

Electrical Test Division

**Type Test Report
(As Per IEC - 60502 & IEC - 61442, IEC - 60840)**

1. Test Report no & Date : ELECTRICAL/HV/ACCESSORIES/1402
Dated 16/11/2008
2. Name & Address of Client : A-1 Electricals, Plot No. 47, Balaji Industrial Estate,
Survey No 172/1, Opp. Krishna Park Hotel,
Gondal Road, Kotharia, Rajkot - 360005, Gujarat, India
3. Product Description : Heat Shrinkable Termination and Straight through Joint
4. Test Specimen Details : 11 KV 3 x 240 sq. MM XLPE Cable
Screened, armoured cable having Heat Shrinkable Indoor
Termination at one end, outdoor Termination at other end
Heat Shrink Straight Joint in the middle.
5. Conformant / Test Standard : IEC - 60502, 61442, 60840
6. No of Specimen Tested : One
7. Particulars of Test Conducted : AC Voltage withstand test (Dry) 5 minutes
AC Voltage withstand test (wet) 1 minute
Impulse Voltage Withstand Test
Load Cycle Test for 60 Cycles
Humidity and salt fog test
High Voltage Test (DC)
Partial Discharge Test
DC High Voltage Test for 15 minutes
8. Test Results : Specimen withstood all the tests

9. AC High Voltage Test (Dry) for 5 minutes Duration.

S. No.	Test Description	Test Voltage	Duration	Results
1.	Core against grounded	39 KV	5 Minute	Withstood

10. AC High Voltage Test (wet) for 1 minute Duration.

S. No.	Test Description	Test Voltage	Duration	Results
1.	Core against grounded	39 KV	1 Minute	Withstood



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11. Impulse Voltage Withstand Test,

- Dry Temperature: 26 Degree Centigrade.
- Wet Temperature: 20 Degree Centigrade.
- No of Impulse Positive and Negative: 10 Each.
- Peak Value of Impulse Voltage: 95 KV.
- Results: Withstood.

12. Load Cycle Test 123 cycles.

The following test conditions were maintained during each load cycle test.

- a) Total Duration of load cycle = 8 hours
- b) Duration of Heating Cycles = 5 Hours
- c) Duration of cooling period = 3 Hours
- d) Max temperature of the conductor during heating cycle = 100 degree centigrade
- e) Voltage applied throughout load cycle test = 23 KV (AC)
- f) Result: Withstood

13. AC High Voltage Test under influence of Humidity and moisture.

The terminations were kept in a chamber where water was sprayed continuously from an atomizer. The Conductivity of the spraying water was maintained between 600 to 800 micro siemens through out the test. The salt fog atmosphere with UV rays has been maintained in the chamber. A test voltage of 11 KV between The conductor shield and grounded shield was maintained for 300 Hours. There had been No Flashover and Any type of visible damage.

14. Partial Discharge Test:

- Sensitivity of the discharge Detector: 5 Pc
- Test Connection : Between Core and grounded shield and armour
- Measurement of Discharge Magnitude at: 15 KV
- Test Value < 5 Pc

15. DC Voltage with stand Test

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|------|---------------------|---|------------------------|
| i. | Test Connection | : | Between Phase & Earth. |
| ii. | Test Voltage | : | 48 KV. |
| iii. | Duration of Test | : | 15 Minutes. |
| iv. | Ambient Temperature | : | 26° C |
| v. | Result | : | With stood Test. |

