSD

Approved by : DDS