



ELECTRONICS TEST AND DEVELOPMENT CENTRE, MOHALI
B-108, Industrial area, Phase- VIII, Mohali (PB)-160071
TEST REPORT

No. : ETDC(MH)/T&M/090	Dated : 04.10.2016	Page : 1 of 6
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1. Indenter **MRM Procom Pvt. Ltd.**
Plot No. 20-21, Industrial Estate,
Sector-59, Phase-II,
Faridabad (HR)-121004
2. Description of sample(s)
 - 2.1 Nomenclature : AMF Controller
 - 2.2 Make/Model : Procom / ECON-A-311
 - 2.3 Sr. No. : 2016090529
 - 2.4 Manufactured by : Procom
 - 2.5 Quantity : 01 Sample
3. Sample(s) received on : 16.09.2016
4. Condition of sample(s) on receipt : Good.
5. Date(s)/Period item(s) tested : 23.09.2016 to 04.10.2016
6. Location where test(s) carried out (With name and address) : ETDC, Mohali.
7. Reference of test method(s) used : IEC 60068 and Indenter's
8. Applicable product specification(s) : Indenter's
9. Deviation(s), exclusion(s), addition(s) in test method(s) : Nil
10. Environmental conditions
 - 10.1 Temperature : 25°C ± 10°C
 - 10.2 Humidity : 45 % to 70 %
11. Statement with regard to compliance : Refer to test results (Test Data)
12. Statement on uncertainty in measurement : Not applicable
13. Major Equipment Used



Sr. no.	Nomenclature	Make	Model	Cal. Validity
1.	Vibration Machine	Saraswati Dynamics	SEV-100	July.2017
2.	IP Enclosure/Dust Chamber	Labin	IP5X IP6X	Nov, 2016
3.	Climatic Test Chamber	Weiss Technik	WK1 340/70	Nov,2016

R. Chauhan
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R. Kumar
Approved by

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14.RESULTS SUMMARIZED :

Test Stage	Test Requirements (Cl. Ref. of specs.)	Test Condition	Test Data	Pass / Fail (Qty.)	Uncertainty (Where applicable)
1.Cold Test (Operational)	IEC 60068-2-1 and Indenter's	The sample shall be subjected to the following environment condition: Temperature: (-)20 °C± 3 °C Duration : 2 Hrs DUT condition: ON	Conducted	-	-
1.1 Visual Examination	-do-	After 1 to 2 hours of recovery DUT shall be examined visually. There shall be no physical/ visual deterioration on the sample.	No physical/ visual deterioration observed	Pass	-
2.Cold Test (Storage)	-do-	The sample shall be subjected to the following environment condition: Temperature: (-)30 °C± 3 °C Duration : 16 Hrs	Conducted	-	-
2.1. Visual Examination	-do-	After 1 to 2 hours of recovery DUT shall be examined visually. There shall be no physical/ visual deterioration on the sample.	No physical/ visual deterioration observed	Pass	-
3.Dry Heat Test	IEC 60068-2-2 and Indenter's	The sample shall be subjected to the following environment condition: Temperature: 70 °C± 3 °C Duration : 16 Hrs DUT condition: ON	Conducted	-	-
3.1. Visual Examination	-do-	After 1 to 2 hours of recovery DUT shall be examined visually. There shall be no physical/ visual deterioration on the sample.	No physical/ visual deterioration observed	Pass	-
4. Damp Heat Cyclic Test	IEC 60068-2-30 and Indenter's	The sample shall be subjected to the following environment condition: Temperature: 55 °C ± 2 °C RH = 95 % ± 3 % Duration : 48 Hrs	Conducted	-	-



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14.RESULTS SUMMARIZED :

Test Stage	Test Requirements (Cl. Ref. of specs.)	Test Condition	Test Data	Pass / Fail (Qty.)	Uncertainty (Where applicable)
4.1. Visual Examination	IEC 60068-2-30 and Indenter's	After 1 to 2 hours of recovery DUT shall be examined visually. There shall be no physical/ visual deterioration on the sample.	No physical/ visual deterioration observed	Pass	-
5. Damp Heat Static Test	IEC 60068-2-78 and Indenter's	The sample shall be subjected to the following environment condition: Temperature: 40 °C ± 2 °C RH = 93 % ± 3 % Duration : 48 Hrs	Conducted	-	-
5.1. Visual Examination	-do-	After 1 to 2 hours of recovery DUT shall be examined visually. There shall be no physical/ visual deterioration on the sample.	No physical/ visual deterioration observed	Pass	-
5.2. Functional Test	-do-	The sample shall be functional after above test sequences.	Functional	Pass	-
6. Vibration Test	IEC 60068-2-6 and Indenter's	The sample shall be subjected to the following test conditions: 5 Hz to 8 Hz at ± 7.5 mm, 8 Hz to 500 Hz at 2 g 10 sweeps in each axis: x, y, z Mounting : Unpacked condition	Conducted.	-	-
6.1 Visual Examination	-do-	After visual examination there shall be no loosening, breaking and any other type of mechanical damage of the sample.	Complies	Pass	-



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14.RESULTS SUMMARIZED :

Test Stage	Test Requirements (Cl. Ref. of specs.)	Test Condition	Test Data	Pass / Fail (Qty.)	Uncertainty (Where applicable)
7. Shock Test	IEC 60068-2-27 and Indenter's	Pulse shape : Half sine pulse Peak acceleration: 15g _n Duration of Pulse: 11ms Number of Shocks: Three in each direction Mounting : Non operating Unpacked condition	Conditioned		
7.1 Visual Examination	-do-	After visual examination there shall be no loosening, breaking and any other type of mechanical damage of the sample.	Complies	Pass	-
7.2. Functional Test	-do-	The sample shall be functional after above test sequences.	Functional	Pass	-
8.IP65	IEC 60529: 2001				
8.1.IP 6X	-do-	Dust-Protection:- Test duration: 8 Hrs. Extraction rate: 40 to 60 volumes per Hr. Talcum powder 2kg/cubic meter Sieve Size: 75 um (wire dia 50 um)	Conditioned	-	-
8.1.1. Visual Examination	-do-	Ingress of dust is not totally prevented but does not enter in sufficient quantity to interfere with satisfactory operation of the equipment	No Ingress of dust observed.	Pass	-
8.2.IPX5	-do-	Water splashed Test using:- nozzle with internal diameter:6.3 mm water delivery rate: 12.5 lt/minute ± 5 % distance from enclosure: 2.5 to 3 meter. Duration: 1 minute/m ² (minimum 3 minute)	Conditioned	-	

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14.RESULTS SUMMARIZED :

Test Stage	Test Requirements (Cl. Ref. of specs.)	Test Condition	Test Data	Pass / Fail (Qty.)	Uncertainty (Where applicable)
8.2.1. Visual Examination	IEC 60947: 2001	Water splashed on the enclosure from any direction shall have no harmful effect.	Complies	Pass	-
8.2.2. Functional Test	-do-	The sample shall be functional after above test sequences.	Functional	Pass	-

15. Additional Remarks: 1. Device under test (DUT) Photograph enclosed as Annexure-I



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 Ministry of Comm. & Info. Technology
 भारत सरकार, एल.टी.क्यू.सी. डायरेक्टोरेट, इटीडीसी, मोहाली (पंजाब)
 Govt. of India, STQC Directorate Centre, ETDC, Mohali (Pb.)

Vinay Rajput
Issued by
 विनय राजपूत VINAY RAJPUT
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Annexure-I

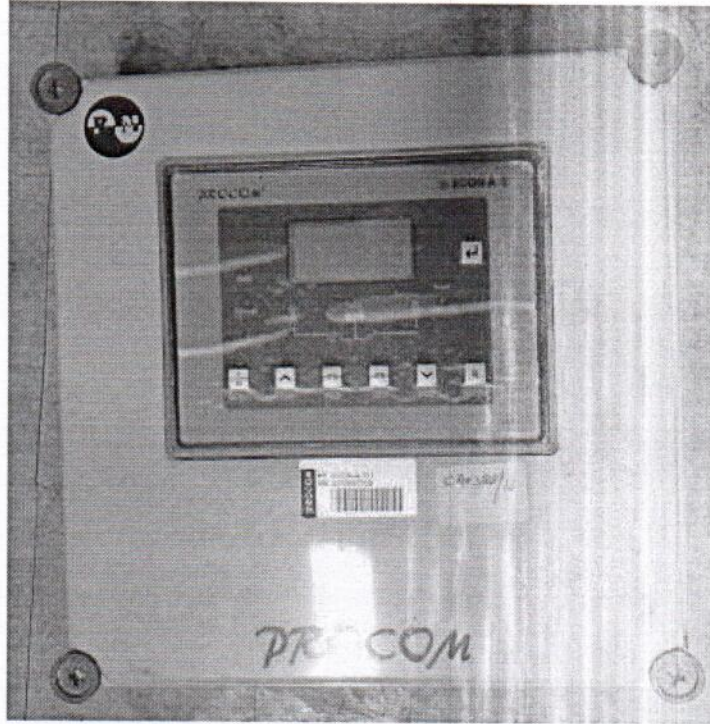


Figure I



Figure II



[Handwritten Signature]

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 (Customer Service Cell)

विनय राजपूत VINAY RAJPUT

वैज्ञानिक 'सी' / Scientist 'C'

संचार एवं सूचना प्रौद्योगिकी मंत्रालय

Ministry of Comm. & Info. Tech:

भारत सरकार, इटीडीसी, मोहाली

Govt. of India, ETDC, Mohali (Pb.)