Certificate No. : T-0071

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
Fax : +91 (0265) 2638382
E-mail : erda@erda.org
Web : http://www.erda.org

TEST REPORT

NAME & ADDRESS OF CUSTOMER **MRM PROCOM PVT. LTD.** Plot No. 20-21, Industrial Estate, Sector-59, Phase-II, Faridabad-121004, Haryana.	**TEST REPORT NO.**: RP-1516-015945 **DATE** : 27.07.2015 **CUSTOMER REF. NO.** : Nil / **DATE** : 07.07.2015 **DATE OF SAMPLE RECEIPT**: 08.07.2015 **DATE OF TESTING**: 09.07.2015 to 23.07.2015
SAMPLE DESCRIPTION CURRENT TRANSFORMER MFD. BY : MRM PROCOM PVT. LTD. RATIO : 1200/5 A BURDEN : 15 VA CLASS : 0.5 H.S.V./I.L. : 0.66/3 kV FREQUENCY : 50 Hz. Insulation Class : E TYPE : RC/BPL	**SAMPLE IDENTIFICATION** **SR. NO.** : 2015070410 **ERDA SAMPLE CODE NO. :** ERDA-00098794 **DRAWING NO. :** MRM/CT/1200-5-0.5/0715/10 REV.-00 SHEET NO. 10 **ENCLOSURE :** **Annexure-I (As per sheet 1 of 1)**
TEST DETAILS & TEST SPECIFICATION ARE AS PER SHEET NO. 2 OF 4.	
TEST RESULTS : As per sheet: 3 of 4 to 4 of 4.	
REMARKS : The sample **conforms** to the requirements of the mentioned standard as mentioned in tests no. 1 to 6 on sheet no. : 2 of 4.	
PREPARED BY / **CHECKED BY** / **APPROVED BY (S.B.PATEL)**	

Note:
1. This report relates only to the particular sample received in good condition for testing at ERDA.
2. This report cannot be reproduced in part under any circumstances.
3. Publication of this report requires prior permission in writing from Director, ERDA.
4. Only tests asked for by the customer have been carried out.
5. In case of any dispute, Vadodara will be the exclusive jurisdiction & shall be construed as where the cause has arised.

Caution: ERDA is not responsible for the authenticity of photocopied or reproduced test reports. ERDA provides support to customers for verification of the authenticity of test reports issued by ERDA.

1753093

Certificate No. : T-0071

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
Fax : +91 (0265) 2638382
E-mail : erda@erda.org
Web : http://www.erda.org

TEST REPORT NO. : RP-1516-015945 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

High Voltage Products Division • Vadodara

1753092

Certificate No. : T-0071

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
Fax : +91 (0265) 2638382
E-mail : erda@erda.org
Web : http://www.erda.org

TEST REPORT NO. : RP-1516-015945 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

1753091

PREPARED BY CHECKED BY

Certificate No. : T-0071

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
Fax : +91 (0265) 2638382
E-mail : erda@erda.org
Web : http://www.erda.org

TEST REPORT NO. : RP-1516-015945 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.
RATIO : 1200/5 A, BURDEN : 15 VA, CLASS : 0.5				
BURDEN: 100 % at 0.8 Lag. P. F.			BURDEN : 25 % at U. P. F.	
1.27	0.014	120	0.134	2.93
1.73	-0.003	100	0.129	3.25
5.63	-0.139	20	0.068	5.97
9.48	-0.335	5	-0.040	10.25

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. 1200 A*1.2=1440 A) of the primary current at rated frequency was circulated in the primary winding of the CT. Rated burden (i.e. 15 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 : 34.56 °C
2.	Body (Thermocouple method)	70 °C	29.8 °C
3.	Ambient temperature	40 °C	32.6 °C

REMARK: Conforms

PREPARED BY CHECKED BY

1753090

Certificate No. : T-0071

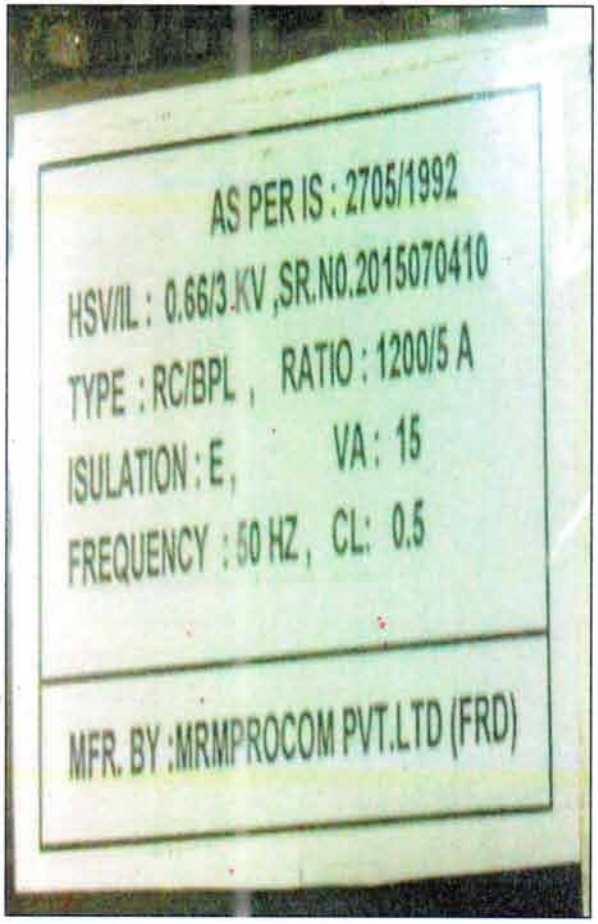
ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION
(Accredited by the National Accreditation Board for Testing and Calibration Laboratories, Govt. of India)
ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.
EPABX : +91 (0265) 2642942, 2642964, 2642377, 3043128 / 29 / 30 / 31 / 33
Fax : +91 (0265) 2638382
E-mail : erda@erda.org
Web : http://www.erda.org

Annexure-I

TEST REPORT NO. : RP-1516-015945 SHEET : 1 OF 1

DATE : 27.07.2015

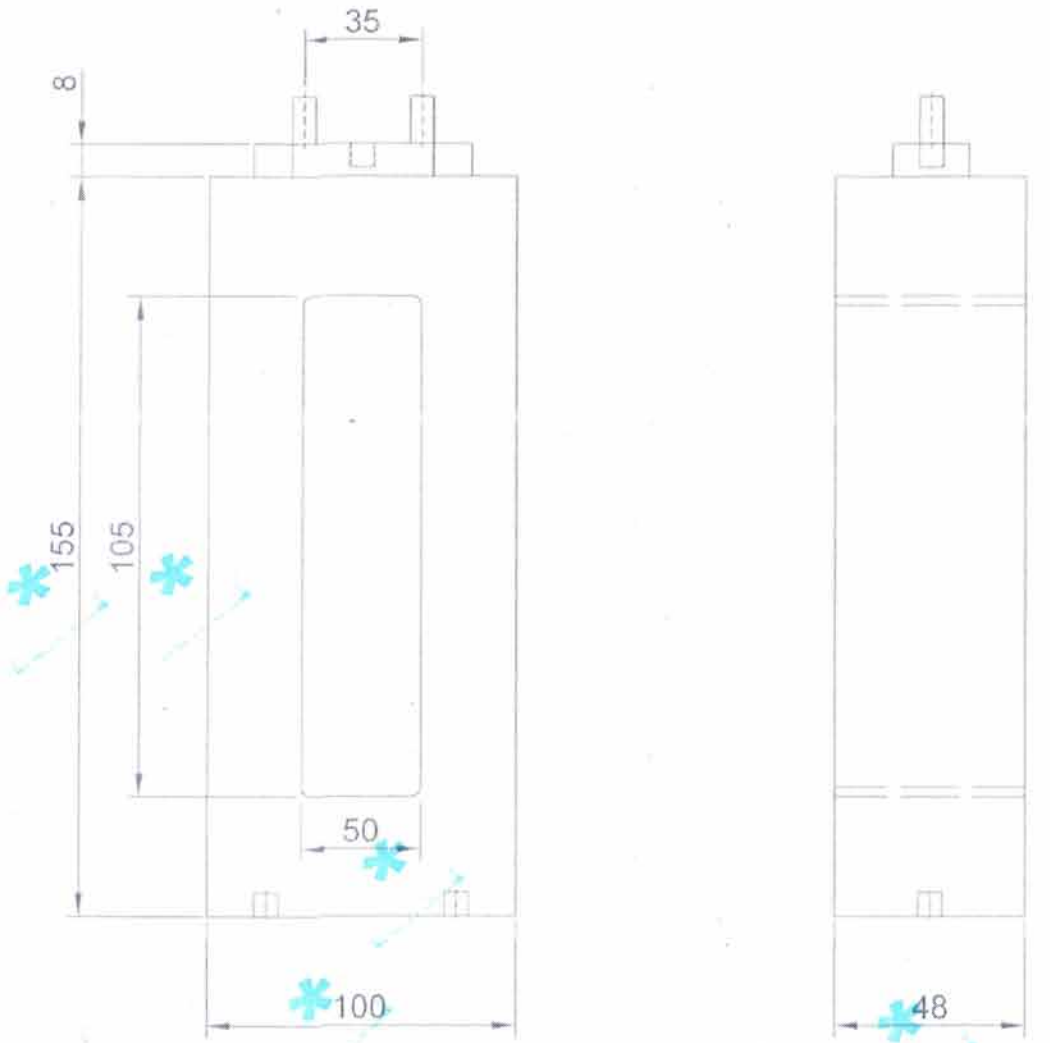
PHOTOGRAPHS OF TEST SAMPLE



1753126

PREPARED BY

CHECKED BY



Test Report No. RP-1516-015945
Date : 27.07.2015
Product :
Verified By : CT Agarwal
Verification of this drawing by ERDA is limited to relevant dimensional checks only.
Verified dimensions are marked with. *

MRM PROCOM PVT. LTD.

(a)	(b)	(c)	(d)		
MRM PROCOM PVT. LTD. PLOT NO 20-21, SEC 59, PH-2, FARIDABAD	As per IS:2705/1992 HSV/IL : 0.66/3KV Type :RC/BPL Insulation : E Frequency: 50Hz	Sr. No. 2015070410 Ratio: 1200/5A VA: 15 Class: 0.5 Dimensional Tolerance ±5%	Drawn	Harvinder Singh	Drg. No. - MRM/CT/1200-5-0.5/0715/10
			Checked/ Approved	Pankaj Gupta	Rev. - 00
			Scale	N.T.S.	Sheet No. 10
			Date	02/07/2015	No. of Sheets 14