

PROTECTION FUNCTION	ANSI CODE	OUT PUT	MAIN BREAKER					TIE BREAKER					MAIN CB MANUAL CLOSE/AR CLOSE	TIE CB MANUAL CLOSE/AR CLOSE	3PH MASTER TRIP RELAY GROUP-A, MAIN BAY	3PH MASTER TRIP RELAY GROUP-B, MAIN BAY	3PH MASTER TRIP RELAY GROUP-A, TIE BAY	3PH MASTER TRIP RELAY GROUP-B, TIE BAY	DIRECT TRIP SEND CHANNEL-1	DIRECT TRIP SEND CHANNEL-2	CARRIER SEND CHANNEL-1	CARRIER SEND CHANNEL-2	DISTANCE BLOCK	BUSBAR PROTECTION(M1/M2)	DR TRIGGER	REMARK			
			TO CB TRIP COIL-1	TO CB TRIP COIL-2	START AUTO RECLOSE	BLOCK AUTO RECLOSE	LBB PROTIN INITIATION	TO CB TRIP COIL-1	TO CB TRIP COIL-2	START AUTO RECLOSE	BLOCK AUTO RECLOSE	LBB PROTIN INITIATION																	
DIFFERENTIAL PROTECTION TRIP(PDIF,87)-MAIN 1 & MAIN 2 (1 ϕ)	87L	1 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
DIFFERENTIAL PROTECTION TRIP(PDIF,87)-MAIN 1 & MAIN 2 (3 ϕ)	87L	3 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
DIFFERENTIAL COMMUNICATION CHANNEL HEALTHY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	-	IP	REFER SHEET-2 THE LOGIC FOR COMMUNICATION FAIL LOGIC		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (ZONE-1 TRIP, 1 ϕ)	21	1 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	*BASED ON SCHEME COMMUNICATION IN SETTING (PUTT OR POTT)		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (ZONE-1 TRIP, 3 ϕ)	21	3 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	*BASED ON SCHEME COMMUNICATION IN SETTING (PUTT OR POTT)		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (CARRIER AIDED, 1 ϕ)	21,85	1 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	NOTE: CURRENT REVERSAL FUNCTION ENABLED AS PER SETTING REQUIREMENT		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (CARRIER AIDED, 3 ϕ)	21,85	3 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP			
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (Z2, Z3, Z4(ZR), SOTF)	21	3 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	TP	TP	TP	TP	-	-	-	-	-	-	-	-	IP		
POWER SWING BLOCKING(PDIS,21)-MAIN 1 & MAIN 2	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#IP	IP	# POWER SWING BLOCKING AS PER SETTING	
STUB PROTECTION TRIP(PTOC, 50)-MAIN 1 & MAIN 2 (ENABLE ONLY WHEN LINE ISOLATOR OPEN)	50	3 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	TP	TP	TP	TP	-	-	-	-	-	-	-	**IP	IP	** OPTIONAL AS PER OEM	
DIRECTIONAL EARTH FAULT (PTOC,67N)-MAIN 1 & MAIN 2	67N	1/3Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	TP	TP	TP	TP	TP	TP	TP	TP	TP	TP	TP	-	IP		
CARRIER AIDED DEF(PTOC,67N,85) - MAIN 1 & MAIN 2	67N,85	1/3Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	*IP	IP	* BASED ON SCHEME COMMUNICATION IN SETTING (PUTT OR POTT)	
OVER VOLTAGE PROTIN STAGE-1/2 (PTOV,50)-MAIN 1 & MAIN 2	59	3 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	TP	TP	TP	TP	TP	TP	TP	TP	TP	TP	TP	-	IP		
WEAK INFEEED PROTECTION(ECHO+TRIP)** - MAIN-1 & MAIN-2	-	1/3Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	*IP	IP	* BASED ON SCHEME COMMUNICATION IN SETTING (PUTT OR POTT)	
BROCKEN CONDUCTOR (PTOC)-MAIN 1 & MAIN 2 (ONLY ALARM)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
CARRIER FAIL-1 & CARRIER SW-2 OUT } CARRIER FAIL-2 & CARRIER SW-1 OUT }	-	-	-	-	-	IP	-	-	-	-	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
TIE CB MANUAL OPEN COMMAND WITH MAIN CB OPEN\$\$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TP\$\$	TP\$\$	-	-	-	-	-	-		\$\$ IF THE BAY IS HALF DIA, TIE BAY ASSOCIATED BUSBAR TRIP TO BE EXTENDED, WITH MAIN CB OPEN FOR DT SEND
MAIN CB MANUAL OPEN COMMAND (OR) BUSBAR OPTD WITH TIE CB OPEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TP	TP	-	-	-	-	-	-		
DIRECT TRIP RECEIVE CHANNEL-1	-	3 Ph	-	-	-	-	-	-	-	-	-	-	-	-	TP	TP	TP	TP	-	-	-	-	-	-	-	-	IP		
DIRECT TRIP RECEIVE CHANNEL-2	-	3 Ph	-	-	-	-	-	-	-	-	-	-	-	-	TP	TP	TP	TP	-	-	-	-	-	-	-	-	IP		
MAIN BAY BREAKER FAIL PROTECTION Retrip (RBRF, 50BF)	50BF	3 Ph	TP	TP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
MAIN BAY BREAKER FAIL PROTECTION Backtrip (RBRF, 50BF)	50BF	3 Ph	-	-	-	IP	-	-	-	-	-	-	RS	-	-	-	TP	TP	TP	TP	-	-	-	-	-	IP##	IP	## INCASE OF STANDALONE LBB, BACKTRIP HAS TO BE EXTENDED AS BUSBAR PROTECTION AS EXTERNAL ZONE TRIP	
TIE BAY BREAKER FAIL PROTECTION Retrip (RBRF, 50BF)	50BF	3 Ph	-	-	-	-	-	TP	TP	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
TIE BAY BREAKER FAIL PROTECTION Backtrip (RBRF, 50BF)	50BF	3 Ph	-	-	-	-	-	-	-	-	IP	-	RS	TP	TP	-	-	TP	TP	-	-	-	-	-	-	IP\$	IP	\$ IF THE BAY IS HALF DIA, TIE LBB BACKTRIP TO BE EXTENDED TO BUSBAR WITH FUTURE BAY(BAY WITHOUT CB).	
BUSBAR PROTECTION (PDIF, 87BB, CBF) MAIN-1/MAIN-2	87BB	3 Ph	TP	TP	-	IP	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	NOTE: FOR CENTRALIZED BUSBAR, TRIP MUST BE EXTENDED TO MASTER TRIP RELAY 96 A & B	
3PH MASTER TRIP RELAY GROUP-A (MAIN BAY)	86A	3 Ph	TP	TP	-	IP	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
3PH MASTER TRIP RELAY GROUP-B (MAIN BAY)	86B	3 Ph	TP	TP	-	IP	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
3PH MASTER TRIP RELAY GROUP-A (TIE BAY)	86A	3 Ph	-	-	-	-	-	TP	TP	-	IP	IP	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	IP		
3PH MASTER TRIP RELAY GROUP-B (TIE BAY)	86B	3 Ph	-	-	-	-	-	TP	TP	-	IP	IP	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	IP		
96 MASTER TRIP RELAY GROUP-A (MAIN BAY)	96A	3 Ph	TP	TP	-	IP	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
96 MASTER TRIP RELAY GROUP-B (MAIN BAY)	96B	3 Ph	TP	TP	-	IP	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
AUTO RECLOSE (RREC, 79)- MAIN CB	79	1/3Ph	-	-	-	-	-	-	-	-	-	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
AUTO RECLOSE (RREC, 79)- TIE CB	79	1/3Ph	-	-	-	-	-	-	-	-	-	-	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
MAIN CB AUTO RECLOSE LOCKOUT	79	3Ph	TP	TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	AR LOCKOUT FOR FOLLOWING CONDITIONS: 1. PERSISTENT & EVOLVING FAULT 2. FAULT IN RECLAIM TIME- DEAD TIME 3. FAULT WITH AR BLOCK 4. FAULT WITH BOTH BCU FAIL	
TIE CB AUTO RECLOSE LOCKOUT	79	3Ph	-	-	-	-	-	TP	TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
MANUAL TRIP MAIN CB	-	-	TP	TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MANUAL TRIP TIE CB	-	-	-	-	-	-	-	TP	TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

RS: - INDICATES RESET STATUS FOR CB CLOSING

TP: - INDICATES TRIP FROM PROTIN. FUNCTION

IP: - INDICATES INITIATION FROM PROTIN FUNCTION



PROTECTION TRIP LOGIC DIAGRAM -LINE (ONE AND HALF)

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