Test Report No: SMR(K)/EMCD-TR/24-25/012/06

EMC TEST REPORT FOR PV MODULE TEMPERATURE SENSOR

Customer:

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

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.: TC1400724000000006F

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SAMEER

SAMEER Centre for MILLIMETER WAVE RESEARCH, KOLKATA

CERTIFICATE NO. TC-14007

EMC TEST REPORT FOR PV MODULE TEMPERATURE SENSOR

Test Report Particulars

1.	Equipment under test	: PV MODULE TEMPERATURE SENSOR
2.	Number of test sample	: One
3.	Model Number of EUT	: MBMet-803
4.	Serial Number of EUT	: 24252
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	: POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST.
9.	Test Method used	: IEC 61000-4-8, Edition 2.0 2009-09
10.	Sample Received	: 5th Dec., 2024
11.	EUT condition	: Functional
12.	Tested on	: 5th 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 **"PV MODULE TEMPERATURE 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	
IN-CHARGE TECH SUPPORT	TEST ENGINEER	QM	

SAMEER KOLKATA CENTRE ★ SAMEER ★ Govt. of India Date: 30.12.2024 Kolkata-700091 ★ R&D Laboratory of Ministry of Electronics & Information Technology

URL NO.: TC1400724000000006F

Equipment Under Test : PV MODULE TEMPERATURE SENSOR
Model No : MBMet-803
Sl. No. : 24252
Customer : M/s. M. B. CONTROL & SYSTEMS PVT. LTD, KOLKATA

EMC TEST REPORT FOR PV MODULE TEMPERATURE SENSOR

1.0 POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST

1.1 STANDARD USED : IEC 61000-4-8, Edition 2.0 2009-09

1.2 TEST SPECIFICATIONS :

Test levels : 5
Magnetic field strength : 100 A/m (Continuous Field)
Frequency : 50 Hz

1.3 TEST INSTRUMENT USED:

EQUIPMENT	MAKE	MODEL NO.	SL. NO.	CAL. DUE DATE
HELMHOLTZ COIL	SAMEER KOLKATA CENTRE	HLMTZ1103	SMR(K)/EMCD/ HLMC060	20/03/2025*
AUTO TRANSFORMER	DIMMERSTAT	28D-1P	1003/03/226/9	
AC/DC CURRENT CLAMP	FLUKE	376FC	59680063WS	16/05/2025

* Internal performance verification date

1.4 ENVIRONMENTAL CONDITION:

Temperature : 27.6°C
Humidity : 49.5%

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/08; Issue 02, dated 4th June 2012; Revision 01, dated 17th June 2016.

EUT was configured for connection to a 12 VDC power supply and kept at the centre of the coil. Then AC power supply, Auto Transformer and the EUT were switched ON, and left ON for 10 minutes for stabilization. Current amplitude in the coil was increased slowly to generate the required level of H-field as mentioned in test specification level-5 of the referred standard.

Equipment Under Test	: PV MODULE TEMPERATURE SENSOR
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EMC TEST REPORT FOR PV MODULE TEMPERATURE SENSOR

1.7 BLOCK DIAGRAM OF THE CALIBRATION SET-UP :

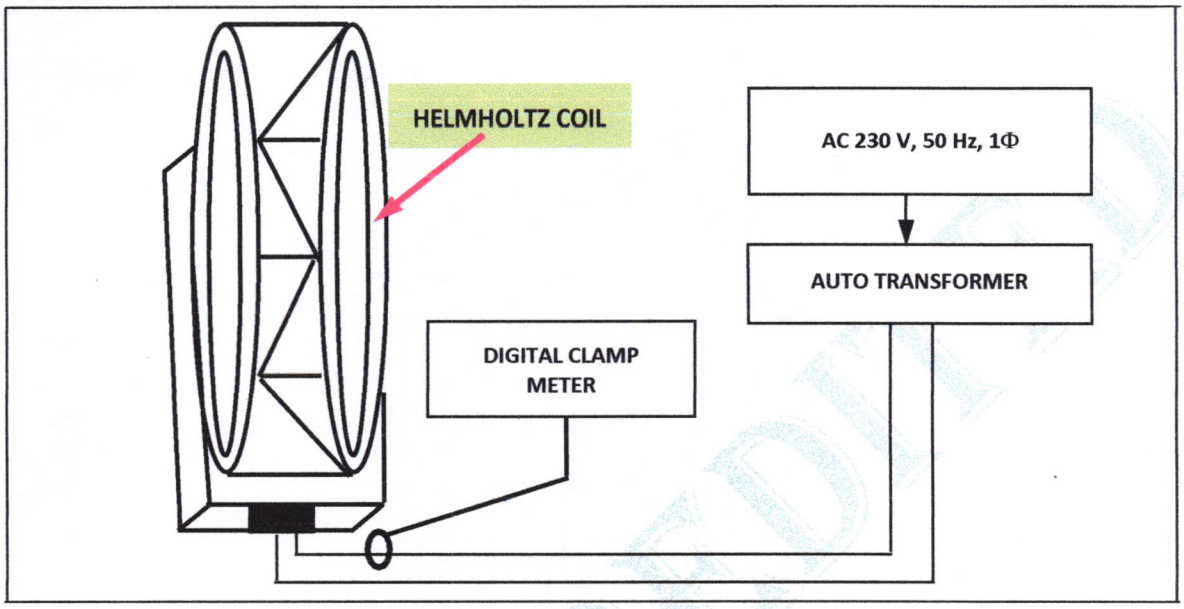

Fig 1: Block Diagram of the Calibration set-up

1.8 TEST SET-UP PHOTOGRAPHS :

(a)

Equipment Under Test	: PV MODULE TEMPERATURE SENSOR
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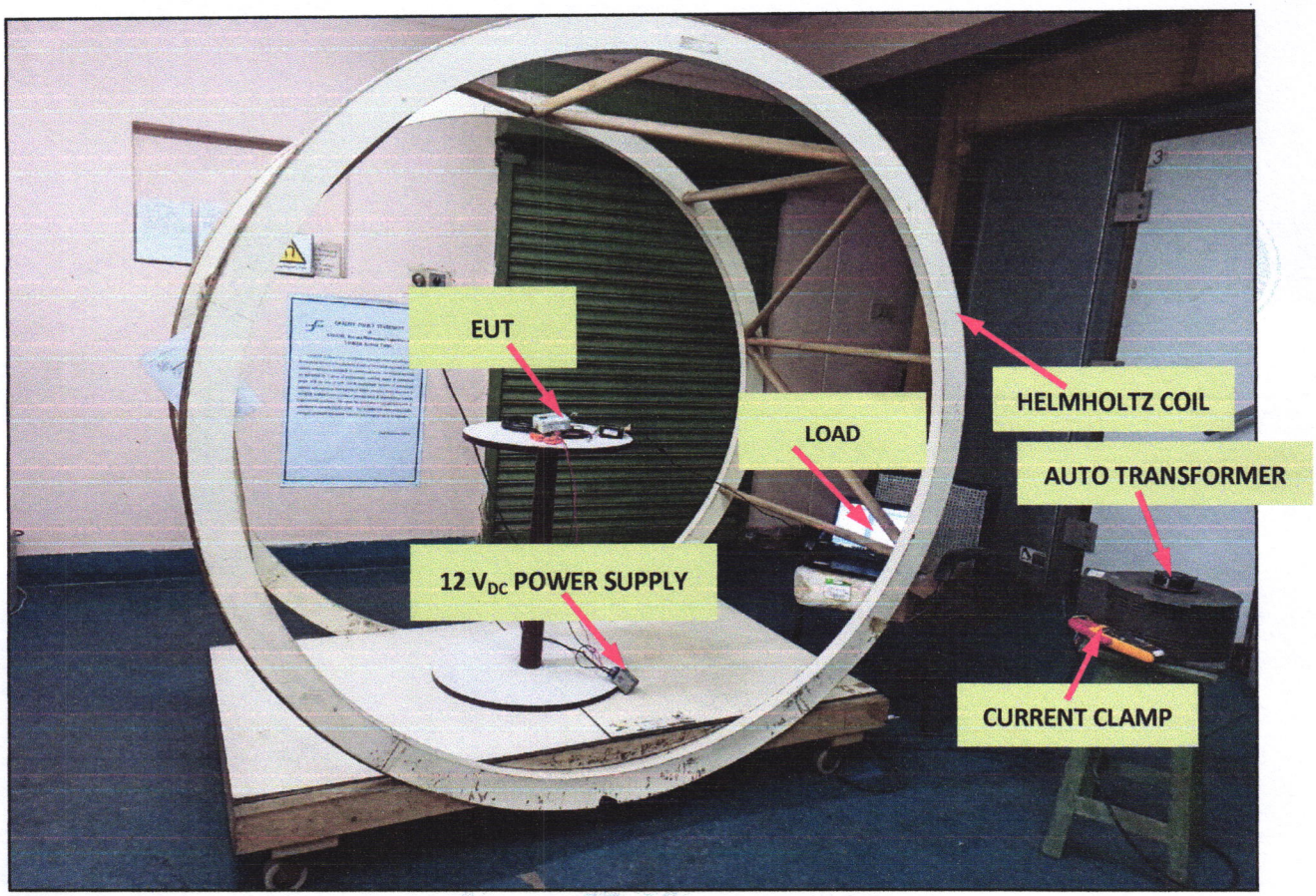
EMC TEST REPORT FOR PV MODULE TEMPERATURE SENSOR



(b)

Fig 2: Photographs of the (a) Equipment under Test (EUT) and (b) Test set-up for Power Frequency Magnetic Field Immunity Test.

EUT: PV MODULE TEMPERATURE SENSOR

1.9 TEST OBSERVATION:

During and after test run, no impact on normal functioning of EUT is noticed. Normal performance within limits specified by the above standard and for the levels requested by the manufacturer.

TEST CONDUCTED BY:

JYOTI PRAKASH
IN-CHARGE TECH SUPPORT

MAHESH C. ARYA
TEST ENGINEER

SAMEER KOLKATA CENTRE * Govt. of India * Kolkata-700091 * Ministry of Electronics & Information Technology

END OF THE TEST REPORT

URL NO.: TC1400724000000006F