

RECLOSER 27P/59P					
RELAY 27P			RELAY 59P		
	SETPOINT (PU)	TIME (CYCLES)		SETPOINT (PU)	TIME (CYCLES)
27 - 1	0.80	117	59 - 1	1.1	60
27 - 2	0.45	45	59 - 2	1.2	6.6

RECLOSER 81					
RELAY 81U			RELAY 81O		
	SETPOINT (HZ)	TIME (CYCLES)		SETPOINT (HZ)	TIME (CYCLES)
81U-1	58.0	18000	81O-1	61.4	18000
81U-2	57.0	60	81O-2	62	60

INVERTER 27P/59P					
INVERTER 27P			INVERTER 59P		
	SETPOINT (PU)	TIME (CYCLES)		SETPOINT (PU)	TIME (CYCLES)
27 - 1	0.88	120	59 - 1	1.1	120
27 - 2	0.50	10	59 - 2	1.2	10

INVERTER 81					
INVERTER 81U			INVERTER 81O		
	SETPOINT (HZ)	TIME (CYCLES)		SETPOINT (HZ)	TIME (CYCLES)
81U-1	57.0	10	81O-1	60.5	10

MOMENTARY CESSATION					
LOW VOLTAGE (PU)			HIGH VOLTAGE (PU)		
MC-LV	0.5		MC-HV	1.2	

NOTES:

1. MOMENTARY CESSATION MAY NOT BE AVAILABLE ON ALL INVERTERS, MAYBE OMITTED IF NOT A VALID PARAMETER
2. IF THE SETPOINTS ARE NOT VALID FOR THE INSTALLED EQUIPMENT CONTACT DUKE ENERGY FOR ADDITIONAL GUIDANCE.



-	-	-	-	INVERTER BASED SYSTEMS ≥1MW DEC/DEP MOA INSPECTION VOLTAGE & FREQUENCY TRIP SETPOINTS LEGACY INVERTERS (1547-2003)	DRAWING NUMBER:	
-	-	-	-		N/A	
-	-	-	-		SIZE	SCALE
0	02/09/24	BBH	-		A	NTS
Date		By	Ckd			

NEGATIVE SEQUENCE OVERVOLTAGE

NEGATIVE SEQUENCE OVERVOLTAGE 59Q PROTECTION ELEMENTS HAVE THE ABILITY TO DETECT PHASE IMBALANCES IN POWER SYSTEMS. WHILE THIS CAN BE UTILIZED FOR VARIOUS LOGIC SCHEMES IT MUST BE UNDERSTOOD THAT DISTRIBUTION AND TRANSMISSION DISTURBANCES CAN BE REFLECTED AS IMBALANCE TO THE DER SITE AND IT IS DESIRABLE TO RIDE THROUGH FOR GRID EVENTS THAT ARE NOT WITHIN THE LOCAL OR AREA ELECTRIC POWER SYSTEM (EPS).

WITH THIS GOAL IDENTIFIED NEGATIVE SEQUENCE OVERVOLTAGE (59Q) PROTECTION ELEMENTS SHOULD NOT TRIP FOR GRID EVENTS IN LESS THAN 20 CYCLES, THIS IS IN ORDER TO ALLOW TRANSMISSION OR DISTRIBUTION PROTECTION SCHEMES TO OPERATE AND CLEAR GRID DISTURBANCES. HOWEVER, THIS REQUIREMENT DOES NOT ALLEVIATE THE DER GENERATION SITE FROM MAINTAINING ADEQUATE PROTECTION FOR THEIR EQUIPMENT. IF THIS REQUIREMENT CANNOT BE ACHIEVED CONTACT DUKE ENERGY FOR ADDITIONAL GUIDANCE. THE GENERATOR OWNER SHALL COMMUNICATE THE DOCUMENTED DER PLANT OR EQUIPMENT LIMITATION TO BE INCLUDED IN THE REQUEST.



-	-	-	-	INVERTER BASED SYSTEMS ≥ 1 MW DEC AND DEP MOA INSPECTION ADDITIONAL RIDE-THROUGH REQUIREMENTS NEGATIVE SEQUENCE OVERVOLTAGE	DRAWING NUMBER:	
-	-	-	-		N/A	
0	02/09/24	BBH	-		SIZE	SCALE
Date	By	Ckd			A	NTS