

LINE DISTANCE RELAY

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TEST DATA

Test Data No. :

Station : _____
 Protected Eqpt. ID _____
 Date of Test : _____
 CT Ratio : _____
 PT Ratio : _____

Relay Specifications:

Brand: _____
 Model: _____
 Serial No. _____
 Current Rating: _____
 Voltage Rating: _____
 Manufacturing Date: _____

A. RELAY SETTINGS

SETTING	L-G			L-L			3-PHASE			TIME (msecond)	AMPERE
	Impedance			Impedance			Impedance				
	R	X	Z	R	X	Z	R	X	Z		
Z1											
Z2											
Z3											
Z4											
67N AIDED											
* P-N Angle at maximum reach											
* P-P Angle at maximum reach											

REMARKS : _____

A.1 ADDITIONAL FUNCTION

	STATUS		REMARKS
	Abled	Disabled	
POWER SWING			
SCHEME (POTT)			
SCHEME (PUTT)			
SOTF			
STUB PROTECTION			
EMERGENCY OVERCURRENT			
VOLTAGE SUPERVISION			
DIRECTIONAL EARTH FAULT			

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B. TEST RESULTS

B.1 IMPEDANCE REACH AND TIME (LINE ANGLE)

ZONE : <u>1</u>	θ : _____			θ : _____			θ : _____
	LINE TO GROUND			LINE TO LINE			3 PHASE
	AN	BN	CN	AB	BC	CA	ABC
	VALUE (ohm)						
TIME (msec)							
INDICATIONS							

ZONE : <u>2</u>	θ : _____			θ : _____			θ : _____
	LINE TO GROUND			LINE TO LINE			3 PHASE
	AN	BN	CN	AB	BC	CA	ABC
	VALUE (ohm)						
TIME (msec)							
INDICATIONS							

ZONE : <u>3</u>	θ : _____			θ : _____			θ : _____
	LINE TO GROUND			LINE TO LINE			3 PHASE
	AN	BN	CN	AB	BC	CA	ABC
	VALUE (ohm)						
TIME (msec)							
INDICATIONS							

ZONE : <u> </u>	θ : _____			θ : _____			θ : _____
	LINE TO GROUND			LINE TO LINE			3 PHASE
	AN	BN	CN	AB	BC	CA	ABC
	VALUE (ohm)						
TIME (msec)							
INDICATIONS							

REMARKS : _____

B.2 RELAY CHARACTERISTIC TEST
Criteria : Reach/characteristic of Z1, Z2, Z3, ZE = ± 5% of setting; Z1Time ≤ 50 ms; Z2Time < setting + 100 ms; Z3 or ZETime = setting + 100 ms

ZONE : 1 **ANGLE :** 30

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (<i>ohm</i>)							
TIME (<i>msec</i>)							
INDICATIONS							

ZONE : 2 **ANGLE :** 30

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (<i>ohm</i>)							
TIME (<i>msec</i>)							
INDICATIONS							

ZONE : 3 **ANGLE :** 30

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (<i>ohm</i>)							
TIME (<i>msec</i>)							
INDICATIONS							

REMARKS : _____

ZONE : 1 ANGLE : 60

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

ZONE : 2 ANGLE : 60

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

ZONE : 3 ANGLE : 60

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

REMARKS :

ZONE : 1 ANGLE :

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

ZONE : 2 ANGLE :

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

ZONE : 3 ANGLE :

	LINE TO GROUND			LINE TO LINE			3 PHASE
	RN	SN	TN	RS	ST	TR	RST
VALUE (ohm)							
TIME (msec)							
INDICATIONS							

REMARKS :

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B.3 TRANSFER TRIP TEST

DEVICE	SEND	With Response?		RECEIVE/AIDED	With Response?	
21		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	
TIME		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	
INDICATION		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	
67G		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	
TIME		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	
INDICATION		<input type="checkbox"/>	Y	<input type="checkbox"/>	N	

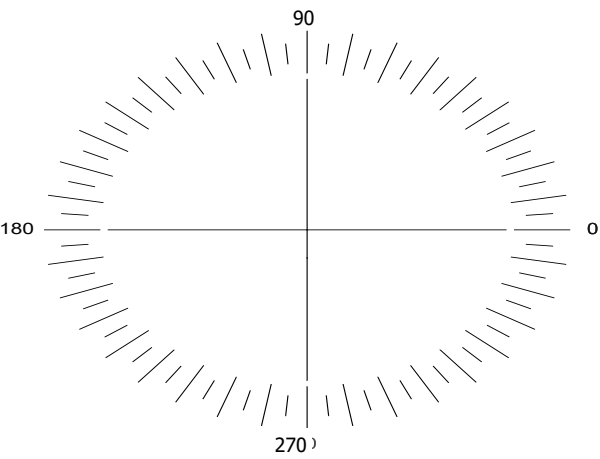
REMARKS : _____

B.4 DIRECTIONAL OVERCURRENT RELAY TEST (67G)

* 67G Pick-up Value : _____ Amp. (± 5% of setting) _____ Volts
 _____ Degrees _____ Trip Time

C. PARAMETER CHECK

SECONDARY VALUES				PHASE ANGLE (Out of phase for incoming; In phase for outgoing)	PRIMARY VALUES (RELAY)	PRIMARY VALUES (STATISTICAL METER)
CIRCUIT 1		CIRCUIT 2				
Parameter	Magnitude (±10% of expected input value)	Parameter	Magnitude (±10% of expected input value)			
				Degrees		
I _A		V _{AN}			Power Flow : _____	Power Flow : _____
		V _{BN}			MW : _____	MW : _____
		V _{CN}			MVAR : _____	MVAR : _____
I _B		V _{AN}				
		V _{BN}			I _A : _____	I _A : _____
		V _{CN}			I _B : _____	I _B : _____
I _C		V _{AN}			I _C : _____	I _C : _____
		V _{BN}			I _N : _____	
		V _{CN}				
I _N		V _{AB}			V _{AB} : _____	V _{AB} : _____
		V _{BC}			V _{BC} : _____	V _{BC} : _____
		V _{CA}			V _{CA} : _____	V _{CA} : _____



REMARKS: _____

D. FUNCTIONAL TESTING / SIMULATION

FUNCTION	CONTROLLING BREAKERS	SIMULATION USED		BREAKERS TRIPPED	REMARKS
		INJECTION	SIGNALLING		

Tested by :

Concurred by :

Contractor - Test Engineer

Owner's Representative

Witnessed by :

NGCP Representative

(Eqpt.ID/Make/Model/SN/
Date of last calibration)

