|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Protection Operated | Protection Panel Indication | | | Phase  Segregation | LEDs’ on Relay | SAS HMI Alarm | CB  Operation | | IN/OUT |
| RED670  87L Diff | TRIP INST. | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + DIFF TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + DIFF OPERATED + I/T FAST SEND | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  Z1 OPTD | TRIP INST. | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z1/AID1/AID2 TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 21 ZONE-1 OPTD R-PH + 21 ZONE-1 OPTD Y-PH+ 21 ZONE-1 OPTD B-PH + I/T FAST SEND + 21 ZONE-4 OPTD R-PH + 21 ZONE-4 OPTD Y-PH+ 21 ZONE-4 OPTD B-PH | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  Z2 OPTD | TRIP  DELAYED | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z2/Z3/E.F/O.C TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 21 ZONE-2 OPTD R-PH + 21 ZONE-2 OPTD Y-PH+ 21 ZONE-2 OPTD B-PH + I/T SEND | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  Z3 OPTD | TRIP  DELAYED | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z2/Z3/E.F/O.C TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 21 ZONE-3 OPTD R-PH + 21 ZONE-3 OPTD Y-PH+ 21 ZONE-3 OPTD B-PH + I/T SEND | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  Z2 AIDED | TRIP INST. | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z1/AID1/AID2 TRIP + I/T RECEIVED + DIST/DEF CR | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 21 CARRIER RECIVED + I/T FAST RECEIVED + 85R1 OPTD + 21 AIDED DIST TRIP + 21 CARRIER SEND + DIFF OPERATED | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |

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| Protection Operated | Protection Panel Indication | | | Phase  Segregation | LEDs’ on Relay | SAS HMI Alarm | CB  Operation | | IN/OUT |
| RED670  SOTF TRIP | TRIP INST. | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z1/AID1/AID2 TRIP + SOTF TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 21 DIST PROT SOTF OPTD + 21 ZONE-4 OPTD R-PH + 21 ZONE-4 OPTD Y-PH  + 21 ZONE-4 OPTD B-PH | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  O/C | TRIP  DELAYED | 86F1 OPTD | CBF INIT. | R – Y – B | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z2/Z3/E.F/O.C TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + DELAYED I/T SEND + 51-1 R-PH OPTD + 51-1 Y-PH OPTD + 51-1 B-PH OPTD | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  E/F | TRIP  DELAYED | 86F1 OPTD | CBF INIT. | R – Y – B | Z2/Z3/E.F/O.C TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + DELAYED I/T SEND + 51N-1 OPTD | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK | OK | OK | OK | OK | OK | OK |
| RED670  DEF | TRIP  DELAYED | 86F1 OPTD | CBF INIT. |  | R-PH TRIP + Y-PH TRIP + B-PH TRIP + Z2/Z3/E.F/O.C TRIP | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + DELAYED I/T SEND + 67N-1 OPTD | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK |  | OK | OK | OK | OK | OK |
| RED670  ADIED DEF | TRIP INST. | 86F1 OPTD | CBF INIT. |  | Z1/AID1/AID2 TRIP + I/T RECEIVED + DIST/DEF CR | CBF INITIATION + 86F1 OPERATED + CB CLOSE LOCKOUT + 67N-1 CARRIER RECIVED + I/T FAST RECEIVED + 85R1 OPTD + 67N-1 CARRIER SEND + 87L DIST GEN TRIP | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
| OK | OK | OK |  | OK | OK | OK | OK | OK |

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| Protection Operated | Protection Panel Indication | | | Phase  Segregation | LEDs’ on Relay | SAS HMI Alarm | CB  Operation | | IN/OUT |
| RED670  DIRECT I/T  86CBF(14,16) |  |  |  |  |  | FPFM DTT SEND | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
|  |  |  |  |  | OK | OK | OK | OK |
| RED670  86B(10,12) |  |  |  |  |  | 86B LOCKOUT OPERATED | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
|  |  |  |  |  | OK | OK | OK | OK |
| RED670  CBF TRIP |  |  |  |  | CBF TRIP | CBF INITIATION + CBF LOCKOUT OPERATED  + FPFM DTT DEND | TRIP BY TC1 | CB CLOSE BLOCK | IN/OUT CHECKED |
|  |  |  |  | OK | OK | OK | OK | OK |