



# GHAZIABAD TESTING LABORATORIES PVT. LTD.

## TEST REPORT ULR No. : TC-120482410000302F

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**Name & Address of the Customer** : M/s. PANNA & SONS  
1826/1, Old Amarnath Building, Bhagirath  
Place Delhi-110006

**Factory Address** : A-176 Harit Vihar Pepsi Road , Busari

**Reference No./Date** : Nil/ Dated : 17/06/2024

**Sample Code No./ Report No.** : TC12048-240619-302

**Report Date** : 24/06/2024

**Sample Received On** : 19/06/2024

**Analysis Date** : 20/06/2024 To 24/06/2024

**Report Prepared On** : 24/06/2024

**Sampled By** : Customer

**Sample Description** : 11 kV, 630 Amps. 3 Phase, AB Switch.

**Test Specification** : [As per Customer requirement & Generally Test Procedure was followed as per IS: 9920 (Part-4) 1985 (R.A.-2007)/ IEC: 62271-103:2021 with latest amendments]

**Condition of the Sample on receipt** : Sample Received in good condition

**Drawing No.** : "10001"



+91-120-3116001, +91-120-3115683, +91-120-2866108

info@gtllab.org www.gtllab.org

Plot No. 29, Prem Vihar, Bisrakh Road, Chhapraula,  
Ghaziabad Uttar Pradesh - 201009 (India)





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**1. Dry Lightning Impulse Voltage Withstand Test.  
(15 Consecutive Impulse of 1.2/50 $\mu$  s applied)**

S. No.	Insulator Position	Test Voltage	Voltage Applied to	Earth Connected to	Results
I	Close	75 kV <sub>p</sub>	Aa	BCbc F	Withstood both (+ve) & (-ve) Polarities
li	Close	75 kV <sub>p</sub>	Bb	ACac F	Withstood both (+ve) & (-ve) Polarities
III	Close	75 kV <sub>p</sub>	Cc	ABab F	Withstood both (+ve) & (-ve) Polarities
Iv	Open	85 kV <sub>p</sub>	A	BCabc F	Withstood both (+ve) & (-ve) Polarities
v	Open	85 kV <sub>p</sub>	B	ACabc F	Withstood both (+ve) & (-ve) Polarities
Vi	Open	85 kV <sub>p</sub>	C	ABabc F	Withstood both (+ve) & (-ve) Polarities
VII	Open	85 kV <sub>p</sub>	a	A	Withstood both (+ve) & (-ve) Polarities
VIII	Open	85 kV <sub>p</sub>	b	B	Withstood both (+ve) & (-ve) Polarities
IX	Open	85 kV <sub>p</sub>	c	C	Withstood both (+ve) & (-ve) Polarities

**2. One Minute Power Frequency Voltage Withstand Test. Dry**

S. No.	Insulator Position	Test Voltage	Voltage Applied to	Earth Connected to	Results
I	Close	55 kV <sub>rms</sub>	Aa	BCbc F	Withstood both (+ve) & (-ve) Polarities
li	Close	55 kV <sub>rms</sub>	Bb	ACac F	Withstood both (+ve) & (-ve) Polarities
III	Close	55 kV <sub>rms</sub>	Cc	ABab F	Withstood both (+ve) & (-ve) Polarities
Iv	Open	65 kV <sub>rms</sub>	A	BCabc F	Withstood both (+ve) & (-ve) Polarities
v	Open	65 kV <sub>rms</sub>	B	ACabc F	Withstood both (+ve) & (-ve) Polarities
Vi	Open	65 kV <sub>rms</sub>	C	ABabc F	Withstood both (+ve) & (-ve) Polarities
VII	Open	65 kV <sub>rms</sub>	a	A	Withstood both (+ve) & (-ve) Polarities
VIII	Open	65 kV <sub>rms</sub>	b	B	Withstood both (+ve) & (-ve) Polarities
IX	Open	65 kV <sub>rms</sub>	c	C	Withstood both (+ve) & (-ve) Polarities



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### 3. One Minute Power Frequency Voltage Withstand Test (Wet)

S. No.	Insulator Position	Test Voltage	Voltage Applied to	Earth Connected to	Results
I	Close	45 kV <sub>rms</sub>	Aa	BCbc F	Withstood both (+ve) & (-ve) Polarities
li	Close	45 kV <sub>rms</sub>	Bb	ACac F	Withstood both (+ve) & (-ve) Polarities
III	Close	45 kV <sub>rms</sub>	Cc	ABab F	Withstood both (+ve) & (-ve) Polarities
Iv	Open	55 kV <sub>rms</sub>	A	BCabc F	Withstood both (+ve) & (-ve) Polarities
v	Open	55 kV <sub>rms</sub>	B	ACabc F	Withstood both (+ve) & (-ve) Polarities
Vi	Open	55 kV <sub>rms</sub>	C	ABabc F	Withstood both (+ve) & (-ve) Polarities
VII	Open	55 kV <sub>rms</sub>	a	A	Withstood both (+ve) & (-ve) Polarities
VIII	Open	55 kV <sub>rms</sub>	b	B	Withstood both (+ve) & (-ve) Polarities
IX	Open	55 kV <sub>rms</sub>	c	C	Withstood both (+ve) & (-ve) Polarities

4.	Visual Examination	Visual Checked	Free from any Physical defects within tolerance.
5.	Verification of Dimensions	Sample dimensions verified with drawing no. "10010"	Dimension verified & found Within tolerance as per drawing no. "10010"



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S. No.	Tests	Results						
6.	<b>Temperature Rise Test</b>  Test Current <b>630 Amps , 50 Hz</b>	Max. Temperature rises above ambient temperature of 35.2 °C :  (i) Terminal (1)- 34 °C (ii) Terminal (2) - 32 °C (iii) Contact - 33 °C -Within sp. Limit						
7.	Measurement of contact resistance (By Milli Volt Drop Test) [Before Temperature Rise Test]  Test Current <b>100 Amps D.C</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Phase 1</td> <td style="text-align: center;">9.20 mV</td> </tr> <tr> <td>Phase 2</td> <td style="text-align: center;">9.54 mV</td> </tr> <tr> <td>Phase 3</td> <td style="text-align: center;">9.33 mV</td> </tr> </table>	Phase 1	9.20 mV	Phase 2	9.54 mV	Phase 3	9.33 mV
Phase 1	9.20 mV							
Phase 2	9.54 mV							
Phase 3	9.33 mV							
8.	Measurement of contact resistance (By Milli Volt Drop Test) [After Temperature Rise Test]  Test Current <b>100 Amps D.C</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Phase 1</td> <td style="text-align: center;">9.30 mV</td> </tr> <tr> <td>Phase 2</td> <td style="text-align: center;">9.72 mV</td> </tr> <tr> <td>Phase 3</td> <td style="text-align: center;">9.50 mV</td> </tr> </table>	Phase 1	9.30 mV	Phase 2	9.72 mV	Phase 3	9.50 mV
Phase 1	9.30 mV							
Phase 2	9.72 mV							
Phase 3	9.50 mV							
9.	<b>Mechanical Endurance Test</b>  The test was done manually by operating 1000 operating cycles without voltage & current. After the test all parts including of the Isolator found in good condition and no undue wear seen. Hence sample is satisfactory in mechanical endurance test.	Withstood Satisfactory						



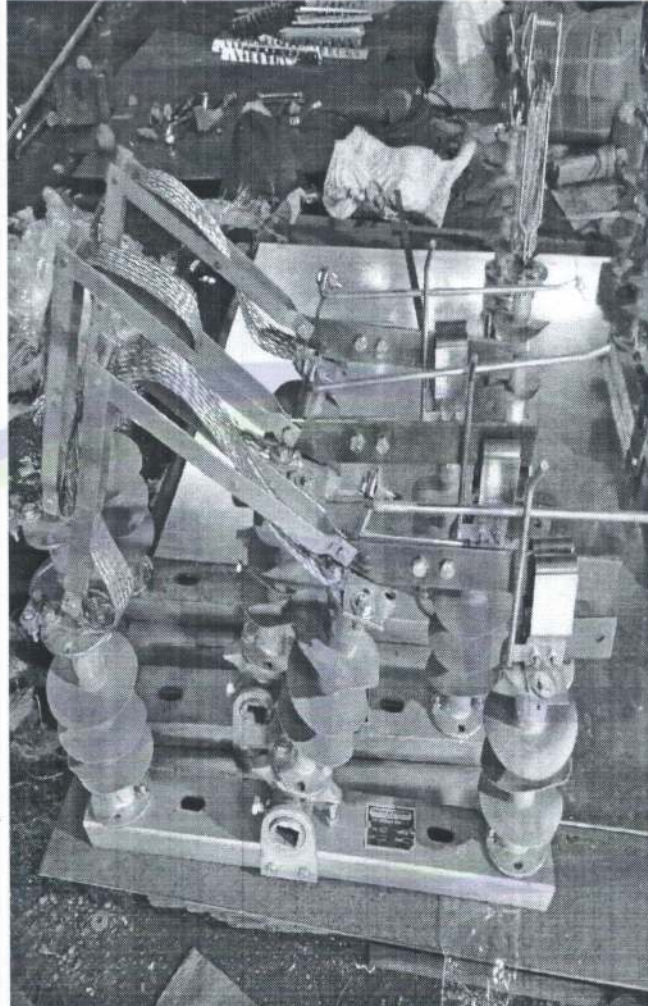
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### Photograph of Sample



**Remarks:** Sample meets the requirement as per specified limits as laid down in IS: 9920 (Part-4) 1985 (R.A.-2007)/ IEC: 62271-103:2011 as observed for the above test parameters only.

\*\*\*\*\*End of Report\*\*\*\*\*

**Note:**

- ❖ This Test report conforms to above test parameters only submitted for testing.
- ❖ Decision Rule applied- Yes/ No UM ±
- ❖ The sample description is not verified in all cases and is given as described by the customer.
- ❖ Samples not drawn by us and the analysis conducted as received basis unless specified otherwise.
- ❖ Tested sample will be disposed off after 30 days from the date of issue of test report unless until specified by customer.
- ❖ Complaints about this report should be communicated in writing within seven days of issue date of this report.
- ❖ This report is not to be reproduced wholly or in part and cannot be used as an evidence in the Court of law and shall not be used in the advertising media without our prior permission from the Director.
- ❖ Laboratory shall maintain the confidentiality of all information related to the samples & Test Reports.



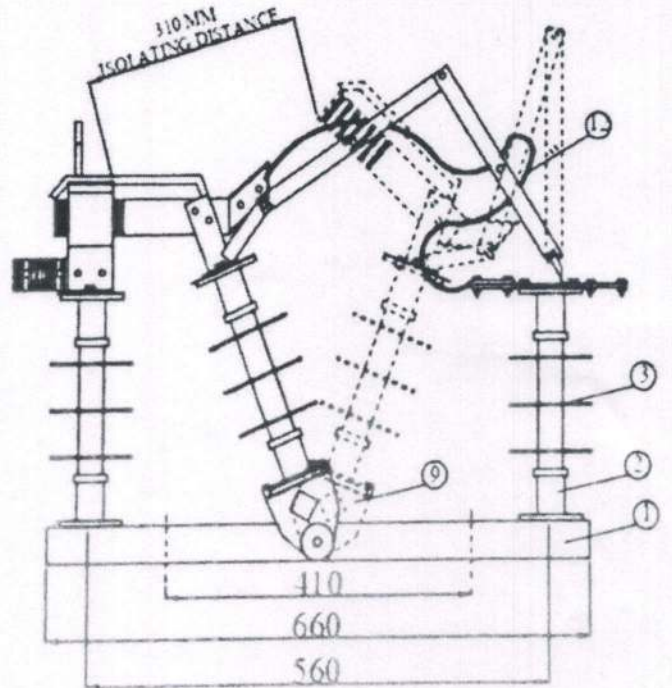
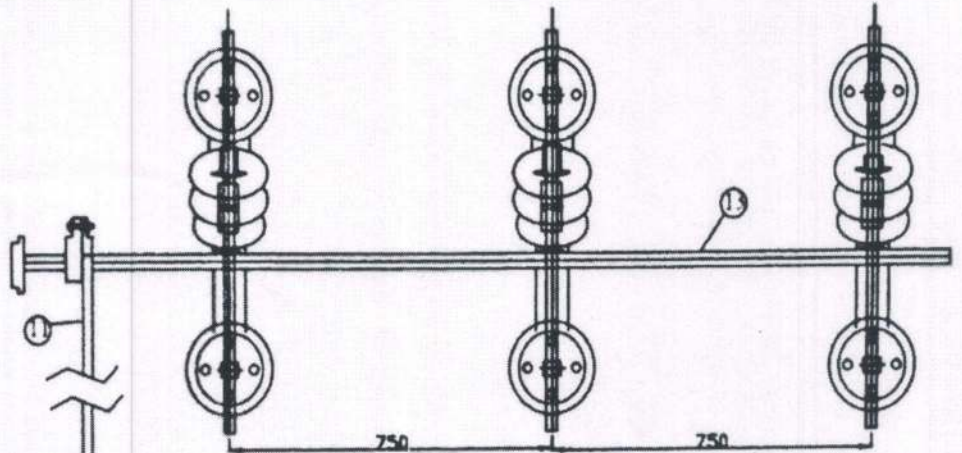
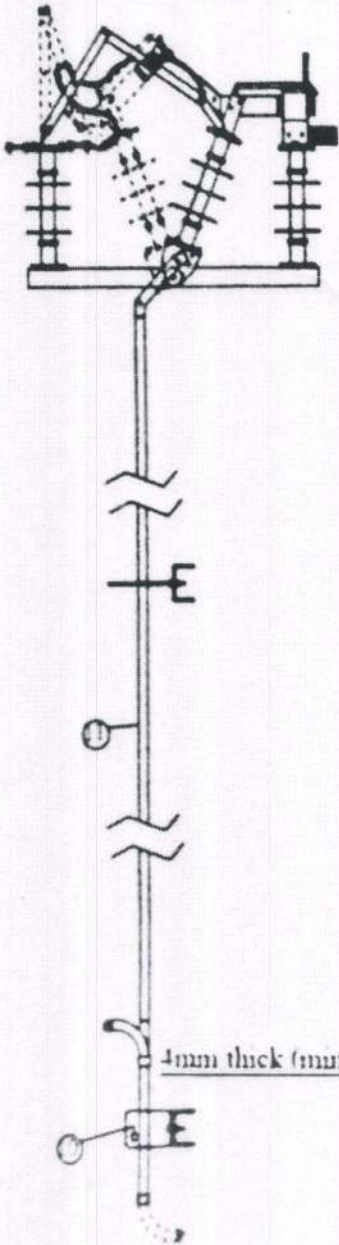
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# PANNA & SONS

1826/1, OLD AMARNATH BUILDING, BHAGIRATH PLACE, DELHI - 110006



4mm thick (mm)

Operating Handle



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PANNA & SONS  
NEW DELHI

**PANNA & SONS**

TITLE  
11 KV AB SWITCHES 3-PHASE 630 Amp.

TOLERANCED DIMENSIONS 5.0 TOLERANCED HOLE CENTRE 2.0

ALL DIMENSIONS ARE IN mm.  
UNLESS OTHERWISE STATED.

PROJECTION



DRAWN Vinod

CHKD

DRAWING NO

REV

DATE 22-06-24

SCALE NTS

10001

A