



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




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Web : http://www.erda.org



### TEST REPORT

SHEET 01 OF 03

<b>NAME AND ADDRESS OF CUSTOMER</b>  UNITED INSTRUMENT SERVICES 496/4, GIDC, MAKARPURA, VADODARA-390 010.	<b>TEST REPORT NO.:</b> RP-1415-028508 <b>DATE:</b> 30/12/2014	
	<b>CUSTOMER REF. NO.</b>	<b>DATED</b>
	Nil	26/12/2014
	<b>DATE OF SAMPLE RECEIPT</b>	<b>DATE OF TESTING</b>
	26/12/2014	27/12/2014 to 30/12/2014
<b>SAMPLE DESCRIPTION</b>  <b>TYPICAL MCC PANEL</b>  <b>Rating:</b> 415V AC, 50Hz  <b>Containing:</b> MPCB, Contactor, Terminals, Lamp & Push button	<b>SAMPLE IDENTIFICATION</b>  <b>ERDA sample code no.:</b> ERDA-00070191  <b>Drg. No.:</b> UIS/002/2014-2015 (Rev.0) (Sheet 1 of 1) (Total 1 sheet)  <b>Sr. No.:</b> Nil	
	<b>TEST SPECIFICATION</b>  IEC 60529:2001	
<b>TEST DETAILS</b>  1.0 IP 54 tests		
<b>Enclosures:</b> i) Photograph No.: ERDA-00070191/1 to 3 ii) Oscillogram No.: Nil iii) Drg. No.: UIS/002/2014-2015 (Rev.0) (Sheet 1 of 1) (Total 1 sheet)		
<b>Test witnessed by:</b> Mr. Chirag M. Panchal (Project Engg.) of M/s. United Instrument Services, Vadodara.		
<b>Remarks:</b> Sample <b>conforms</b> to the requirement of IP 54 tests as per the standard.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b>

**Note:** 1. This report relates only to the particular sample received for testing in good condition at ERDA.  
2. This report cannot be reproduced in part under any circumstances.

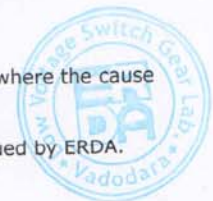
3. Publication of this report requires prior permission in writing from Director, ERDA.

4. Only the 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 arisen.

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**TEST REPORT NO.:** RP-1415-028508

**SHEET 02 OF 03**

**DATE:** 30/12/2014

**TEST RESULTS**

**IP 54 tests: (Protection against ingress of dust, protection against access to hazardous parts with a wire greater than 1.0mm, and protection against splashing water-As per IEC 60529:2001)**

**1.0 IP 5X test:**

**1.1 Protection against ingress of dust-As per Cl. No. 13.4 & 13.5 of IEC 60529:2001**

The sample was kept as in normal use inside the test chamber. The required amount of talcum powder was maintained in suspension throughout the test. The pressure inside the enclosure was maintained to 200 mm column of water below atmosphere. The test was continued for 8 hrs.

After the test, following observation was made:

i) No dust was found inside the enclosure.

**1.2 Protection against access to hazardous parts with a wire greater than 1.0 mm-As per Cl. No. 12.2 & 12.3 of IEC 60529:2001**

The sample was checked from all practically possible areas with straight rigid steel wire free from burrs having 1.0 mm diameter up to 100 mm length with a force 1N.

After the test, following observation was made:

i) The wire did not enter inside the enclosure.

  
**PREPARED BY**

  
**CHECKED BY**

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**DATE:** 30/12/2014

### **2.0 IP X4 test: (Protection against splashing water-As per Cl. No. 14.2.4 & 14.3 of IEC 60529:2001)**

The sample was kept as in normal use. The sample was subjected to water splashing test. The water was splashed on the sample at a delivery rate of 10 l/min from all practicable directions. The distance between nozzle and equipment was maintained approximately 300 mm to 500 mm. The test was continued for 5 minutes.

After the test, following observation was made:

- i) No water was found inside the enclosure.

### **2.1 After IP X4 test**

The following test was carried out.

#### High voltage test

The sample was subjected to test voltage of 2.5 kV (RMS) at 50 Hz (As specified by the customer) for one minute between all live parts connected together and the body. The sample withstood the test voltage.

*Approved*

**PREPARED BY**

*Patel*

**CHECKED BY**



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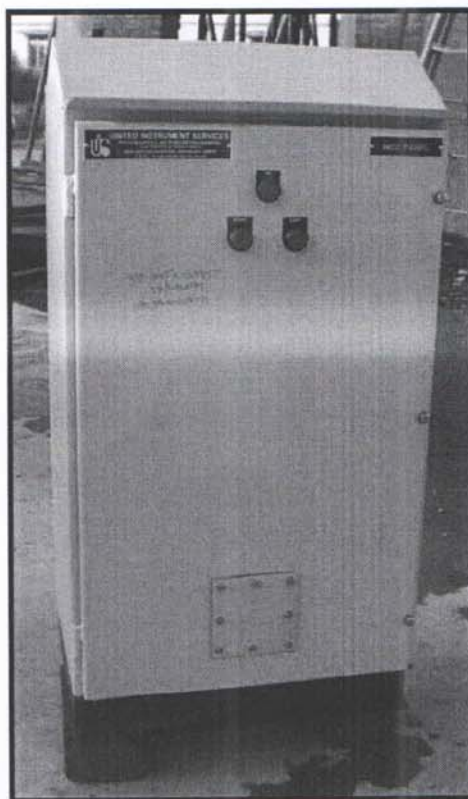
**TEST REPORT NO.:** RP-1415-028508

**DATE:** 30/12/2014



**PHOTOGRAPH NO.:** ERDA-00070191/1

**NAME PLATE**



**PHOTOGRAPH NO.:** ERDA-00070191/2

**TYPICAL MCC PANEL**

TE 1534114



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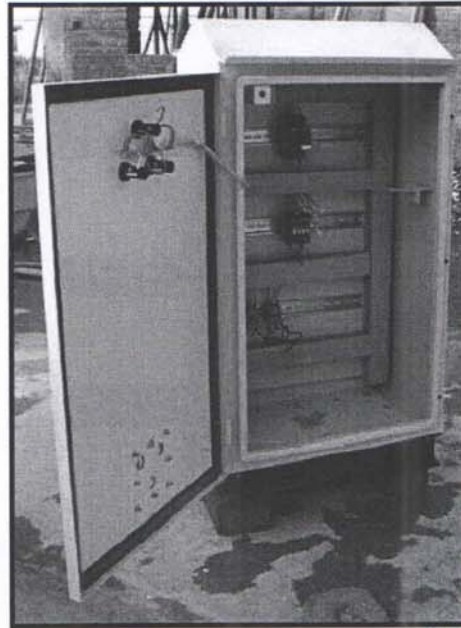
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**TEST REPORT NO.:** RP-1415-028508

**DATE:** 30/12/2014



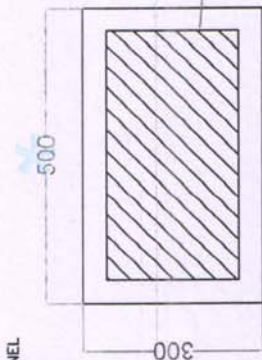
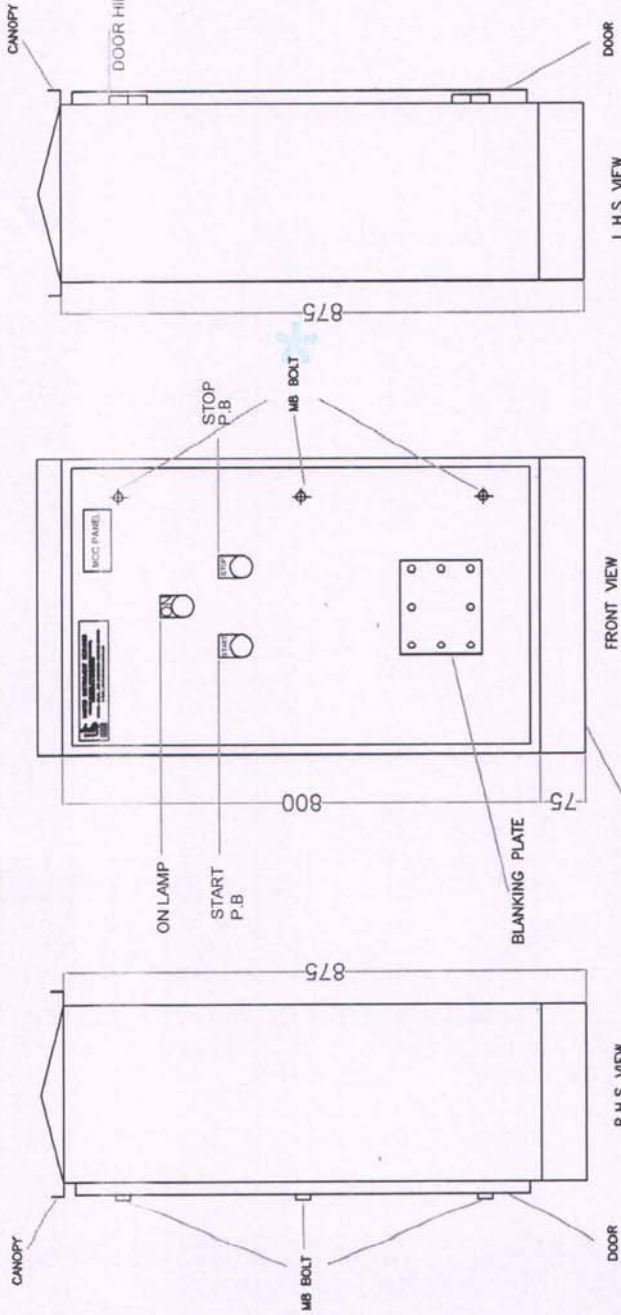
**PHOTOGRAPH NO.:** ERDA-00070191/3

**TYPICAL MCC PANEL**

**TE 1534115**



1 2 3 4 5 6 7 8



**GENERAL SPECIFICATIONS:-**

- ALL DIMENSIONS ARE IN mm.
- FABRICATION WITH CRCA SHEET.
- DOORS :- 14 SWG (2.0mm) GP
- DOORS :- 16 SWG (1.6mm) BASE :- 75X400mm ISMC
- MOUNTING PLATE :- 14 SWG (2.0mm)
- CONSTRUCTION :- NON DRAWOUT, SINGLE FRONT.
- PAINTING :- POWDER COATING AFTER CHEMICAL SURFACE TREATMENT EXTERIOR AND INTERIOR :- SIEMENS GREY (SH. RAL 7035)
- BUSBARS :- NOT APPLICABLE.
- PROTECTION :- IP-54
- FAULT LEVEL :- 25KA
- DOOR LOCK :- METAL CAM LOCK
- ENCLOSURE :- DUST & VERMIN PROOF
- INSTALLATION :- INDOOR, FLOOR MOUNTING.
- CABLE ENTRY :- FROM BOTTOM
- BUS BAR :- 1A
- SYSTEM :- 415V AC 50Hz (3PH+4W)
- WIRE SIZE :- CT CKT. :- 2.50 mm CU FLEXIBLE
- DOOR & GLAND PLATE GASKET :- 25X6 MM RUBBER GASKET

**NOTES :-**

- ALL SWING DOORS WILL BE EARTHED OF 1.5 SQMM GREEN WIRE
- HARDWARE WILL BE CORROSION RESISTANT (YELLOW PASSIVATED)
- ALL DOORS, COVERS WILL HAVE CROSS LINK POLYMER FOAM GASKET

Test Report No. RD/25-028508  
 Date : 30/12/2014  
 Product : Electrical MCC Panel  
 Verified By : *[Signature]*  
 Verification of this drawing by ERDA is limited to relevant dimensional checks only.  
 Verified dimensions are marked with "✓"

UNITED INSTRUMENT SERVICES  
 496/4-GIDC, MAHARAJA, VADODRA-390010



SHEET 1 OF 1  
 DRG. NO:- UIS/002/2014-2015  
 DFN. JHP  
 CHKD. JHP

DATE

REVISIONS

NO. 1

SCALE NTS

REV. 0

DRAWING TITLE : GA DRAWING FOR TYPICAL MCC PANEL

CUSTOMER : FOR ERDA TESTING

PROJECT :

CONSULTANT :

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