

DISTRIBUTION COMMISSIONING FORM (DCF) 3.7 – Three phase pole mounted shunt reactor commissioning

Purpose: This instruction covers the testing and commissioning of all replacements or new installations of three-phase pole-mounted shunt reactors up to 200 kVAr before energisation.

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

Notes: The following tests and checks must be carried out after installation and before the transformer is put into service.

Address/Pole No.		Work Package No.	
Manuf. Serial No.		SPIDAWeb Pick ID:	

1. Pre-Installation Checks

Ensure that the earth resistance test (DCF 4.1) has been completed with acceptable results (<30 Ω) prior to commissioning.					
HV jumpers not yet connected to the reactor bushings					
Test	Test Connection	Test Voltage	Resistance	Expected Results	
Insulation resistance test on the reactor winding	HV to tank - bridge RWBN bushings together for this test	2.5 kV	Ω	>1 GΩ	
Continuity (beep) test	R-N, W-N, B-N			Continuity required - all	

2. Installation and Construction Checks

Inspect the following: - rating plate - tank and bushings - oil level - connections/installation	Reactor matches system voltage.	
	Reactor bushings and tank in good condition (no oil leaks).	
	Oil level satisfactory (if sight glass provided).	
	Install and connect the reactor according to <i>Distribution Construction Standards Handbook (DCSH) drawing no H34</i> (EDM 24538359). WARNING: Incorrect connection could result in failure of reactor	
	CHECK: Neutral (N) bushing is NOT connected	
	CHECK: Reactor tank is connected to the earth return wire and down earth	
	CHECK: O/H line connected to Phase bushings (A, B, C).	
	All SPIDAWeb labels fitted and numbered correctly as per SPIDAWeb sheet.	

3. Energising the Reactor

Check the HV fuse rating (10A Stock code GF1565).	Record the fuse rating: _____A Note: DOF may be remote from structure.	
	Energise the Reactor (and check for abnormal noise). Record the switching program number:	

4. Handover of Responsibility

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	

Notes: Bolts and screws in all electrical connections across the Western Power network must be properly tightened.
All lug crimps confirmed intact visually or with a pull test.

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.