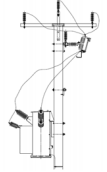
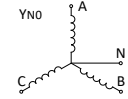


DISTRIBUTION COMMISSIONING TEST SHEET – THREE PHASE POLE MOUNTED REACTOR
HPC-4DL-07-0041-2023

This commissioning test sheet covers the checking, testing and commissioning of all replacement or new installations of three phase pole-mounted reactors 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	
Shunt Reactor Location:					

1. REACTOR DESCRIPTION

Rated Voltage	kV	Rated kVAr	kVAr	Stock code	Serial Number
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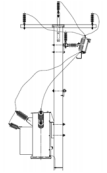
2. VISUAL INSPECTION AND SAFETY CHECK

Inspect the following: <ul style="list-style-type: none"> • Rating plate • Tank and bushings • Oil level • HV terminations 	1	Check that the installation complies with the distribution construction standards and applicable design drawings.	<input type="checkbox"/>		
	2	Check that Public Safety has been considered (e.g. trip hazards removed, anti-climbing devices applied where applicable).	<input type="checkbox"/>		
	3	Check the supply to the shunt reactor, that it is switched off and isolated as per switching sheet and permit.	<input type="checkbox"/>		
	4	Confirm (with approved testing device) that the reactor is de-energised.	<input type="checkbox"/>		
	5	Ensure that the earth system is complete, undamaged and bonded to earth points.	<input type="checkbox"/>		
	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	<input type="checkbox"/>
	7	Shunt reactor voltage rating matches system voltage.	<input type="checkbox"/>		
	8	Shunt reactor oil level is satisfactory (if visible).	<input type="checkbox"/>		
	9	Check tank caps, on rear at bottom LHS and on top at back LHS (if visible), that are secure and not leaking.	<input type="checkbox"/>		
	10	Shunt reactor tank and bushings in good condition (no oil leaks).	<input type="checkbox"/>		
	11	All labels fitted and numbered correctly.	<input type="checkbox"/>		



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3. EARTH RESISTANCE TEST

1	Test earth resistance using one of the following DCT's and record value in 3.4.					<input type="checkbox"/>
2	New earth stake, use HPC-4DL-07-0038-2017 DCT- Earth Testing of Distribution Poles, to test the earth.					<input type="checkbox"/>
3	Existing earth stake, use HPC-4DL-07-0037-2017 DCT- Earth Testing of Altered Systems, to test the earth.					<input type="checkbox"/>
4	Previous test value if known	= _____ Ω	Measured value	= _____ Ω	Value acceptable	Yes <input type="checkbox"/> No <input type="checkbox"/>
	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.					<input type="checkbox"/>
5	Earth stake resistance above 30 Ohms or outside of an acceptable value must be communicated to the formal leader or Asset manager.					<input type="checkbox"/>

4. INSULATION RESISTANCE TEST

1	Ensure that the high voltage (HV) terminals of the shunt reactor are de-energised and disconnected (including neutral to earth).				<input type="checkbox"/>
Using an insulation resistance tester for a minimum of 1 minute for a stable reading test: (Short circuit all winding terminals of the source of the same voltage level together.)		Test Connection	Test Voltage	Expected Results	Test Results
		Primary HV to Tank	2.5 kV	>1,000 MΩ	Ω
2	Confirm shunt reactor has been discharged.				<input type="checkbox"/>
3	Confirm all conductors and neutral reattached as per DCS.				<input type="checkbox"/>

5. 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: _____ DD/MM/YY Time: _____ HH:MM

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.