

LRAUV Valve Control Board
Checkout Log

last update 3/7/2013 17:30

Serial	5V Limit Cycle	Cap Midpoint	5V Curr Lim	3.3V	Move current @ 15V	Vbatt undervolt	Stdbby Current
	V-V	V	A	V	A	V	uA
1							
2	4.95-4.99	2.48	0.69	3.29	0.12	10	32
3	4.93-4.97	2.49	0.65	3.3	0.13	10	32
4	4.94-5.00	2.5	0.82	3.3	not tested	9.9	33
5	4.93-5.00	2.52	0.67	3.3	not tested	9.9	32
6	4.92-4.98	2.48	0.78	3.29	not tested	9.8	32

Checkout steps:

1. Connect 0-24V @ 1A power supply via ammeter, using test cable and J1/P1 connector. Connect DVM to JMP2 (discharge) to monitor 5V.
2. Input voltage slow ramp 0-15V. Verify smooth startup at 4V, cap charge to 5V.
3. Record 5V limit cycle and cap midpoint. Verify no OVP conduction at with input at 24V.
4. Connect 2 ohm load, via 3A ammeter, to 5V supply at JMP2-1 and C7 + terminal. Allow reading to stabilize (15 sec) and record 5V Current Limit.
5. Record 3.3V voltage, at C11.
6. Connect test cable to J2/P2 signal connector. Verify operation of Open/Closed switch and Shallow/Deep switch.
7. Verify Open (daylight) and Closed (darkness) positions on valve. Record Move current.
8. With valve Open, reduce input voltage, verify and record Vbatt undervolt at about 10V.
9. With valve Closed and caps fully charged, measure and record input Standby Current.
10. Power down, disconnect, and install JMP2 to discharge caps while board is in storage.