

Test Report No: SMR(K)/EMCD-TR/24-25/012/04

# **EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR**

Customer:

**M/s. M. B. CONTROL & SYSTEMS PVT. LTD.  
31/1, AHIRIPUKUR ROAD,  
KOLKATA-700 019, WEST BENGAL,  
INDIA.**

**This report shall not be reproduced except in full and without written approval of  
SAMEER Centre for MILLIMETER WAVE RESEARCH**



**SAMEER Centre for MILLIMETER WAVE RESEARCH  
(SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND  
RESEARCH)  
R & D LABORATORY OF  
MINISTRY OF ELECTRONICS & INFORMATION TECHNOLOGY (MeitY)  
GOVT. OF INDIA**

**PLOT-L2, BLOCK-GP, SECTOR-V, SALT LAKE ELECTRONICS COMPLEX,  
KOLKATA-700 091, INDIA**

**DECEMBER, 2024**

**URL NO.: TC1400724000000004F**



Test Report No: SMR(K)/EMCD-TR/24-25/012/04

# **EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR**

**Customer:**

**M/s. M. B. CONTROL & SYSTEMS PVT. LTD.  
31/1, AHIRIPUKUR ROAD,  
KOLKATA-700 019, WEST BENGAL,  
INDIA.**

**This report shall not be reproduced except in full and without written approval of  
SAMEER Centre for MILLIMETER WAVE RESEARCH**



**SAMEER Centre for MILLIMETER WAVE RESEARCH  
(SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND  
RESEARCH)  
R & D LABORATORY OF  
MINISTRY OF ELECTRONICS & INFORMATION TECHNOLOGY (MeitY)  
GOVT. OF INDIA**

**PLOT-L2, BLOCK-GP, SECTOR-V, SALT LAKE ELECTRONICS COMPLEX,  
KOLKATA-700 091, INDIA**

**DECEMBER, 2024**

**URL NO.: TC1400724000000004F**

## SAMEER Centre for MILLIMETER WAVE RESEARCH, KOLKATA

## EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR

CERTIFICATE NO.  
TC-14007**Test Report Particulars**

1. Equipment under test : SOLAR IRRADIANCE SENSOR
2. Number of test sample : One
3. Model Number of EUT : MBMet-500A-B
4. Serial Number of EUT : 23028
5. Brand : Not Available
6. Manufacturer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD.
7. Customer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD.  
31/1, AHIRIPUKUR ROAD, KOLKATA-700 019,  
WEST BENGAL, INDIA
8. Type of test requested : DAMPED OSCILLATORY WAVE IMMUNITY TEST
9. Test Method used : IEC 61000-4-18, Edition 2.0 2019-05
10. Sample Received : 5<sup>th</sup> Dec. 2024
11. EUT condition : Functional
12. Tested on : 5<sup>th</sup> Dec. 2024
13. Test Venue : SAMEER KOLKATA CENTRE
14. Test Witnessed by : Mr. MANOJ KUMAR GIRI (QUALITY CONTROL ENGINEER)
15. Test Request Number : SMR(K)/EMCD-TRQ/24-25/012

The "SOLAR IRRADIANCE SENSOR" has been tested for the parameters reflected in the subsequent pages and the data reported in this report are valid only for the test sample(s) mentioned above at the time of and under the stated condition of measurement. Particulars of manufacturer / supplier, given in this report, are based on the information given by the customer, along with test request and **SAMEER Centre for MILLIMETER WAVE RESEARCH** does not bear any responsibility for the correctness of that information for the above mentioned equipment under test.

TEST REPORT PREPARED By:

REVIEWED BY:

APPROVED BY:

OFFICE SEAL &  
REPORT ISSUED DATE

JYOTI PRAKASH

MAHESH C. ARYA

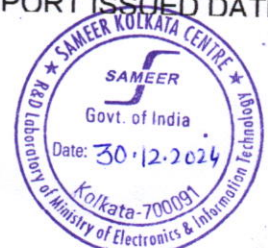
Satyajit Chakrabarti

SATYAJIT CHAKRABARTI

IN-CHARGE TECH SUPPORT

TEST ENGINEER

QM



URL NO.: TC1400724000000004F



Equipment Under Test : SOLAR IRRADIANCE SENSOR  
 Model No : MBMet-500A-B  
 Sl. No. : 23028  
 Customer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD, KOLKATA

### EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR

## 1.0 SLOW DAMPED OSCILLATORY WAVE IMMUNITY TEST

1.1 STANDARD USED : IEC 61000-4-18, Edition 2.0 2019-05

## 1.2 TEST SPECIFICATIONS :

Test Level : Up to 3  
 Test Voltage :  $\pm 1$  KV (L-L)  
 Wave-form rise time : 75 ns  
 Voltage oscillation frequency : 100 kHz.  
 Coupling : L-L

## 1.3 TEST INSTRUMENT USED:

EQUIPMENT	MAKE	MODEL NO.	SL. NO.	CAL. DUE DATE
DAMPED OSCILLATORY WAVE GENERATOR	EMC PARTNER AG	DOW-CG1-S	109929-1509	07/05/2025*
COUPLING DECOUPLING NETWORK		CDN-DOW-DATA-LF	1514	
MIXED SIGNAL OSCILLOSCOPE	TEKTRONIX	MSO4104B	C010745	25/10/2025

\* Internal performance verification date

## 1.4 ENVIRONMENTAL CONDITION:

Temperature : 25.3°C  
 Humidity : 49.4%

## 1.5 LOAD USED: A Laptop was used as the load for verifying the communication during the testing

## 1.6 TEST PROCEDURE:

As per SMR(K) / OP / 010; Issue 01, dated 2<sup>nd</sup> Sept, 2021; Revision 00, dated -  
 EUT was configured for connection to a 12 V<sub>DC</sub> power supply. The damped oscillatory wave generator and the EUT were switched ON and left ON for 10 minutes for stabilization. Both positive and negative damped oscillatory wave impulses were applied to the EUT. Test voltage coupling between L-L were considered.



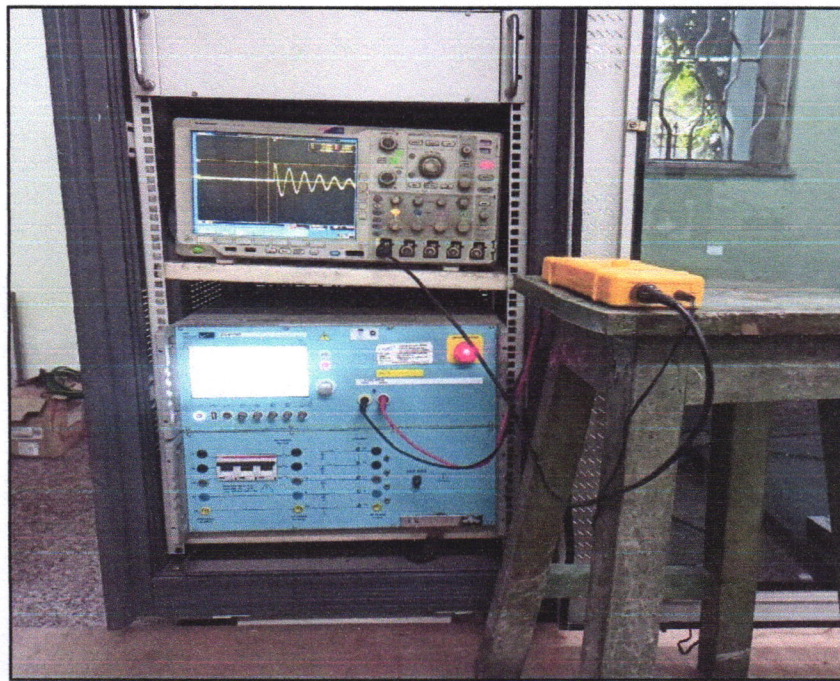


Equipment Under Test : SOLAR IRRADIANCE SENSOR  
Model No : MBMet-500A-B  
Sl. No. : 23028  
Customer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD, KOLKATA

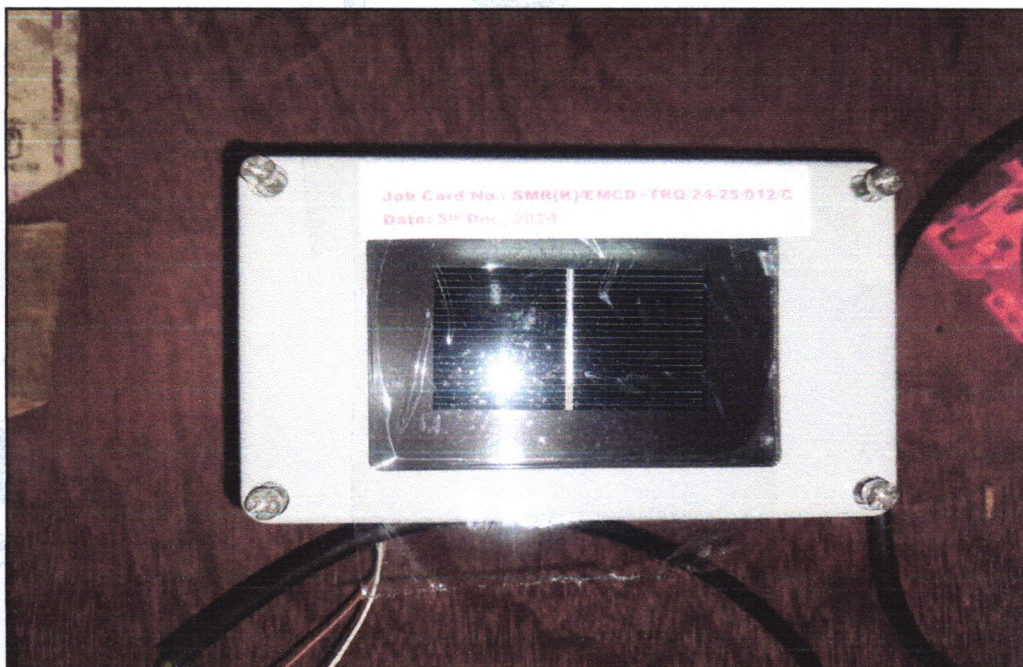
---

**EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR**

---

**1.7 TEST SET-UP PHOTOGRAPHS:**

(a)

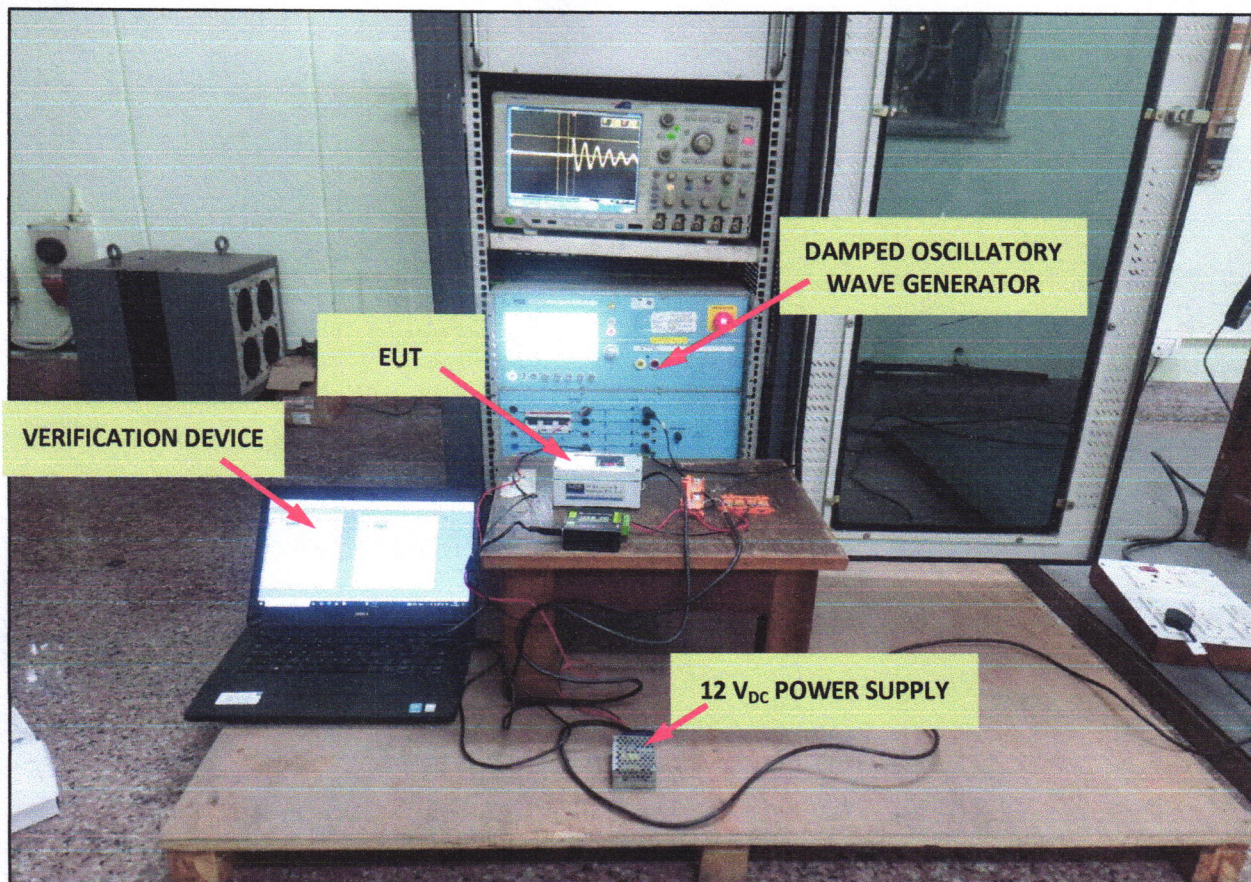


(b)





Equipment Under Test : SOLAR IRRADIANCE SENSOR  
Model No : MBMet-500A-B  
Sl. No. : 23028  
Customer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD, KOLKATA

**EMC TEST REPORT FOR SOLAR IRRADIANCE SENSOR**

(c)

Fig 1: Photographs of (a) Calibration set-up, (b) Equipment under Test (EUT) and (c) Test set-up for Damped Oscillatory Wave Immunity Test.

EUT: SOLAR IRRADIANCE SENSOR

**1.8 TEST OBSERVATION:**

During and after test run, no impact on normal functioning of EUT is noticed. Normal operation within the specification limits of the equipment.

TEST CONDUCTED BY:

*Jyoti Prakash*

JYOTI PRAKASH

IN-CHARGE TECH SUPPORT

*Mahesh C. Arya*

MAHESH C. ARYA

TEST ENGINEER



\*\*\*\*\*END OF THE TEST REPORT\*\*\*\*\*