



RT-21 and RT-21r APPLICATION NOTE Contact Closure (rev 2)

1. When configured as described, the RT-21 (or the 'r' version) can operate systems where only a set of contact closures are required. One for CCW and one for CW, which in turn can be supplied with external voltage to drive external relays.
2. FOR RELAY CONTROL – The relays are rated at 8A and should be switching 48 VDC or less. **Green Heron recommends the implementation of mechanical limit switches as an additional precaution.**
3. Since no voltage is generated within the RT-21 for this application, the transformer taps for the motor winding on the standard RT-21 Units is NOT CONNECTED. This means that all 4 of these wires should NOT be connected to J9.
4. The RT-21 should be modified as follows:
 - a. Remove J4 if installed
 - b. Remove all jumpers on J12 and J14 if installed
 - c. Move white wire on J8-3 over to J9-2 (you will need to extend this wire as it needs to connect up to Terminal #6 on the rear terminal strip)
 - d. Add wire from J8-3 to J12-2

5. Connections are:

TERM STRIP #	FOR RELAY CONTROL	
1	CW	Contact Closure CW
2	CCW	Contact Closure CCW
3	GND	Ground (Pot Ret)
4	POS	Pot Wiper (Pulse)
5	REF	Pot Reference V
6	BRK	Contact Closure Return

The contact closure return is isolated from ground in this application and requires a separate return wire in order to complete the closure circuit.

Connect up the Position Feedback. For a Potentiometer, use 3, 4 and 5 on the Terminal Strip. If you use a proximity switch, connect across 3 and 4. Make sure you set the correct SETUP – OPTION for POT or CTR.

6. Set both the MAX and MIN SPEED settings to 10 in order to disable the PWM speed controller.
7. Set Advanced Options (SETUP UTILITY) to 'FAST BRAKE'. Must be running 1.06 or later software.