DISTRIBUTION COMMISSIONING TEST SHEET – ISOLATION POLE MOUNTED TRANSFORMER
HPC-4DL-07-0043-2024

This commissioning test sheet covers the checking, testing and commissioning of all replacement or new installations of isolation pole-mounted transformers before energisation.

NOTE: Tests must be carried out after the installation, alteration or repair and before putting back to service.
SAFETY: At all times maintain suitable clearance to all other electrical equipment and verify planned escape routes.
In preparation for the tests, wherever possible, disconnect the cables from the equipment on both sides and make the area safe.

DATE:		**Project No.**		**Name of Officer**	
Transformer Location:					

1. TRANSFORMER DESCRIPTION

	kV	V	Rated kVA	kVA	Stock code		Serial Number	

2. VISUAL INSPECTION AND SAFETY CHECK

Inspect the following: • Rating plate • Tank and bushings • HV terminations	1	Check that the installation complies with the distribution construction standards and applicable design drawings.			☐
	2	Check that Public Safety has been considered (e.g. cabinets secured and locked, anti-climbing devices applied, trip hazards removed where applicable).			☐
	3	Check the supply to the transformer, that it is switched off and isolated.			☐
	4	Confirm (with approved testing device) that the isolation transformer is de-energised.			☐
	5	Ensure that the earth system is complete, undamaged and bonded to earth points.			☐
	6	Check that the nearest conductive material is at least two (2) metres away from the earth ring/system (take a photo if possible)	Measured distance	m	☐
	7	Isolation transformer voltage rating matches system voltage.			☐
	8	Isolation transformer tap is at the position of previously installed transformer or per network planning requirements.			☐
	9	Isolation transformer tank and bushings in good condition (no oil leaks).			☐
	10	HV conductors are properly terminated and connected on transformer bushings (if applicable).			☐
	11	All labels fitted and numbered correctly.			☐

3. EARTH RESISTANCE TEST (POLE)

1	Test earth resistance using one of the following DCT's and record value in 3.4.						☐
2	New earth stake, use HPC-4DL-07-0038-2017 DCT- Earth Testing of Distribution Poles, to test the earth.						☐
3	Existing earth stake, use HPC-4DL-07-0037-2017 DCT- Earth Testing of Altered Systems, to test the earth.						☐
4	Previous test value if known	= _____Ω	Measured value	= _____Ω	Value acceptable	Yes ☐ No ☐	
	Measured value would be acceptable if **below 30 Ohms** or a value between 0.8 and 1.2 which is obtained when dividing the Measured value by the Previous test value. **Note:** If previous test value is not known a value less than or equal to, 30 Ohms is acceptable.						☐
5	Earth stake resistance **above 30 Ohms or outside of an acceptable value** must be communicated to the formal leader or Asset manager.						☐

4. INSULATION RESISTANCE TESTS

1	Ensure that the high voltage (HV) windings of the transformer are de-energised.				☐
2	Ensure all electrical connections have been disconnected, this includes earth loop at ER.				☐
3		Test Connection	Test Voltage	Expected Results	Test Results
	Using an insulation resistance tester for a minimum of 1 minute for a stable reading test the following:	Primary HV (SW) to Tank	2.5 kV	>1,000 MΩ	Ω
		Primary HV (SW) to HV (A1/A10)	2.5 kV	>1,000 MΩ	Ω
		HV (A1/A10) to Tank	2.5 kV	>1,000 MΩ	Ω
4	Confirm transformer has been discharged after each test.				☐
5	Reconnect HV conductors, tighten bolts with recommended torque stated below.				☐
6	Reconnect earth loop at ER with recommended torque stated below.				☐

Suggested bolt torques:
- M10 stainless steel bolts: 38 Nm
- M12 stainless steel bolts: 66 Nm
- M14 stainless steel bolts: 106 Nm
- M16 stainless steel bolts: 162 Nm

5. HANDOVER OF RESPONSIBILITY FOR THE COMPLETION OF SECTION 1 TO 5

I hereby certify that section 1 to 5 has been completed with satisfactory results and transfer responsibility to the commissioning officer.

Testing Officer: Pay Number: _____

Signature: Date: DD/MM/YY Time: HH:MM

6. OPERATIONAL HANDOVER

The commissioning officer must ensure that all checks are completed and the test results comply with the minimum standards.

I hereby certify that all sections have been completed with satisfactory results and transfer responsibility to the network operating authority. This equipment is ready to be **SAFELY** energised.

Commissioning Officer: _____ Pay Number: _____

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. Return this sheet to the project/working file as a record of commissioning and as a document required for the Handover Certificate.