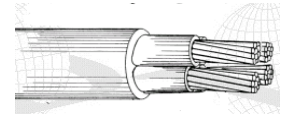


DISTRIBUTION COMMISSIONING FORM (DCF)2.5 – Low voltage XLPE cable

Purpose: This instruction covers the testing and commissioning of all replacements or new installations of low voltage cross-linked polyethylene (XLPE) cable.



For more information refer to the *Distribution Commissioning Forms Guideline* ([EDM 34137510](#))

Note: The following tests must be carried out after installation, alteration, repair or jointing and before the cable is put into service.

Work Package No:		SPIDAWeb Pick ID:	
Test Site:			
Location of Cable:	From:		
	To:		

1. Cable Description

Size of Cable:	mm ²	Length of cable (approximately)	m	Aluminium	Copper
----------------	-----------------	---------------------------------	---	-----------	--------

2. Visual Inspection and Safety Check

Confirm that the cable is de-energised (with an approved testing device) before proceeding further.	
Check that the cable is installed correctly – Terminations and joints properly completed.	
Wherever possible, check that there is no physical damage to the cable or equipment.	
Check all cable identification labels are applied as per labelling standard	
Check that each phase colour is identified (if applicable).	
Disconnect the relevant MEN link and N-E connections for the cable under test.	

3. End to End Phasing Test

Use a resistor box in conjunction with a 500 V insulation resistance tester to identify the cable end and phases.	Test Connection	Resistor Values	Test Results
	Red phase – screen	MΩ	MΩ
	White phase – screen	MΩ	MΩ
	Blue phase – screen	MΩ	MΩ

4. Insulation Resistance Test

<p>This test may not be practical for existing cables because of connected services.</p> <p>Use a 1 kV insulation resistance tester for 1 minute from conductor to conductor and from conductor to neutral (never use 5 kV insulation testers for this test).</p> <p>Record actual results.</p> <p>Values greater than 10 MΩ for new cables and 1 MΩ for existing cables are acceptable.</p> <p>Discharge the cable after testing.</p>	New cable		Existing cable	
	Test Connection		Minimum Values	Test Results
	Red phase - white phase		>10 MΩ/1 MΩ	MΩ
	White phase - blue phase		>10 MΩ/1 MΩ	MΩ
	Blue phase - red phase		>10 MΩ/1 MΩ	MΩ
	Red phase - neutral		>10 MΩ/1 MΩ	MΩ
	White phase - neutral		>10 MΩ/1 MΩ	MΩ
	Blue phase - neutral		>10 MΩ/1 MΩ	MΩ

5. Sheath Integrity Test (new cable only): Neutral to Earth Test at 1kV

Test at 1 kV for 1 minute with all the cable neutral connections disconnected and record the result. (>10 MΩ). Enter N/A for in-service cable.	MΩ
--	----

6. Reinstatement of Connections

Reinstate all connections which were disconnected as per item 2 above.	
--	--

7. Handover of Responsibility for the Completion of Items 1-6

I hereby certify that items 1 to 6 have been completed with satisfactory results and transfer control to the person responsible for commissioning.			
Testing officer/cable jointer/CPM		BNA	
Signature		Date & Time	

8. Phase Out Test

If the LV cable is to be interconnected with another section of LV network, phase out across a normally open point using a voltmeter. Otherwise, with resistor box for de-energised circuits.

9. Commissioning

The person responsible for commissioning must ensure that all checks are completed, and the test results comply with the minimum standards.

If energisation occurs more than two weeks after the above handover, conduct all insulation resistance tests again to ensure the cable is safe to energise.

I hereby certify that all items have been completed with satisfactory results and transfer control to the network operating authority.			
Commissioned by		BNA	
Signature		Date & Time	

1. Ensure the work area is left tidy with no hazards to the public.
2. Hand over responsibility to the operating authority.
3. The completed form must be returned to the project file/work pack.