



ELECTRICAL RELAY AND EQUIPMENT LIST			
DEVICE	DEVICE NAME	TYPE	FUNCTION
21Z1	ZONE 1 DISTANCE RELAY (NOTE 1)	SEL-311C	RELAY DETECTS FAULTS IN PG&E SYSTEM IN ZONE 1
21Z2	ZONE 2 DISTANCE RELAY (NOTE 1)	SEL-311C	RELAY DETECTS FAULTS IN PG&E SYSTEM IN ZONE 2
27DC	DC UNDER VOLTAGE RELAY	EMAX	RELAY CAN BE USED TO TRIP 60kV BREAKER
49	TRANSFORMER THERMAL RELAY	PART OF MAIN TRANSFORMER	RELAY CAN BE USED TO SOUND ALARM & TRIP GENERATOR BREAKER
50/51G	GROUND OVERCURRENT RELAY (NOTE 1)	SEL-311C	DETECTS OVER CURRENT TO PROVIDE BACKUP PROTECTION FOR INTERNAL & EXTERNAL FAULTS. TRIPS MAIN CIRCUIT BREAKER. 200/5
50/51P	PHASE OVERCURRENT RELAY (NOTE 1)	SEL-311C	DETECTS OVER CURRENT TO PROVIDE BACKUP PROTECTION FOR INTERNAL & EXTERNAL FAULTS. TRIPS MAIN CIRCUIT BREAKER. 200/5
51TG	TRANSFORMER GROUND OVERCURRENT RELAY	BASLER BE1-50/51M-204	RELAY CAN BE USED TO SOUND ALARM & TRIP GENERATOR BREAKER (NOTE 3)
63	TRANSFORMER PRESSURE SW.	PART OF MAIN TRANSFORMER	RELAY CAN BE USED TO SOUND ALARM & TRIP GENERATOR BREAKER
152	60kV BREAKER	-	CIRCUIT BREAKER DESIGNED TO INTERRUPT FAULTS FROM UTILITY SYSTEM AND TO ACT AS A SEPERATION DEVICE DURING CERTAIN CONDITIONS.
MCT	METERING CURRENT TRANSFORMER	-	CURRENT TRANSFORMER PACKAGE FEED UTILITY METERING 100/200:5
MPT	METERING POTENTIAL TRANSFORMER	-	POTENTIAL TRANSFORMER PACKAGE FEED UTILITY METERING 500/1
RCT	RELAY CURRENT TRANSFORMER	-	CURRENT TRANSFORMER PACKAGE FEED UTILITY PROTECTION 200/5
PT	POTENTIAL TRANSFORMER	-	POTENTIAL TRANSFORMER PACKAGE FEED UTILITY PROTECTION 500/1

NOTES

NOTE 1: LINE RELAY X2 FOR REDUNDANCY.

NOTE 2: SCADA TO DISCONNECT SWITCHES.

NOTE 3: IF REDUNDANCY FOR 51TG FUNCTION IS REQUIRED, 2EA BASLER BE1-50/51M-204 RELAYS WILL BE UTILIZED.

DEVICE LEGEND

LLHP - LASSEN LODGE HYDRO PROJECT

<p>BAT ELECTRIC, INC. 20410 MARTINEZ LANE REDDING, CA 96002 TEL: (530) 221-1336 FAX: (530) 221-3496</p>	<p>RUGRAW, LLC LASSEN LODGE 5.0MW HYDRO ELECTRIC PROJECT POINT OF INTERCONNECTION</p>	<table border="1"> <tr><th>REV</th><th>BY</th><th>DATE</th></tr> <tr><td>A</td><td>PT</td><td>1-21-14</td></tr> <tr><td>B</td><td>PT</td><td>4-1-14</td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	REV	BY	DATE	A	PT	1-21-14	B	PT	4-1-14						
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<p>DWG No.: 11P0525-02</p>	<p>ENGR: D.BATDORF DRFT: PT DATE: 3-29-11</p>	<p>TEXT REV</p>															