

सी पी आर आई  
भारत

**CPRI  
INDIA**

परीक्षण रिपोर्ट  
TEST REPORT





CPRI

**Central Power Research Institute**  
(Member of STL)  
SWITCHGEAR TESTING & DEVELOPMENT STATION  
GOVINDPURA , BHOPAL-462023, INDIA

Phone: +91(0)755 2586682 Fax:+ 91(0)755 2587774



Certificate No. T-0011

**TEST REPORT**

Sheet 1 of 5

**Test Report Number**

S2090701

**Date :**

15 DEC 2009

**Name & address of the Customer**

M/s Sun- Tech Engineers,  
909/1/C, G.I.D.C., Makarpura,  
Vadodara - 10  
Gujrat

**Name & address of the Manufacturer**

M/s Sun - Tech Engineers,  
909/1/C, G.I.D.C., Makarpura,  
Vadodara - 10  
Gujrat

**Particulars of sample tested**  
**Condition of sample on Receipt**

L.T. Switchboard  
New

Type  
Designation  
Serial number  
Number of samples tested  
Date(s) of Test(s)  
CPRI sample code no.

Extendable  
PMCC  
STE 09-10/1285  
One  
27<sup>th</sup> November, 2009  
STDSSST209S0929

**Particulars of tests conducted**  
**Test in accordance with Standard/specification**

Verification of the short circuit withstand strength  
As per clause 8.2.3 of IS: 8623 (Part-I), 1993

Sampling plan  
Customer's requirement  
Deviations if any

Not applicable  
Nil  
Nil

**Name of the Witnessing persons**

Customer's representative  
Other than Customer's representatives  
Test subcontracted with  
address of the laboratory

Shri Jagdish Dave  
Nil  
None

**Documents constituting this report (in words)**

Number of sheets  
Number of oscillograms  
Number of graphs  
Number of photos  
Number of Test circuit diagrams  
Number of drawings

Five  
Two  
Nil  
One  
Two  
Three

(SAUMITRA PATHAK)  
TEST ENGINEER



(ANUPAM AWASTHI)  
JOINT DIRECTOR

AUTHORISED SIGNATORIES



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**Summary of test**

**Test conducted** Verification of the short circuit withstand strength

**Rating for which tested** 50 kArms for 1.0 second with initial peak of 105 kA

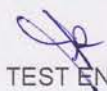
**Documents constituting this report**

Oscillogram numbers S2090701.S02, S04

Photograph number P-1

Test circuit diagram number OLTS/TCD-STC-01 & OLTS/TCD-STC-02

Drawing numbers STE/TEST/01sheet 1 of 3,  
 STE/TEST/01sheet 2 of 3,  
 STE/TEST/01sheet 3 of 3

  
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## Ratings assigned by manufacturer

Test sample	L.T. Switchboard
Type	Extendable
Designation	PMCC
Serial number	STE 09-10/1285
Rated operational voltage	415 V
Rated current	3200 A
Rated insulation voltage	660 V
Rated frequency	50 Hz
Number of phases	Three phase + Neutral
Rated short-time current	50 kArms for 1.0 second with initial peak of 105 kA

Remark : Nil

  
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## Verification of the short circuit withstand strength (cl. 8.2.3)

### Test conditions:

Condition of the sample : New  
 No. of phases : Three & Neutral  
 Source frequency : 50Hz.  
 Transformer neutral & short circuit point : See test circuit diagram no. OLTS/TCD-STC-01 for three phase test and OLTS/TCD-STC-02 for single phase test  
 Safety parameter : The sample was insulated from earth and connected to neutral of the supply via a fuse of 0.1mm diameter copper wire 50mm long in series with a resistor limiting the fault current to 100A

### Test results:

Oscillogram Number	Peak kA	RMS in kA			Duration (second)	Equivalent current in kArms for 1 second
		Ir	Iy	Ib		
Three phase STC test on HBB + VBB (Peak in R - phase).						
Test circuit diagram: OLTS/TCD-STC-01						
S2090701.S02	106.40	51.02	51.20	50.98	1.0	51.20
Single phase test on neutral and nearest phase of HBB + VBB.						
Test circuit diagram: OLTS/TCD-STC-02						
S2090701.S04	64.00	30.28			1.0	30.28

### Observations

During test : No abnormality.  
 After test : No abnormality. Fine wire fuse intact. All busbars and supports intact.  
 Remarks : After short circuit test the sample withstood HV test at 2.5 kVrms for one minute as per standard.

Conclusion : The test results indicate that the sample tested complies with the requirement of cl. 8.2.3 of the standard.

  
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