

**1. Purpose**

To confirm that non-metallic screen (NMS) or light duty metallic screen (LDMS) HVABC cable:

- Is fit to be energised,
- Phases are correctly identified,
- The cable is continuous
- The catenary cable is earthed
- The cable sheath is continuous and not damaged

**2. Description of applicable cable types**

- HV ABC, Metallic screened to AS/NZS3599.1
- HV ABC, Non-metallic screened to AS/NZS3599.2.

**3. Tests required**

- Sheath integrity test (**for metallic screened HVABC only**)
- Catenary is earthed
- Phase Identification/Continuity Test
- Insulation Megger Test
- VLF Test at test voltage specified in CC011
- Insulation Mains Voltage “Soak” Test (**optional**) (refer to CC011)
- Post “Soak” Test – Insulation Megger Test (**optional**)

**4. Tools and Equipment**

- Continuity and Phase Identification Tester
- 5 kV Megger

**5. Test Result Pass Criteria**

When recording these values, an accurate measurement must be recorded. Values with ranges (e.g. 55+MΩ) will not be acceptable. The test results will form the baseline for future maintenance purposes.

Test Between	Test Result
Sheath integrity	>1MΩ
Phase to Phase	>10,000 MΩ (10GΩ)
Catenary to Earth	Solid Short Circuit
VLF Test	Pass/Fail
“Soak” Test	No breakdown
Post “Soak” Test Ph–Earth	No appreciable difference to previous Megger results

## 6. Supporting documents

### 6.1. Test Report Forms

The commissioning test report is available in the appendix:

- HV ABC Cable Test Report

For CitiPower/Powercor employees the commissioning test reports are to be completed via the ClickMobile application, for further details refer to guideline “Testing Form” (Document No. JEQA4UJ443MT-1864305901-228).

The commissioning standards and test reports can also be found on CitiPower/Powercor’s external website from:

- Home/Industry/Supplier Resources/Forms, Reports and Bulletins/Commissioning Standards and Test Reports.

### 6.2. Standard Works Practice

Related works practices are available from the Source:

- Light duty metallic screen (LDMS) HVABC Cable Stringing

## Appendix A - LDMS HV ABC Commissioning Test Report

Job Title:

Cable Circuit Details			
Test Instrument Model		Instrument No.	
Test Instrument Model		Instrument No.	
Tested by		Date	
Cable type details			

NOTE: When recording these values, an accurate measurement must be recorded. Values with ranges (e.g. 55+MΩ) will not be acceptable. The test results will form the baseline for future maintenance purposes.

1. All circuits identified and labelled Yes -  No -
2. Continuity / Phase Sequence Tests passed Yes -  No -
3. Catenary is Earthed
4. Insulation Mains Voltage "Soak" Test (optional) (refer to CC011)
5. Post "Soak" Test – Insulation Megger Test (optional)
6. Sheath Integrity Test

SHEATH INTEGRITY TEST 1 KV for PVC Outer Sheath	
Screen Wires to Earth	Resistance
Red	MΩ
White	MΩ
Blue	MΩ

### 7. Insulation Resistance Test

INSULATION RESISTANCE TEST 5KV				
Phase to Screen - All Cables	1 min. reading	10 min. reading	Polarisation Index	Phase Comparison
Red	MΩ	MΩ		
White	MΩ	MΩ		
Blue	MΩ	MΩ		

Note: All tests conducted as detailed in Commissioning Standard, Insulated Cables – test Types CC011

### 8. Commissioning Test Results Pass Criteria

Test Between	Test Result	Pass	Fail
Sheath integrity	>1MΩ	<input type="checkbox"/>	<input type="checkbox"/>
Phase to Phase	>10,000 MΩ (10GΩ)	<input type="checkbox"/>	<input type="checkbox"/>
Catenary to Earth	Solid Short Circuit	<input type="checkbox"/>	<input type="checkbox"/>
VLF Test	Pass / Fail	<input type="checkbox"/>	<input type="checkbox"/>
"Soak" Test	No breakdown	<input type="checkbox"/>	<input type="checkbox"/>
Post "Soak" Test – Insulation Megger Test	No appreciable difference to previous Megger results	<input type="checkbox"/>	<input type="checkbox"/>

Commissioning Test Passed Yes -  No -   
Comments

Signed:

Date:

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