

CPRI

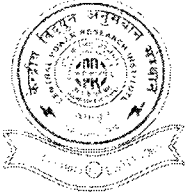
TEST REPORT



Central Power Research Institute

(A Govt. of India Society)

P.B.No. 8066, Sadashivanagar Post Office,
Sir C.V. Raman Road,
Bangalore - 560 080 (INDIA)



CPRI

**HEAT RUN TEST LABORATORY
DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CENTRAL POWER RESEARCH INSTITUTE**
P. B.NO.8066, SADASHIVANAGAR SUB P.O
PROF. SIR.C.V.RAMAN ROAD, BANGALORE - 560 080, INDIA
Phone: + 91 (0) 80-2360 4435 Fax: 080 – 2360 4435



NABL Accredited
Laboratory
Cert.No.T- 0010

Sheet 1 of 4

TEST REPORT

Test Report Number : DCCD - 11005 **Dated:** 09.07.2009

Name & Address of the Customer : M/s. Krishnaa Energy Private Limited,
DP 69, SIDCO Industrial Estate,
Thirumudivakkam,
Chennai-600 044

Name & Address of the Manufacturer : M/s. Krishnaa Energy Private Limited,
DP 69, SIDCO Industrial Estate,
Thirumudivakkam,
Chennai-600 044
Ref: Letter No.: Nil Dated: 30.06.2009

Particulars of sample tested : 11KV, 1250Amps, 25kA, VCB Panel.

Condition of the Sample on Receipt : New

Type : Indoor
Designation : H.T.VCB Panel
Serial Number : NIL
Number of samples tested : One
Date(s) of Test(s) : 01.07.2009.
CPRI sample code no : SC09S1231

Particulars of tests conducted : Milli Volt Drop Test & Temperature Rise Test at 1250 A.

Test in accordance with standard/specification : As per IEC: 62271-200-2003/ IEC: 62271-1- 2007

Sampling plan : NA
Customers requirement : Milli Volt Drop Test & Temperature Rise Test at 1250A.
Deviations if any : Nil

Name of the witnessing persons
Customers representatives : Mr. P.Ramachandran (Manger -R & D)
Other than Customers representatives : Nil
Test subcontracted with address of the laboratory : NA

Documents constituting this report (in words)
Number of Sheets : Four
Number of oscillograms : Nil
Number of graphs : Nil
Number of photos : Nil
Number of Test Circuit Diagrams : Nil
Number of Drawings : Four: (1) KE.0802150-00 Sheet 1 of 1
(2) KE.0802150-00 Sheet 2 of 2
(3) KE.0802150-00 Sheet 3 of 3
(4) KE.0802150-00 Sheet 4 of 4


(G.P. VITTAL)
Test Engineer




(S.RAMA PRASATH)
ENGINEERING OFFICER-V

AUTHORISED SIGNATORIES



CPRI

**HEAT RUN TEST LABORATORY
DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CENTRAL POWER RESEARCH INSTITUTE**
P.B.NO.8066, SADASHIVANAGAR SUB P.O
PROF.SIR.C.V.RAMAN ROAD, BANGALORE - 560 080, INDIA
Phone: + 91 (0) 80-2360 4435 Fax: 080 – 2360 4435



NABL Accredited
Laboratory
Cert.No.T- 0010

Sheet 2 of 4

TEST REPORT

Test Report No.: DCCD - 11005

Dated: 09.07.2009

TEST RESULTS

1. Milli volt drop test (Resistance measurement of the main circuit):

As per Cl 6.4 of IEC: 62271-200-2003 / IEC: 62271-1- 2007

Magnitude of current passed: 100 Amperes dc

Test condition: At room temperature

Point of measurement: dc voltage drop across the terminals of the panel, breaker in closed position.

Specified values as per Cl. 6.4 of IEC Pub: 62271-1-2007	Voltage drop (mV)			Results / Remarks
		Before temperature rise test °C	After temperature rise test °C	
The measured values before and after temperature rise test shall not differ by more than 20%.	Ambient temperature	29.0	29.0	
	R phase	53.65	57.50	Within limits
	Y phase	55.05	57.95	Within limits
	B phase	60.60	62.00	Within limits

1. Temperature Rise Test: As per Cl.6.5 of IEC: 62271-200-2003 / IEC: 62271-1- 2007

Temporary connections:

Connections	Material	Quantity (Numbers)	Length (mm)	Section mm ²	Remarks
Incoming side	Copper flexible braids	Two	2000	400	Each Phase
	Copper busbar	One	1500	63X12	Each Phase
Outgoing side	Copper busbar	One	1500	63X12	Each Phase
	Copper busbar (Shorting)	One	470	50X10	Across RYB Phases

2. Magnitude of current passed:

R phase: 1250 Amps	Y Phase: 1250 Amps	B Phase: 1250 Amps
Frequency 49.1 Hz to 49.5 Hz		


(G.P.VITTAL)
Test Engineer



CPRI

HEAT RUN TEST LABORATORY
DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CENTRAL POWER RESEARCH INSTITUTE

P.B.NO.8066, SADASHIVANAGAR SUB P.O
PROF.SIR.C.V.RAMAN ROAD, BANGALORE - 560 080, INDIA
Phone: + 91 (0) 80-2360 4435 Fax: 080 - 2360 4435



NABL Accredited
Laboratory
Cert.No.T- 0010

Sheet 3 of 4

TEST REPORT

Test Report No.: DCCD - 11005

Dated: 09.07.2009

Average ambient temperature: 31.6°C
Temperature rise of the various parts at steady state:

Parts of Assemblies	Temperature rise at ambient air temperature not exceeding 40°C (as per Table 3 & Cl.6.5 of IEC :(62271-1- 2007)-(K)	Temperature rise (K)			Results / Remarks		
		R Phase	Y Phase	B Phase	R Phase	Y Phase	B Phase
VCB Contacts : (Silver Plated-In air)							
a) Incoming Contacts	65	58.6	60.1	48.7	Within limit	Within limit	Within limit
b) Outgoing Contacts	65	58.7	58.8	49.8	Within limit	Within limit	Within limit
Terminals: Breaker-(Tin Plated)							
a) Incoming	65	58.4	50.1	53.0	Within limit	Within limit	Within limit
b) Outgoing	65	50.7	50.9	38.7	Within limit	Within limit	Within limit
Panel - (Bare Copper-In air)							
a) Incoming	50	44.1	49.4	33.1	Within limit	Within limit	Within limit
c) Outgoing	50	33.2	34.4	34.4	Within limit	Within limit	Within limit
Busbar: (Bare Copper-In air)	50	50.3	48.5	44.8	Within limit	Within limit	Within limit
Accessible Parts - Expected to be touched in normal operation (Body-Top)	30	09.6			Within limit		

(G.P.VITTAL)
Test Engineer



CPRI

**HEAT RUN TEST LABORATORY
DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CENTRAL POWER RESEARCH INSTITUTE**

P.B.NO.8066, SADASHIVANAGAR SUB P.O
PROF.SIR.C.V.RAMAN ROAD, BANGALORE - 560 080, INDIA
Phone: + 91 (0) 80-2360 4435 Fax: 080 – 2360 4435



NABL Accredited
Laboratory
Cert.No.T- 0010

Sheet 4 of 4

TEST REPORT

Test Report No.: DCCD - 11005

Dated: 09.07.2009

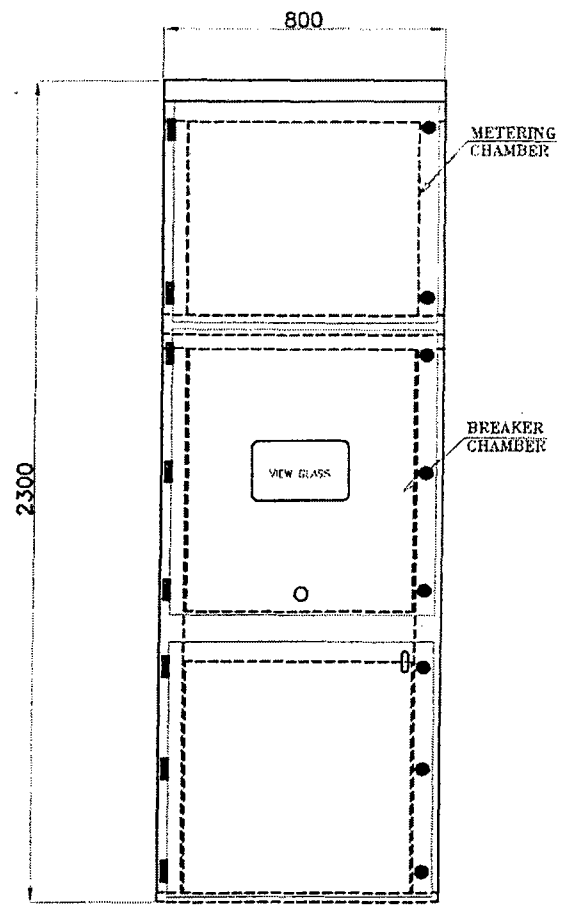
NOTE

- a) The test results relate only to the item(s) tested.
- b) Publication or reproduction of this test report in any form other than by complete set of the whole report and in the language written, is not permitted with out the written consent of CPRI
- c) Any correction/erasure invalidates this test report.
- d) Any anomaly/discrepancy in this test report should be brought to our notice within 45 days from the date of issue.

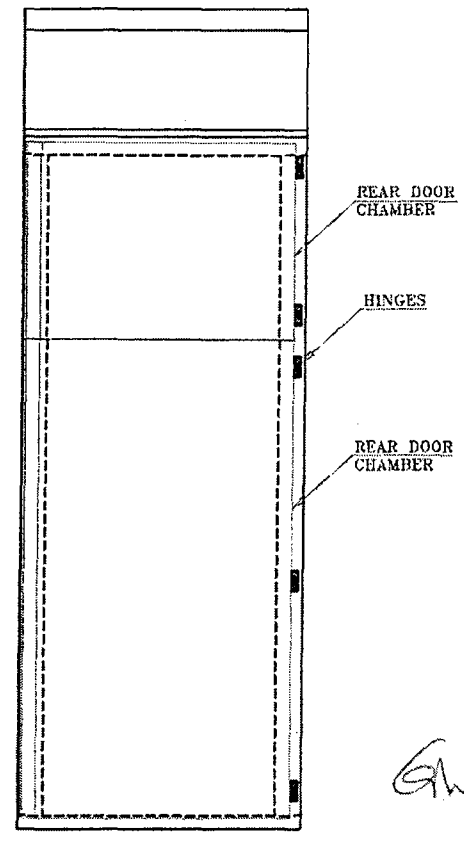

(G.P.VITTAL)
Test Engineer

THIS DRAWING IS THE PROPERTY OF MARUTHI ENERGY (INDIA) PVT LTD., AND MUST NOT BE COPIED OR REPRODUCED WITHOUT THEIR CONSENT.

THE POLICY OF MARUTHI ENERGY IS CONTINUAL IMPROVEMENT & DEVELOPMENT.



FRONT VIEW

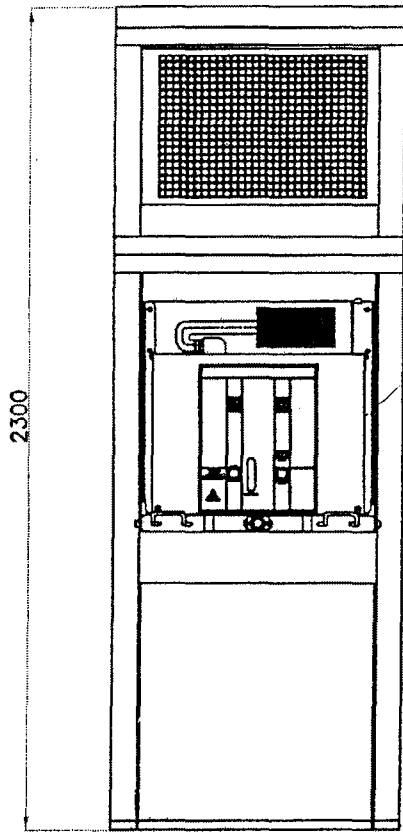


REAR VIEW

11005
09.07.2009
Ghanta

MATERIAL:-		QTY: 1 NO.		ALL DIMENSIONS ARE IN mm		DESCRIPTION: GA FOR 11KV, 1250A, 25KA/Sec INDOOR METAL ENCLOSED VCB PANEL		BRAND		DRAWING NO:	
FINISH:-						MFG BY:		KRISHNA		KE.0802150-00	
						KRISHNAA ENERGY PVT LTD.,		SCALE : N.T.S.		SHEET.No.	
						SURVEY.No.184/2, SIDCO INDUSTRIAL ESTATE				1 OF 1	
						THIRUMKUZHAVAKKAM, CHENNAI - 44				REF.No-	
0		PSK	S.S	S.S	25/7	www.maruthienergy.com					
REV. DATE	REMARKS	DRAWN	CHD.	APPD.	SIGN	DATE	FILE NAME:	D:\SIVA\ASSEMBLY\DEV			

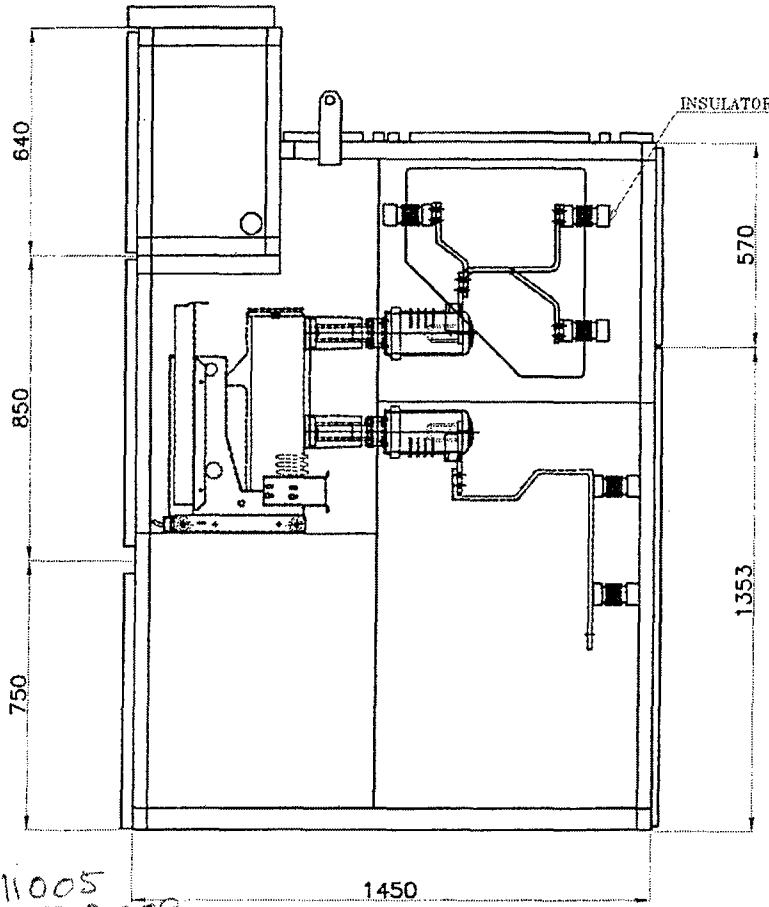
THIS DRAWING IS THE PROPERTY OF MARUTHI ENERGY (INDIA) PVT LTD., AND MUST NOT BE COPIED OR REPRODUCED WITHOUT THEIR CONSENT.



FRONT VIEW

CIRCUIT BREAKER

2300



SECTIONAL VIEW

INSULATOR

640

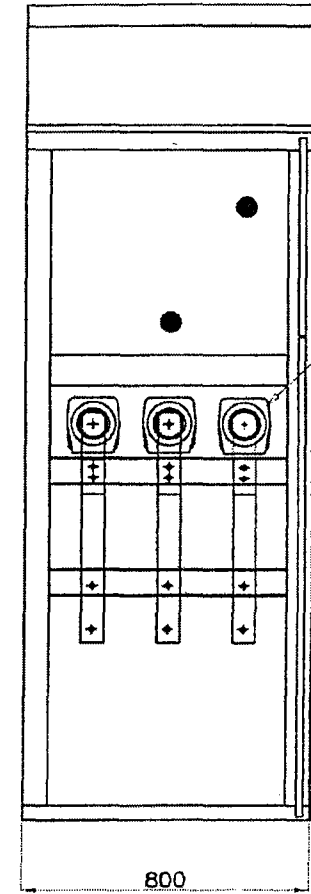
850

750

1450

570

1353



REAR VIEW

SPOUT

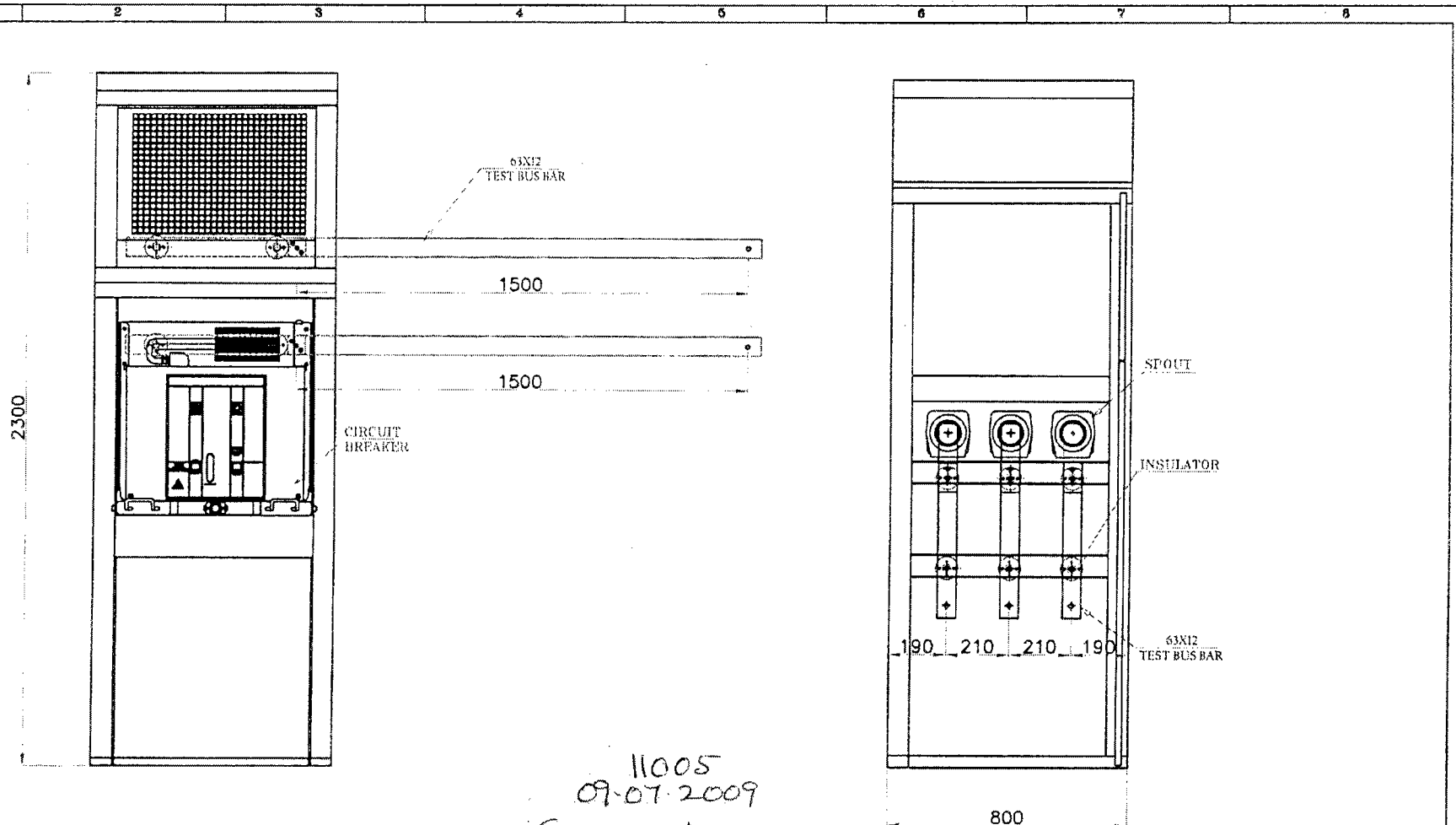
800

11005
09.07.2009
Chinn

MATL:-		QTY: 1NO.		ALL DIMENSIONS ARE IN mm		DESCRIPTION: GA FOR 11KV, 1250A, 25KA/3sec INDOOR METAL ENCLOSED VCB PANEL		BRAND: KRISHNA		DRAWING NO: KE.0802150-00		
FINISH:-						MFG BY: KRISHNAA ENERGY PVT LTD.,		SCALE: N.T.S.		SHEET.No. 2 OF 2		
						SURVEY.No:194/2, SIDCO INDUSTRIAL ESTATE, THEERAMUDYAKKAM, CHENNAI - 44		REF.No-				
						www.maruthienergy.com						
0		PSK	S.S	S.S	25/7	FILE NAME: D:\SIVA\ASSEMBLY\DEV						
REV.	DATE	REMARKS		DRAWN	CHD.	APPD.	SIGN	DATE				
1				3				6				
2				3				6				

THE POLICY OF MARUTHI ENERGY IS CONTINUAL IMPROVEMENT & DEVELOPMENT.

THIS DRAWING IS THE PROPERTY OF MARUTHI ENERGY (INDIA) PVT LTD., AND MUST NOT BE COPIED OR REPRODUCED WITHOUT THEIR CONSENT.



11005
09-07-2009
Shilpa

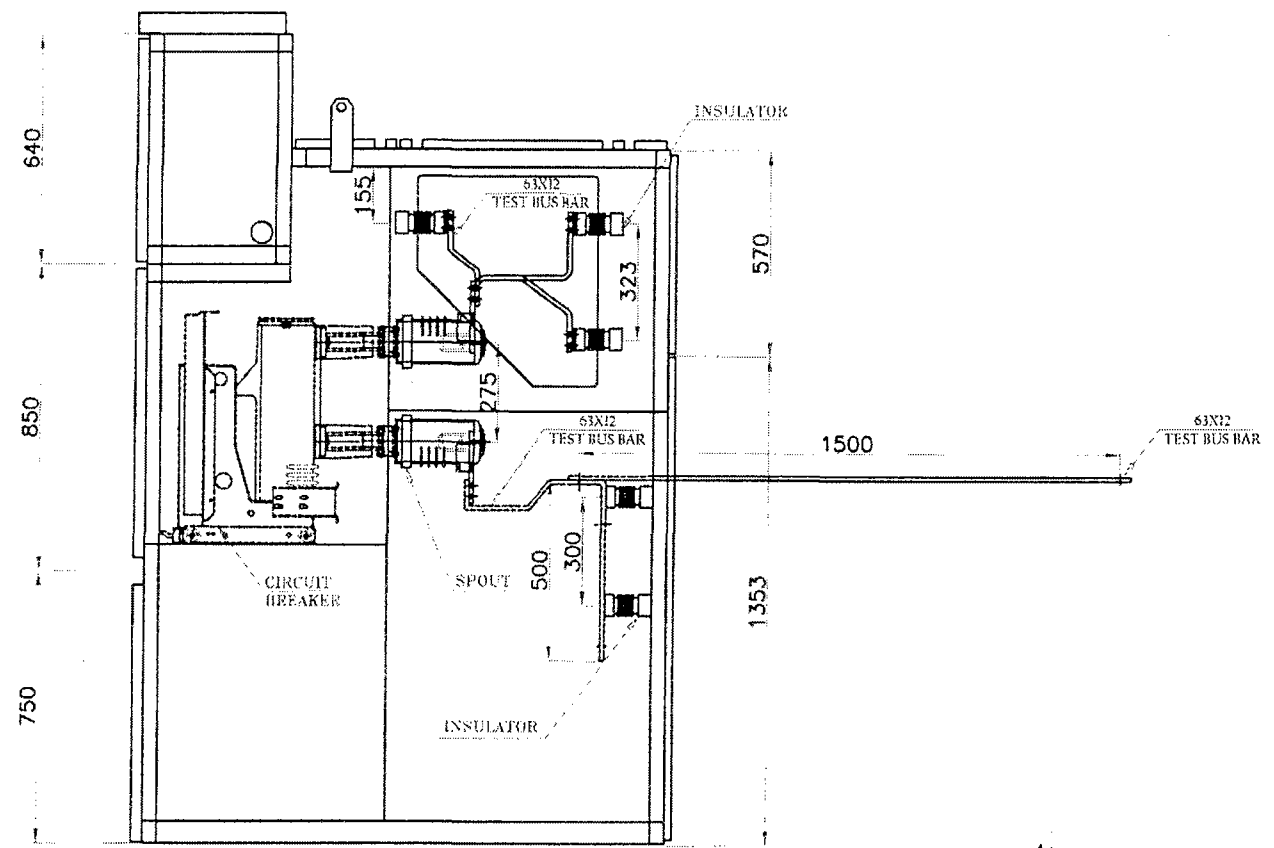
FRONT VIEW

REAR VIEW

MATL:-		QTY: 1NO.		ALL DIMENSIONS ARE IN mm				DESCRIPTION: GA FOR 11KV, 1250A, 25KA/3sec INDOOR METAL ENCLOSED VCB PANEL		BRAND		DRAWING NO:	
FINISH:-								MPG BY:		KRISHNA		KE.0802150-00	
								KRISHNAA ENERGY PVT LTD.,		SCALE : N.T.S.		SHEET.No.	
								SURVEY.No:184/2, SIDCO INDUSTRIAL ESTATE THIRUMALDIVAKKAM, CHENNAI - 44 www.maruthienergy.com				3 OF 3	
0		PSK	S.S	S.S		25/7	FILE NAME: D:\SIVA\ASSEMBLY\DEV				REF.No-		
REV. DATE	REMARKS	DRAWN	CHD.	APPD.	SIGN	DATE							

THE POLICY OF MARUTHI ENERGY IS CONTINUAL IMPROVEMENT & DEVELOPMENT.

THIS DRAWING IS THE PROPERTY OF MARUTHI ENERGY (INDIA) PVT LTD., AND MUST NOT BE COPIED OR REPRODUCED WITHOUT THEIR CONSENT.



SECTIONAL VIEW

11005
09.07.2009
Amith J

MATL:-		QTY: 1NO.		ALL DIMENSIONS ARE IN mm.				DESCRIPTION: GA FOR 11KV,1250A,25KA/3sec INDOOR METAL ENCLOSED VCB PANEL				BRAND		DRAWING NO:			
FINISH:-								MFG BY:				KRISHNA		KE.0802150-00			
								KRISHNAA ENERGY PVT LTD.,				SCALE : N.T.S.		SHEET.No.			
								SURVEY.No:184/2, SIDCO INDUSTRIAL ESTATE						4 OF 4			
								THERUMUDIVAKKAM, CHENNAI - 44									
0								www.maruthienergy.com									
REV. DATE		REMARKS		DRAWN		CHD.		APPD.		SIGN		DATE		FILE NAME: D:\SIVA\ASSEMBLY\DEV		REF.No-	

THE POLICY OF MARUTHI ENERGY IS CONTINUAL IMPROVEMENT & DEVELOPMENT.