

DE-XXXX Project Name Non-Export Test Plan

Project Address

Name of testing organization: _____

Name of Tester: _____

Test Date: _____

CUSTOMER SCOPE OF WORK TO BE TESTED

- Install SEL-751 relay to implement reverse power (32) function and breaker fail
- Implement inverter protection settings IEEE1547-2018, Including MISO ride through

TESTING

Instruction to tester: Clearly Indicate initials in each PASS/FAIL box

SEL 751 Relay Fail Test:

- Simulate failure of SEL 751 relay

	PASS	FAIL
SEL 751 Fail Alarm Status		
SEL 751 Relay trips and locks out Breaker XXXX (Tested breaker name as in drawings)		

*Customer is recommended to integrate relay fail alarm into internal site alarming.

Comments

SEL 751 Loss of Potential Test

- Simulate loss of potential sensing to SEL-751 relay

	PASS	FAIL
On loss A phase PT input SEL 751 Relay trips and locks out Breaker XXXX		
On loss B phase PT input SEL 751 Relay trips and locks out Breaker XXXX		
On loss C phase PT input SEL 751 Relay trips and locks out Breaker XXXX		

Comments

SEL 751 Relay 32 Function Test:

- Inject current into SEL 751 relay to simulate reverse power condition

	PASS	FAIL
SEL 751 Relay trips and locks out Breaker XXXX when there is reverse power		

Comments

SEL 751 Breaker Failure Function Test:

- Inhibit Breaker XXXX status verification back to SEL 751. Initiate trip from SEL 751 to Breaker XXXX verify ESTOP of all Inverters

	PASS	FAIL
All inverters execute ESTOP on breaker fail from SEL 751		

Comments

Inverter settings verification functionality

- Open Breaker XXXX, Verify Open, Close Breaker XXXX

	PASS	FAIL
When Breaker XXXX Open, verify 0 Voltage on all phases after 2 seconds		
On Breaker XXXX close verify inverter Synchronization check		
On Breaker XXXX close verify that inverter system does not re-energize prior to 300 seconds		
On Breaker XXXX close, and after 300 seconds of de-energization, verify that the inverter system output linearly ramps for no less than 300 seconds before reaching rated output		

Comments

- Verify the following inverter settings are applied

Voltage Relay Settings		
Shall Trip Function	Allowable Setting	
	Voltage (per unit of nominal voltage)	Clearing Time (Seconds)
Overvoltage 1	1.20	0.16
Overvoltage 2	1.10	2.0
Undervoltage 1	0.70	2.0
Undervoltage 2	0.45	0.32
Frequency Relay Settings		
Shall Trip Function	Allowable Setting	
	Frequency (Hz)	Clearing Time (Seconds)
Overfrequency 1	62.0	0.16
Overfrequency 2	61.2	2.0
Underfrequency 1	58.5	2.0
Underfrequency 2	56.5	0.16

Enter Service Criteria		Default Settings
Permit Service		Enabled
Applicable Voltage Within Range	Min. Value	0.917 p.u.
	Max. Value	1.05 p.u.
Frequency Within Range	Min. Value	59.5 Hz
	Max. Value	60.1 Hz

Tester Signature

Date