

## Calibration Certificate

Certificate No.: YEA(C)/ 230726/C875/004  
ULR No. : CC222123000009969F

Dated : 31.07.2023

Calibrated for : **Central Pollution Control Board**  
Southend Conclave 1582, Rajdanga Main Road,  
Kolkata - 700107, West Bengal, India.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
28.07.2023	28.07.2024	1	4

**Description of Instrument**

*Name* : Digital Multimeter  
*Identification* : DM-23(1260641)  
*Make* : HTC (Sl. No.: 1260641)  
*Model / Type* : DM-23

**Service Request No. / Order Reference** : 230726/C875/001-016**Receipt of Instrument** : 26.07.2023**Location where calibration performed** : At permanent laboratory**Applicable Specification of Instrument to be Calibrated** : Not Specified**Condition of Instrument to be Calibrated** : Satisfactory**Basis of Calibration** : Comparison Method with cross reference to  
YEA / W1 / E (S) - 01,02,03**Environmental Condition during Calibration** : *Temp.* : 25±2°C *RH* : 50±15%**Equipment used for Calibration** : Standard Multifunction Calibrator**Traceability** : To National Standard vide Certificate No:  
YEA(C)/230120/Y001/001 valid till 20.01.2024**Measurement Uncertainty** : The figures are stated in the result at coverage factor  
 $k= 2$  corresponding to confidence probability of  
95% for normal distribution.**Laboratory Identification** : Sticker is affixed for authentication of calibration.

CC-2221

The above Instrument/Equipment/Machine has been calibrated.  
The results are given in the page 2 to ... 4 ...of the Certificate.

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Admn. Office & Lab : Kamardanga Road (Opp. Tarama Ashram), Ichapur, Howrah - 711 104

E-mail : calibration@yeagroup.org ★ Visit us at : www.yeagroup.org

CIN : U74140WB2005PTC106389 ★ Toll Free Help Desk : 1800 345 9001

Certificate No.:YEA(C)/ 230726/C875/004

ULR No. : CC22212300009969F

Calibrated By : A. Manna

Dated : 31.07.2023

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## Calibration Result

### Electro-Technical Calibration

#### CALIBRATION RESULTS OF DIGITAL MULTIMETER:

Sl. No	Parameter	Range	Standard Value	DUC Value	Deviation	Percentage Error	Measurement Uncertainty
							( ± %)
1	Direct Voltage	200 mV	10.0000	10.00	0.00	0.000	0.145
2			100.000	100.01	0.01	0.010	0.027
3			180.000	180.03	0.03	0.017	0.022
4		2 V	0.50000	0.5000	0.0000	0.000	0.019
5			1.00000	1.0000	0.0000	0.000	0.015
6			1.80000	1.8001	0.0001	0.006	0.013
7		20 V	5.00000	4.997	-0.003	-0.060	0.019
8			10.0000	9.998	-0.002	-0.020	0.015
9			18.0000	17.999	-0.001	-0.006	0.013
10		200 V	50.0000	50.00	0.00	0.000	0.021
11			100.000	99.99	-0.01	-0.010	0.017
12			180.000	179.99	-0.01	-0.006	0.015
13		1000V	500.000	500.0	0.0	0.000	0.019
14			700.000	700.0	0.0	0.000	0.018
15			1000.00	1000.0	0.0	0.000	0.016
16	Alternating Voltage (50 Hz)	2 V	0.50000	0.5000	0.0000	0.000	0.160
17			1.00000	0.9999	-0.0001	-0.010	0.137
18			1.80000	1.8011	0.0011	0.061	0.131
19		20 V	5.00000	5.008	0.008	0.160	0.160
20			10.0000	10.015	0.015	0.150	0.137
21			18.0000	18.038	0.038	0.211	0.133
22		200 V	50.0000	50.04	0.04	0.080	0.206
23			100.000	100.14	0.14	0.140	0.183
24			180.000	180.35	0.35	0.194	0.187
25		750 V	300.000	299.3	-0.7	-0.233	0.175
26			500.000	499.5	-0.5	-0.100	0.206
27	750.000		750.1	0.1	0.013	0.191	

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Sl. No	Parameter	Range	Standard Value	DUC Value	Deviation	Percentage Error	Measurement Uncertainty
							( ± %)
28	Direct Current	200 $\mu$ A	50.0000	49.99	-0.01	-0.020	0.318
29			100.000	99.94	-0.06	-0.060	0.202
30			180.000	179.88	-0.12	-0.067	0.151
31		2 mA	0.50000	0.5000	0.0000	0.000	0.134
32			1.00000	0.9999	-0.0001	-0.010	0.104
33			1.80000	1.7995	-0.0005	-0.028	0.092
34		20mA	5.00000	5.004	0.004	0.080	0.088
35			10.0000	10.013	0.013	0.130	0.073
36			18.0000	18.024	0.024	0.133	0.068
37		200 mA	50.0000	49.99	-0.01	-0.020	0.098
38			100.000	99.92	-0.08	-0.080	0.077
39			180.000	179.86	-0.14	-0.078	0.084
40		20A	1.00000	1.002	0.002	0.200	0.209
41			10.0000	10.033	0.033	0.330	0.321
42			18.0000	18.042	0.042	0.233	0.604
43	Alternating Current (50 Hz)	200 mA	50.0000	50.02	0.02	0.040	0.418
44			100.000	100.09	0.09	0.090	0.264
45		20A	180.000	180.16	0.16	0.089	0.325
46			1.00000	1.009	0.009	0.900	0.280
47			10.0000	10.043	0.043	0.430	0.377
48	18.0000	18.062	0.062	0.344	0.170		
49	Resistance	200 $\Omega$	100.000	100.11	0.11	0.110	0.047
50			190.000	190.21	0.21	0.111	0.030
51		2 k $\Omega$	1.00000	0.9997	-0.0003	-0.030	0.030
52			1.90000	1.8991	-0.0009	-0.047	0.029
53		20 k $\Omega$	10.0000	9.998	-0.002	-0.020	0.034
54			19.0000	18.992	-0.008	-0.042	0.044
55		200 k $\Omega$	100.000	99.97	-0.03	-0.030	0.049
56			190.000	189.91	-0.09	-0.047	0.047
57		2 M $\Omega$	1.00000	0.9997	-0.0003	-0.030	0.047
58			1.90000	1.8993	-0.0007	-0.037	0.116
59		200 M $\Omega$	100.000	99.96	-0.04	-0.040	0.053
60			190.000	189.89	-0.11	-0.058	0.155

Cont...4





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**DUC** : Device Under Calibration

**REMARKS** : The above Digital Multimeter has been calibrated and the readings are tabulated above.

**NOTES** : This certificate refers to the results tabulated at the time of calibration only for the above mentioned item submitted for calibration and this should not be reproduced, other than in full except with prior written approval from the head of calibration laboratory.

Authorised By

  
A. Das

Manager Calibration



**\*\*\* End of the Calibration Certificate \*\*\***