

LINE DIFFERENTIAL RELAY

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TEST DATA

Test Data No. :

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

Relay Specifications:

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

A. RELAY SETTINGS

A.1 LINE DIFFERENTIAL SETTINGS

PARAMETERS	VALUE
DIFFERENTIAL CURRENT PICKUP	
CT FACTOR	
DIFFERENTIAL SLOPE	
LOCAL ADDRESS	
REMOTE ADDRESS	

B. TEST RESULTS

B.1 DIFFERENTIAL TEST

B.1.1 PICK-UP TEST (LOOPBACK)

PARAMETERS	A	B	C
CURRENT PICK-UP (A)			
RELAY INDICATION/TARGET			

B.1.2 END TO END TEST (LOOPBACK)

B.1.2.1 STABILITY TEST

Local Station : _____
Nominal Current (A) : _____
Angle Displacement (°) : _____

Remote Station : _____
Nominal Current (A) : _____
Angle Displacement (°) : _____

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

MULTIFUNCTION LINE DIFFERENTIAL RELAY TEST DATA

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B.1.2.2 INCREASE CURRENT MAGNITUDE AT LOCAL END (TEST POINT 1)

Local Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Remote Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

B.1.2.3 INCREASE CURRENT MAGNITUDE AT REMOTE END (TEST POINT 1)

Local Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Remote Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

B.1.2.4 INCREASE CURRENT MAGNITUDE AT LOCAL END (TEST POINT 2)

Local Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Remote Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

B.1.2.5 INCREASE CURRENT MAGNITUDE AT REMOTE END (TEST POINT 2)

Local Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Remote Station : _____
Test Current (A) : _____
Angle Displacement (°) : _____
Trip Current (A) : _____

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

Phase	Measured Values (A)		
	A	B	C
Local			
Remote			
Differential			
Bias			

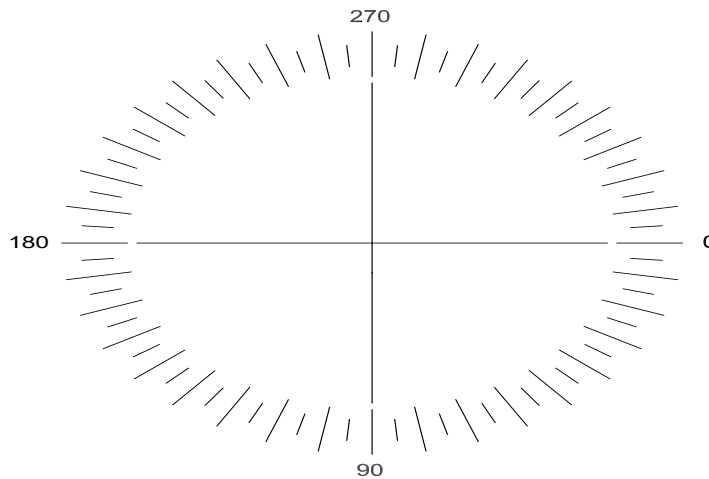
B.1.2.6 COMPUTED SLOPE

Slope Local	
Slope Remote	

REMARKS: _____

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}			V _{AB} : _____	V _{AB} : _____
I _N		V _{AB}			V _{BC} : _____	V _{BC} : _____
		V _{BC}			V _{CA} : _____	V _{CA} : _____
		V _{CA}				



D. RELAY OPERATING PARAMETERS

PARAMETERS	MEASURED VALUES		
	A	B	C
AUXILLIARY VOLTAGE (VDC)			
TRIPPING VOLTAGE (VDC)			
IDIFF			
IBIAS			
ILOCAL			
IREMOTE			

REMARKS: _____

E. 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

TEST INSTRUMENTS: _____
(Eqpt.ID/Make/Model/SN/ _____
Date of last calibration) _____
