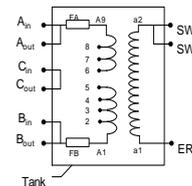


## DISTRIBUTION COMMISSIONING FORM (DCF) 3.6 – SWER Isolation Transformer (Ground Mounted)



**Purpose:** This form covers the testing and commissioning for new or replacement single phase ground mounted SWER isolation transformers up to 315 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.

<b>Address/Pole No.</b>			
<b>Work Package No.</b>		<b>SPIDAWeb Pick ID:</b>	

### 1. Transformer Checks

- Refer to the transformer nameplate to confirm bushings A, B, C, arrangement (may be different from above diagram).
- 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.

Test	Test Connection	Test Voltage	Resistance	Expected Values
Insulation resistance test on the transformer winding	A <sub>in</sub> to tank	2.5 kV	Ω	> 1 GΩ
	A <sub>in</sub> to SW1	2.5 kV	Ω	> 1 GΩ
	SW1 to tank	2.5 kV	Ω	> 1 GΩ
	C <sub>in</sub> to tank	2.5 kV	Ω	> 1 GΩ
Continuity test on the transformer winding	A <sub>in</sub> to C <sub>in</sub>	1 kV	Ω	0 MΩ
	A <sub>in</sub> to B <sub>in</sub>	1 kV	Ω	> 1 GΩ
	SW1 to ER	1 kV	Ω	0 MΩ

### 2. Installation and Construction Checks

Earthing	Ensure that the earth resistance test (DCF 4.1) has been completed with acceptable results (<30 Ω) prior to commissioning.
Inspect the following: <ul style="list-style-type: none"> <li>rating plate</li> <li>tank and bushings</li> <li>tap setting</li> <li>wiring installation</li> <li>markings labels and danger plate</li> </ul>	Transformer matches system voltage.
	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).
	Transformer installed as per construction standards and applicable design drawings.
	HV cables properly terminated connected and marked/labelled.
	Unused bushings are properly capped.
	Neutral connected and earthed, and MEN/N - E link connected.
	Transformer's danger plate is fitted.
All SPIDAWeb labels fitted and numbered correctly as per SPIDAWeb sheet.	

### 3. Handover of Responsibility

I hereby certify that items 1 and 2 have been completed with satisfactory results and transfer control to the network operating authority.			
Testing officer / cable jointer / CPM		NAC	
Signature		Date & Time	

### 4. 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.	
<b>Note:</b> 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.		

### 5. 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.