DCM-100 SETUP MANUAL

"We just made CNC easier"

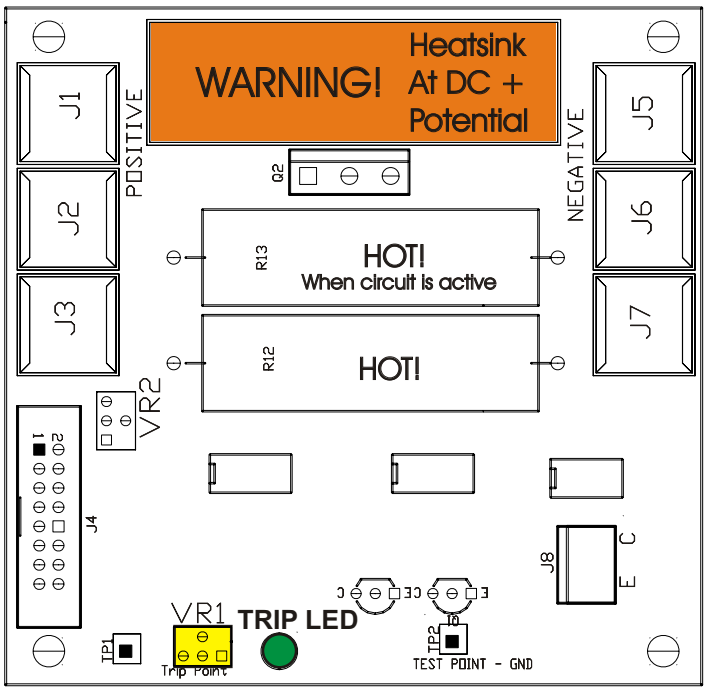
CandCNC
http://www.CandCNC.com

Advanced Breakout Cards
Table I/O Cards
Torch Height Controls
AC Power Control
DC Power Control
Special Interface Cards

DCM-100 OVP* and DC Power Breakout

40A Max Total Current

120VDC Max DC Volts



*Over Voltage Protector.
(Sometimes called Load Dump or Crowbar Circuit)

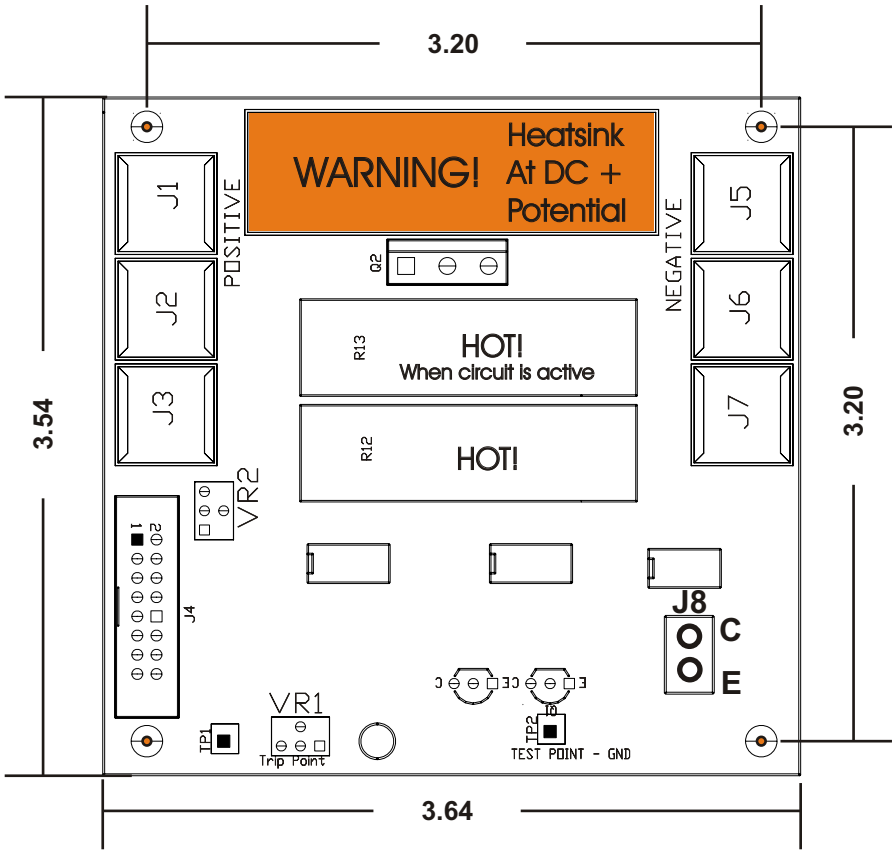
Offers protection from DC voltages that could harm voltage sensitive circuits. Adjustable to trip at any voltage from 20 to 100 VDC. Circuit fires for 4 seconds and places a heavy load across the DC supply to absorb any voltage and act as a dynamic brake for spinning motors.

1. **Adjustable trip point**
2. **FIres for 3 - 4 seconds then resets**
3. **Opto output for external logic**
4. **Plug compatable with ACM-01 and ACM-100 Ac Controllers**
5. **High Current inputs and outputs for easy DC power distribution**
6. **Eliminates having to use terminal blocks for power connections**
7. **6 connections on each side use Crimp Connectors for easy hookup.**

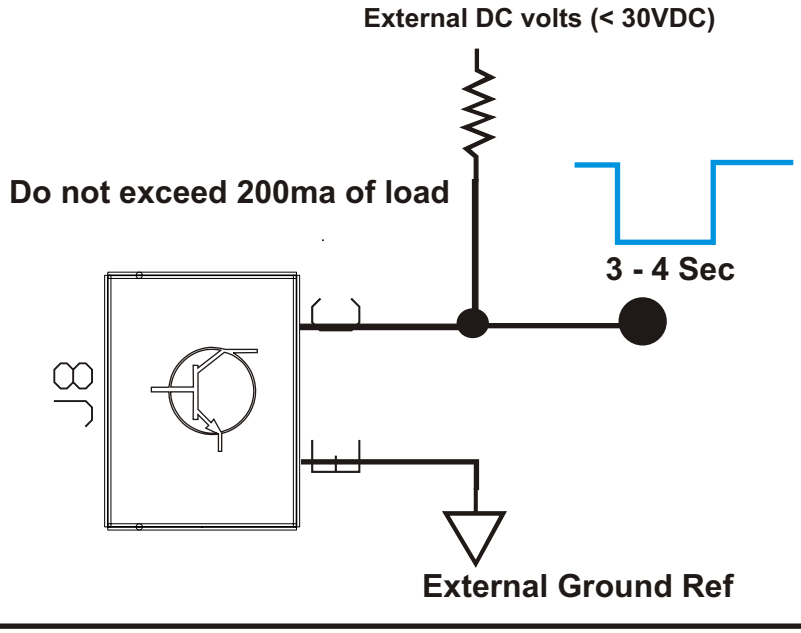
Note: When used with the ACM series modules the DCM-100 is tripped with any AC shutdown to act as a dynamic brake

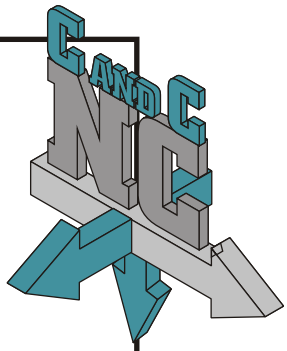
DRILL AND MOUNTING GUIDE

PRINT AND CUTOUT FOR DRILL TEMPLATE

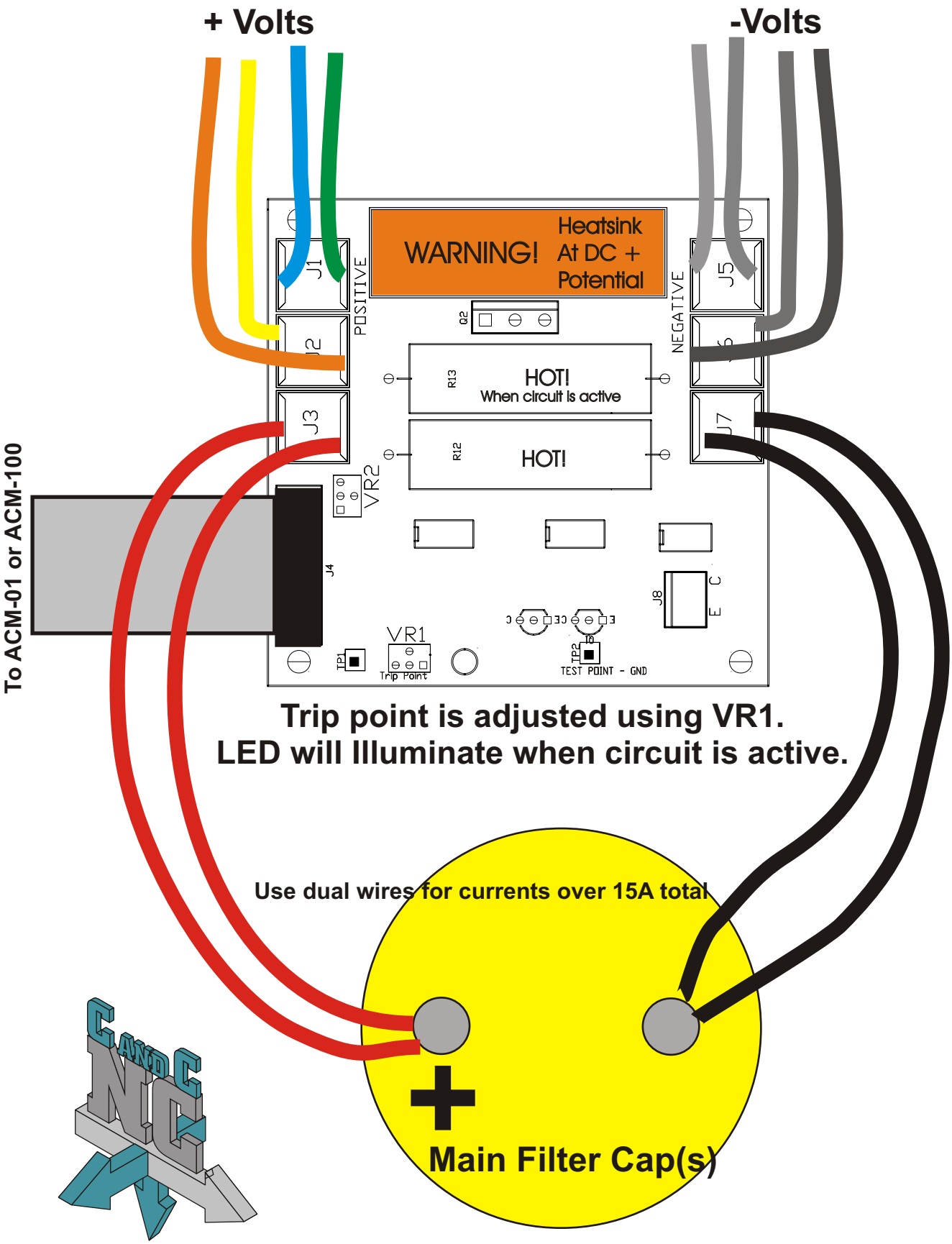


Circuit for triggering external devices (Isolated)





Connections to motor drive cards



INSTRUCTIONS:

1. Mount DCM-100 board Horz or Vertically

2. Connect the ribbon cable as shown to the ACM-01 or ACM-100 Module. The DCM-100 is designed to run from a regulated 12VDC supplied by the ACM-01 or ACM-100 module and cannot be used stand alone.

3. Make sure Heatsink (Shown in Orange) is NOT in contact with any part of the chassis or other electronics in the cabinet. It is at the +DC voltage potential. Be careful any time the Supply is on. Do not short to ground!

4. Use insulated Faston type crimp connectors to make connections. On J1-J3 and J5- J7. Make sure POSITVE voltage is connected to J1-J3 and NEGATIVE to J5 - J7. Reverse voltage will cause the internal diode in Q2 to conduct and R13 and R12 to get very hot and for Q2 to ultimately fail. The survival time of the circuit connect backwards will be a function of the supply voltage but will be measured in. in seconds. Use wire and connectors rated for the expected currents involved On currents above 15A total use two wires back to the Main Filters (Example: Two #12 Stranded wires are good for 30A total)

5. When OVP trip point (set by VR1) is reached the circuit will activate and place a heavy load (approx 4 ohms) across the Raw DC to drain the filter caps and act as a dynamic load to the motors. The ACM-01 or ACM-100 will activate and remove AC voltage from the power supply

6. Circuit operation can be confirmed by observation of the LED. To set the trip point, connect a voltmeter to the output and turn on your DC supply then adjust VR1 until it fires. Increase the setting slightly and you will be protected against any voltage above your supply level NOTE: Units are factory set at 75VDC.

7. To set the unit to other trip points connect an accurate Digital voltmeter (DVM) to TP3 and the Ground lead to TP2. The trip point setting is 10 times the voltage at TP3. (Example 75VDC trip = 7.5VDC @ TP3)

8. If you have access to a current limited variable DC supply you can use it to set the trip points. But the ACM module must be connected and powered up to supply the circuit voltage. NOTE: The active circuits on the card MUST have a source of regulated 12VDC.