



# ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

(Accredited by the National Accreditation Board for Testing and Calibration Laboratories, Govt. of India)

ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

EPABX : +91 (0265) 2642942, 2642964, 2642377, 3043128 / 29 / 30 / 31 / 33

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## TEST REPORT

SHEET: 1 OF 4

<b>NAME &amp; ADDRESS OF CUSTOMER</b>  <b>MRM PROCOM PVT. LTD.</b> Plot No. 20-21, Industrial Estate, Sector-59, Phase-II, Faridabad-121004, Haryana.	<b>TEST REPORT NO.:</b> RP-1516-015953 <b>DATE</b> : 27.07.2015	
	<b>CUSTOMER REF. NO. :</b> Nil	<b>DATE :</b> 07.07.2015
	<b>DATE OF SAMPLE RECEIPT</b>	<b>DATE OF TESTING</b>
	08.07.2015	09.07.2015 to 18.07.2015
<b>SAMPLE DESCRIPTION</b> CURRENT TRANSFORMER  MFD. BY : MRM PROCOM PVT. LTD.  RATIO : 200/5 A  BURDEN : 5 VA  CLASS : 1.0  H.S.V./I.L. : 0.66/3 kV  FREQUENCY : 50 Hz.  Insulation Class : E  TYPE : NC/BPL	<b>SAMPLE IDENTIFICATION</b>  <b>SR. NO.</b> : 2015070508  <b>ERDA SAMPLE CODE NO. :</b> ERDA-00098801  <b>DRAWING NO. :</b> MRM/CT/200-5-1.0/0715/03 REV.-00 SHEET NO. 03	
	<b>ENCLOSURE :</b> <b>Annexure-I (As per sheet 1 of 1)</b>	
<b>TEST DETAILS &amp; TEST SPECIFICATION ARE AS PER SHEET NO. 2 OF 4.</b>		
<b>TEST RESULTS</b> : As per sheet: 3 of 4 to 4 of 4.		
<b>REMARKS</b> : The sample <b>conforms</b> to the requirements of the mentioned standard as mentioned in tests no. 1 to 6 on sheet no. : 2 of 4.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b> <b>(S.B.PATEL)</b>

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TEST REPORT NO. : RP-1516-015953

SHEET : 2 OF 4

DATE : 27.07.2015

### TEST DETAILS & TEST SPECIFICATION:

Sr. No.	TESTS	REFERENCE STANDARD
1.	Verification of terminal marking and polarity.	Cl. No. 9.2 of IS 2705 (Part 1) : 1992
2.	Power frequency dry withstand test on primary winding.	Cl. No. 9.3 of IS 2705 (Part 1) : 1992
3.	Power frequency dry withstand test on secondary winding.	Cl. No. 9.4 of IS 2705 (Part 1) : 1992
4.	Over voltage inter-turn test.	Cl. No. 9.5 of IS 2705 (Part 1) : 1992
5.	Determination of errors according to the requirements of the appropriate accuracy class.	Cl. No. 7.2.1 of IS 2705 (Part 2) : 1992
6.	Temperature rise test.	Cl. No. 9.7 of IS 2705 (Part 1) : 1992

  
PREPARED BY

  
CHECKED BY



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Certificate No. : T-0071

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TEST REPORT NO. : RP-1516-015953

SHEET : 3 OF 4

DATE : 27.07.2015

### TEST RESULTS:

1. **Verification of terminal marking and polarity.**

(Cl. No. 9.2 of IS 2705 (Part 1) : 1992)

Primary winding terminals : P1-P2

Secondary windings terminals : S1-S2

Terminal marking & polarity was found Ok.

Terminal marking was found marked clearly & Indelibly.

**REMARK:** Conforms

2. **Power frequency dry withstand test on primary winding.**

(Cl. No. 9.3 of IS 2705 (Part 1) : 1992)

The power frequency voltage of 3 kV rms was applied between the primary winding terminals and earth for one minute duration. The secondary windings terminals were connected together to earth.

The sample withstood the test voltage without any disruptive discharge.

**REMARK:** Conforms

3. **Power frequency dry withstand test on secondary winding.**

(Cl. No. 9.4 of IS 2705 (Part 1) : 1992)

The power frequency voltage of 3 kV (rms) was applied between the secondary windings terminals (all) connected together and the earth. The primary winding terminals were shorted and connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed.

The sample withstood the test voltage satisfactorily.

**REMARK:** Conforms

4. **Over voltage inter-turn test. (Cl. No. 9.5 of IS 2705 (Part 1) : 1992)**

With the primary winding open circuited, a voltage at rated frequency was applied to the secondary winding terminals (S1-S2) such as to produce a secondary limiting current of rms value equals to rated secondary current (i.e. 5 amp.) for one minute.

The sample withstood the applied voltage satisfactorily for one minute.

**REMARK:** Conforms

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TEST REPORT NO. : RP-1516-015953

SHEET : 4 OF 4

DATE : 27.07.2015

**5. Determination of errors according to the requirements of the appropriate accuracy class. (Cl. No. 7.2.1 of IS 2705 (Part 2) : 1992)**

PHASE ANGLE ERROR IN MIN.	RATIO ERROR IN %	% OF RATED CURRENT	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
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RATIO : 200/5 A, BURDEN : 5 VA, CLASS : 1.0

BURDEN: 100 % at 0.8 Lag. P. F.			BURDEN : 25 % at U. P. F.	
-5.20	0.228	120	0.790	9.32
-4.41	0.185	100	0.773	10.33
10.23	-0.505	20	0.509	21.70
25.57	-1.671	5	-0.032	48.97

**REMARK:** Conforms**6. Temperature rise test. (Cl. No. 9.7 of IS 2705 (Part 1) : 1992)**

A Continuous rated thermal current equals to 120% (i. e. 200 A\*1.2=240 A) of the primary current at rated frequency was circulated in the primary winding of the CT. Rated burden (i.e. 5 VA) was connected to the secondary winding terminals (i.e., S1-S2) of the CT. At steady state, temperature of the body and ambient temperature were recorded. The resistances of secondary winding were measured immediately after shut down and temperature rise calculated.

The temperature rises so obtained were as follows:

Sr. no.	Temperature rise of :	Specified limit for temperature rise test.	Obtained value :
1.	Secondary winding (Resistance method)	70 °C	S1-S2 : 11.81 °C
2.	Body (Thermocouple method)	70 °C	12.0 °C
3.	Ambient temperature	40 °C	34.6 °C

**REMARK:** Conforms

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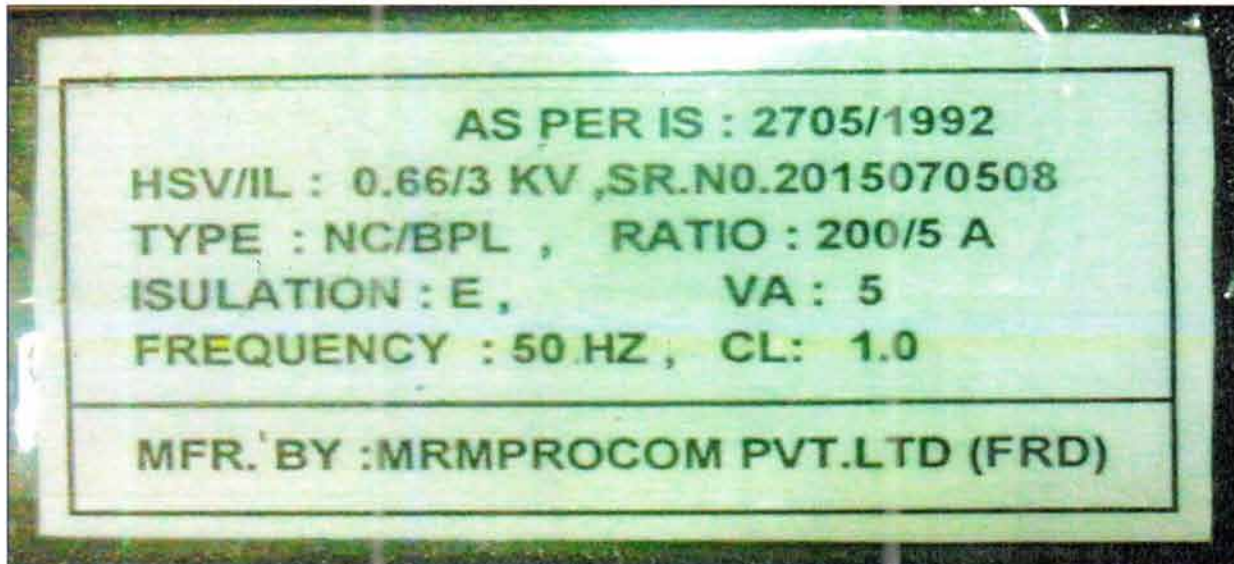
## Annexure-I

TEST REPORT NO. : RP-1516-015953

SHEET : 1 OF 1

DATE : 27.07.2015

### PHOTOGRAPHS OF TEST SAMPLE



AS PER IS : 2705/1992  
 HSV/IL : 0.66/3 KV , SR.NO.2015070508  
 TYPE : NC/BPL , RATIO : 200/5 A  
 ISULATION : E , VA : 5  
 FREQUENCY : 50 HZ , CL: 1.0

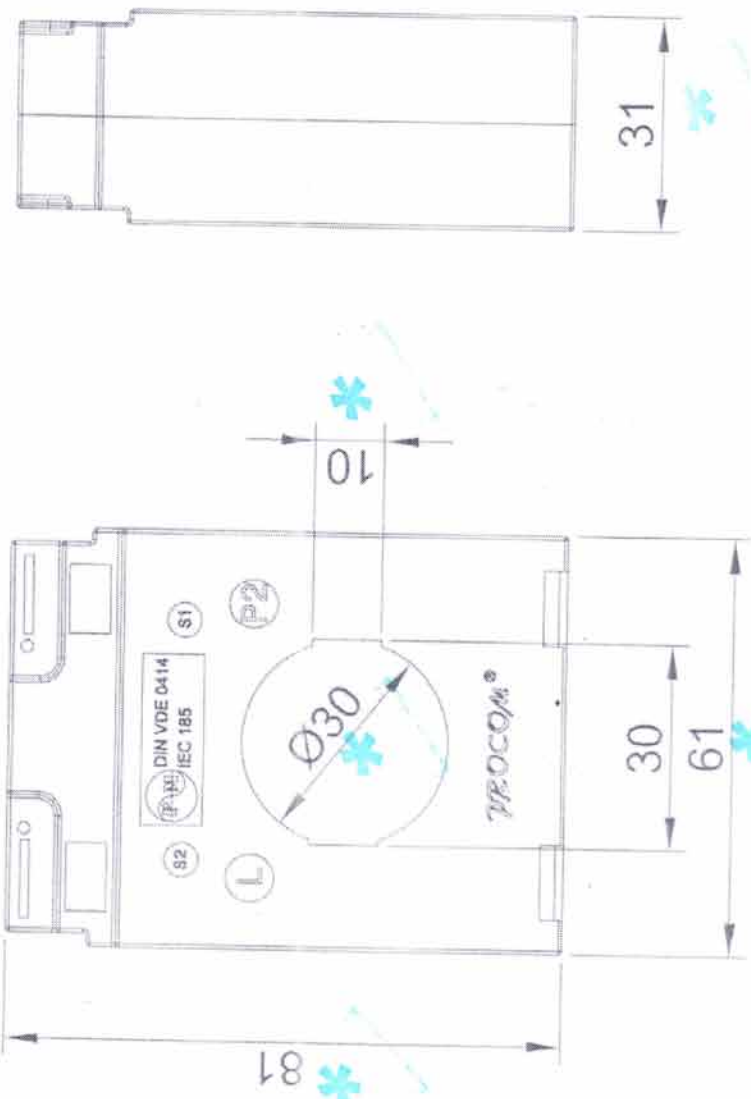
MFR. BY : MRMPROCOM PVT.LTD (FRD)

1753133

*Agarwal*  
PREPARED BY

*Neeraj*  
CHECKED BY





Test Report No. PP-1576-015953  
 Date : 27.07.2015  
 Product : CT  
 Verified By : [Signature]  
 Verification of this drawing by ERDA is limited to relevant dimensional checks only. Verified dimensions are marked with \*.



 <b>MRM PROCOM PVT. LTD.</b> PLOT NO.20-21 SEC. 39, PHAS. FARIDABAD	(a) As per IS:2705/1992 HSV/IL : 0.66/3KV Type : NC/BPL Insulation : E Frequency : 50Hz		(b) Sr. No. 2015070508 Ratio: 200/5A VA: 5 Class: 1.0 Dimensional Tolerance $\pm 5\%$		(c) Drawn Checked/ Approved Scale Date		(d) Drg. No. - MRM/CT/200-5-1-0-071503 Rev. - 00 Sheet No. 03 No. of Sheets 14	
	(a)		(b)		(c)		(d)	
H	G	F	E	D	C	B	A	