# **DISTRIBUTION COMMISSIONING FORM (DCF) 3.5 – SWER Isolation** Transformer (Pole Mounted)

**Purpose:** This form covers the testing and commissioning requirements for new or replacement pole mounted SWER isolation transformers up to 200 kVA before energisation.

For more information refer to the Distribution Commissioning Forms Guideline (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.	SPIDAWeb Pick ID:	

### 1. Transformer Checks

- Ensure that the earth resistance has been tested and is acceptable.
- Ensure all electrical connections have been disconnected, including MEN links/N-E links.
- Record the insulation resistance after 1 minute of testing.

Stock number	XT 0189, XT 0190, XT 0195	XT 0198, XT 0196	XT 0192	XT 0193
Transformer type				
Transformer diagram	A10 SW	SW3 SW2 ER	SW1 ER1 ER2	A8 SW
Insulation resistance test using	A10 to SW Ω	SW3 to Tank Ω	SW1 to SW2 Ω	A8 to SW Ω
2.5 kV (greater than	A10 to Tank		SW1 to Tank	A8 to Tank
1 GΩ acceptable)	Ω		Ω	Ω
Winding continuity test using 1 kV (0 Ω acceptable)	A10 to A1	SW3 to ER	SW1 to ER1	A8 to A1
	Ω	Ω	Ω	Ω
	SW to ER	SW2 to ER	SW2 to ER2	SW to ER
	Ω	Ω	Ω	Ω

## 2. Installation and Construction Checks

Earthing	Ensure that the earth resistance test (DCF 4.1) has been completed with acceptable results (<30 $\Omega$ ) prior to commissioning.			
Inspect the following: • rating plate • tank and bushings • tap setting • wiring • neutral connection • MEN links /N-E connections	Transformer matches system voltage.			
	Transformer installed as per construction standards and applicable design drawings.			
	HV bushings connected.			
	Neutral connected and earthed and MEN links /N -E links reconnected.			
	Transformer tap is at the position as per design/network planning or previously installed transformer.			
	Transformer bushings and tank in good condition (no oil leak).			
	All SPIDAWeb labels fitted and numbered correctly as per SPIDAWeb sheet.			

### 3. Energisation

Energisation of a transformer without a load	Check that the HV fuses are correct.		
	Energise the transformer as per the switching program. (Check for abnormal noise.)		
	Record the voltage reading at the control of the 1-ph recloser, if available.	v	
Energisation of a transformer with a load	Energise the load as per the switching program.		
	Ensure the transformer is operating normally.		

**Note**: When erecting a new or reconstructed LV apparatus, check the voltage at an existing LV point, if possible, in accordance with Network Operations instructions. Phase out any newly fitted LV disconnectors and check them for sound operation.

## 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	NAC	
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.

