

PROTECTION FUNCTION	ANSI CODE	OUT	MAIN BREAKER (NORMAL MODE)					TBC BREAKER (TRANSFER MODE)					MAIN CB MANUAL CLOSE/AR CLOSE	TBC CB MANUAL CLOSE/AR CLOSE	3PH MASTER TRIP RELAY GROUP-A	3PH MASTER TRIP RELAY GROUP-B	DIRECT TRIP SEND CHANNEL-1	DIRECT TRIP SEND CHANNEL-2	CARRIER SEND CHANNEL-1	CARRIER SEND CHANNEL-2	DISTANCE BLOCK	BUSBAR PROTECTION M1/2 (MAIN/TBC)	DR TRIGGER	REMARKS			
			TO CB TRIP COIL-1	TO CB TRIP COIL-2	BLOCK AUTO RECLOSE	START AUTO RECLOSE	LBB PROTN INITIATION	TO CB TRIP COIL-1	TO CB TRIP COIL-2	BLOCK AUTO RECLOSE	START AUTO RECLOSE	LBB PROTN INITIATION															
DIFFERENTIAL PROTECTION TRIP(PDIF,87)-MAIN 1 & MAIN 2 (1φ)	87L	1 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	-	-	-	-	-	-	-	-	-	-	IP		
DIFFERENTIAL PROTECTION TRIP(PDIF,87)-MAIN 1 & MAIN 2 (3φ)	87L	3 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	-	-	-	-	-	-	-	-	-	-	IP		
DIFFERENTIAL COMMUNICATION HEALTHY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	-	IP	REFER SHEET-02 THE LOGIC FOR COMMUNICATION FAIL LOGIC		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (ZONE-1 TRIP, 1φ)	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, 3φ)	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, 1φ)	21,85	1 Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	-	-	-	-	-	-	-	-	-	-	IP		
DISTANCE PROTECTION TRIP(PDIS,21)-MAIN 1 & MAIN 2 (CARRIER AIDED, 3φ)	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	-	-	-	-	-	-	-	-	IP	NOTE: BASED ON SCHEME COMMUNICATION IN SETTING	
POWER SWING BLOCKING(PDIS,21)-MAIN 1 & MAIN 2	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP	# POWER SWING BLOCKING AS PER SETTING	
DIRECTIONAL EARTH FAULT (PTOC,67N)-MAIN 1 & MAIN 2	67N	3 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	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	* BASED ON SCHEME COMMUNICATION IN SETTING	
OVER VOLTAGE PROTN STAGE-1/2 (PTOV,59)-MAIN 1 & MAIN 2(IF APPLICABLE)	59	3 Ph	TP	TP	IP	-	IP	TP	TP	IP	-	IP	-	-	TP	TP	TP	TP	-	-	-	-	-	-	IP	NOTE: BASED ON SETTING REQUIREMENT	
WEEK INFEED PROTECTION(ECHO+TRIP)**-MAIN 1 & MAIN 2	-	1/3Ph	TP	TP	-	IP	IP	TP	TP	-	IP	IP	-	-	-	-	-	-	-	-	-	-	-	-	IP	* BASED ON SCHEME COMMUNICATION IN SETTING	
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
MANUAL OPEN COMMAND MAIN CB IN NORMAL MODE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ FOR ≥ 400KV LINES
MANUAL OPEN COMMAND TBC CB IN TRANSFER MODE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$ FOR ≥ 400KV LINES
DIRECT TRIP RECEIVE CHANNEL-1	-	3 Ph	-	-	-	-	-	-	-	-	-	-	-	-	TP	TP	-	-	-	-	-	-	-	-	IP		
DIRECT TRIP RECEIVE CHANNEL-2	-	3 Ph	-	-	-	-	-	-	-	-	-	-	-	-	TP	TP	-	-	-	-	-	-	-	-	IP		
MAIN BAY BREAKER FAIL PROTECTION Retrip (RBRF, 50BF)(NORMAL MODE)	50BF	3 Ph	TP	TP	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
MAIN BAY BREAKER FAIL PROTECTION Backtrip (RBRF, 50BF)(NORMAL MODE)	50BF	3 Ph	-	-	IP	-	-	-	-	-	-	-	-	RS	-	-	TP	TP	-	-	-	-	-	-	IP	## INCASE OF STANDALONE LBB, BACKTRIP HAS TO BE EXTENDED AS BUSBAR PROTECTION AS EXTERNAL ZONE TRIP	
TBC BAY BREAKER FAIL PROTECTION Retrip (RBRF, 50BF)(TRANSFER MODE)	50BF	3 Ph	-	-	-	-	-	TP	TP	IP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	IP		
TBC BAY BREAKER FAIL PROTECTION Backtrip (RBRF, 50BF)(TRANSFER MODE)	50BF	3 Ph	-	-	-	-	-	-	-	IP	-	-	-	RS	-	-	TP	TP	-	-	-	-	-	-	IP	## INCASE OF STANDALONE LBB, BACKTRIP HAS TO BE EXTENDED AS BUSBAR PROTECTION AS EXTERNAL ZONE TRIP	
MAIN BUS BUSBAR PROTECTION (PDIF, 87BB, CBF) MAIN-1/2	87BB	3 Ph	TP	TP	IP	-	IP	-	-	-	-	-	RS	-	-	\$TP	\$TP	-	-	-	-	-	-	-	IP	\$ FOR ≥ 400KV LINES NOTE: FOR CENTRALIZED BUSBAR, TRIP MUST BE EXTENDED TO MASTER TRIP RELAY 96 A & B	
TRANSFER BUS BUSBAR PROTECTION (PDIF, 87BB, CBF) MAIN-1/2	87BB	3 Ph	-	-	-	-	-	TP	TP	IP	-	IP	-	RS	-	\$TP	\$TP	-	-	-	-	-	-	-	IP	\$ FOR ≥ 400KV LINES	
3PH MASTER TRIP RELAY GROUP-A/B	86A	3 Ph	TP	TP	IP	-	IP	\$\$\$TP	\$\$\$TP	\$\$\$IP	-	\$\$\$IP	RS	\$\$\$RS	-	-	-	-	-	-	-	-	-	-	IP	\$\$\$ MAIN BAY & TBC BAY ALL TRIPPINGS & INITIATION SHOULD BE SEGREGATED VIA NORMAL/TRANSFER SWITCH	
96A/B MASTER TRIP RELAY(MAIN BAY)	96	3 Ph	TP	TP	IP	-	IP	-	-	-	-	-	RS	-	-	-	-	-	-	-	-	-	-	-	IP		
96A/B MASTER TRIP RELAY(TBC BAY)	96	3 Ph	-	-	-	-	-	TP	TP	IP	-	IP	-	RS	-	-	-	-	-	-	-	-	-	-	IP		
AUTO RECLOSE (RREC, 79) (MAIN CB IN NORMAL MODE)	79	1/3Ph	-	-	-	-	-	-	-	-	-	-	IP	-	-	-	-	-	-	-	-	-	-	-	IP		
AUTO RECLOSE (RREC, 79) (TBC CB IN TRANSFER MODE)	79	1/3Ph	-	-	-	-	-	-	-	-	-	-	-	IP	-	-	-	-	-	-	-	-	-	-	IP		
MAIN CB AUTO RECLOSE DEFINITE TRIP/LOCKOUT	79	3Ph	TP	TP	-	-	-	-	-	-	-	-	-	-	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 BCU FAIL	
TBC CB AUTO RECLOSE DEFINITE TRIP/LOCKOUT	79	3Ph	-	-	-	-	-	TP	TP	-	-	-	-	-	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 PROTN. FUNCTION

IP: - INDICATES INITIATION FROM PROTN FUNCTION



PROTECTION TRIP LOGIC DIAGRAM FOR LINE(DM & DMT)

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