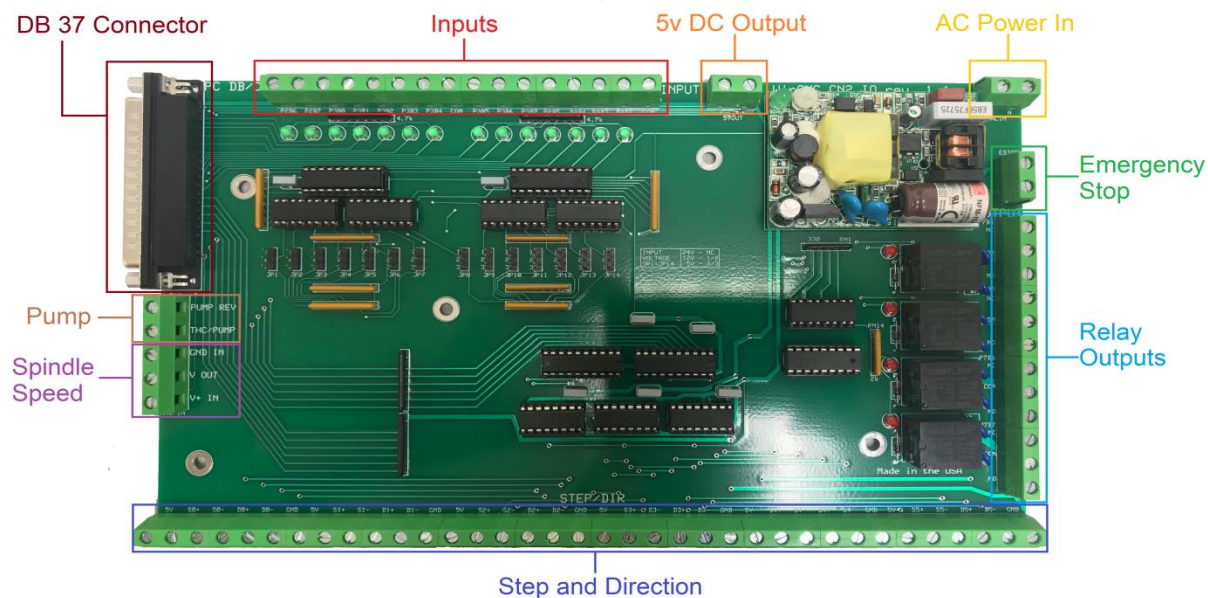


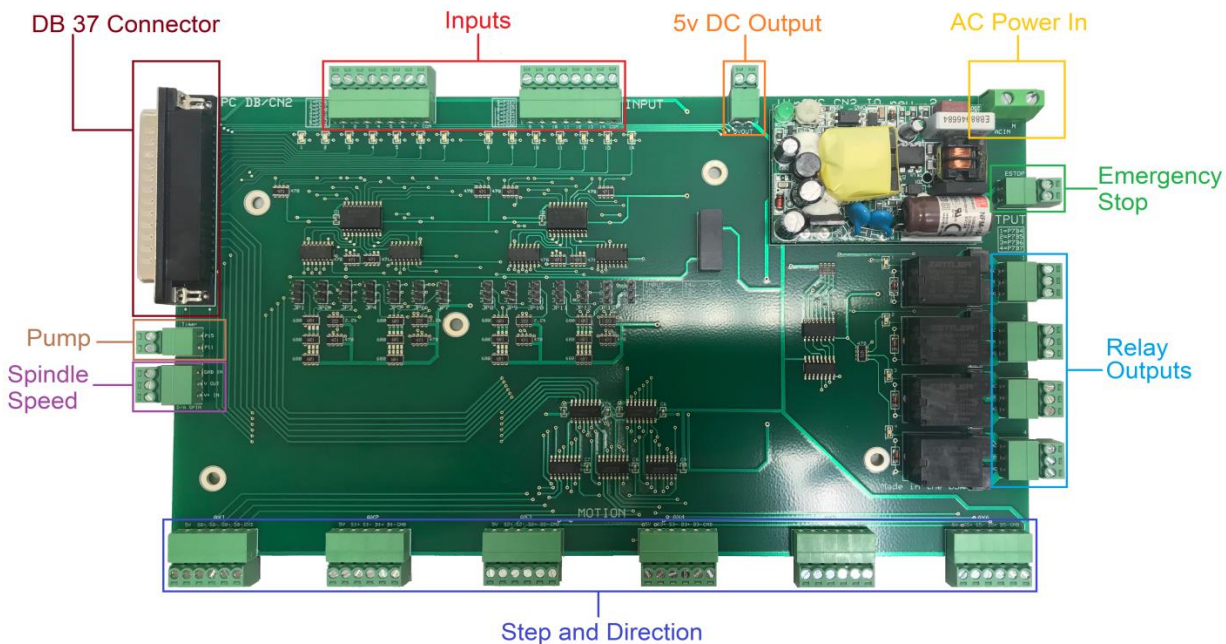
Introduction

This document will outline installing a CN2 Interface board on your CNC machine controlled by WinCNC.

Thru-Hole CN2



Surface Mount CN2



Pictured above are CN2 Interface Boards. The first step in connecting the board should be configuring the jumpers to accept the input voltage you are using. By default you will receive your board with all jumpers removed and enclosed in a separate bag. Jumper positions 1+2 should be used for 12v DC, positions 2+3 should be used for 5v DC, and no jumpers should be used for 24v DC. If using 5v DC for your inputs the 5v output on the board can be used as a power supply. Any other voltage will require an external power supply not supplied.

Emergency Stop Function

A circuit must be completed between the two E-Stop terminals on each board for them to function. This can be accomplished with a switch or by simply shorting the terminals if you wish to bypass the E-Stop.

When the emergency stop circuit is open on the CN2 board, the outputs will go into the open state and the inputs will go low. The step and direction will also stop working.

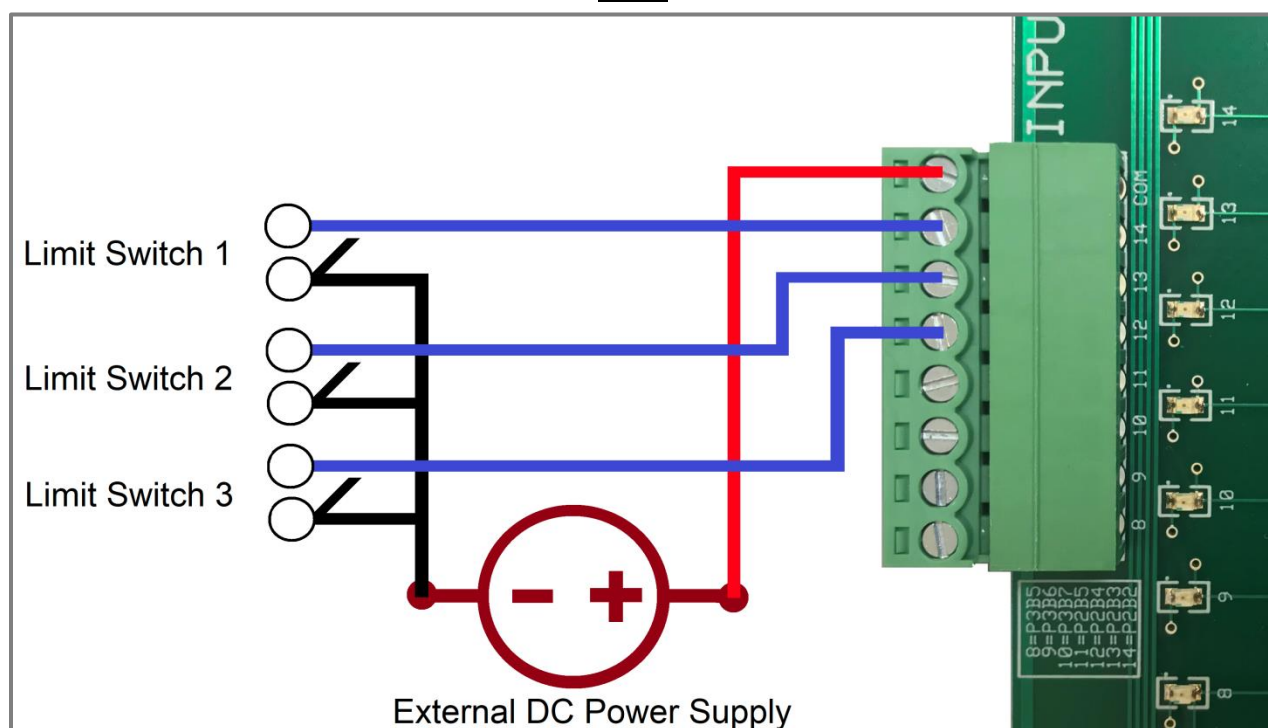
Power and PC Connection

Either board can be powered using 90~240V AC. The CN2 board uses a DB37 cable to connect directly to the blue connector at the back of the PC.

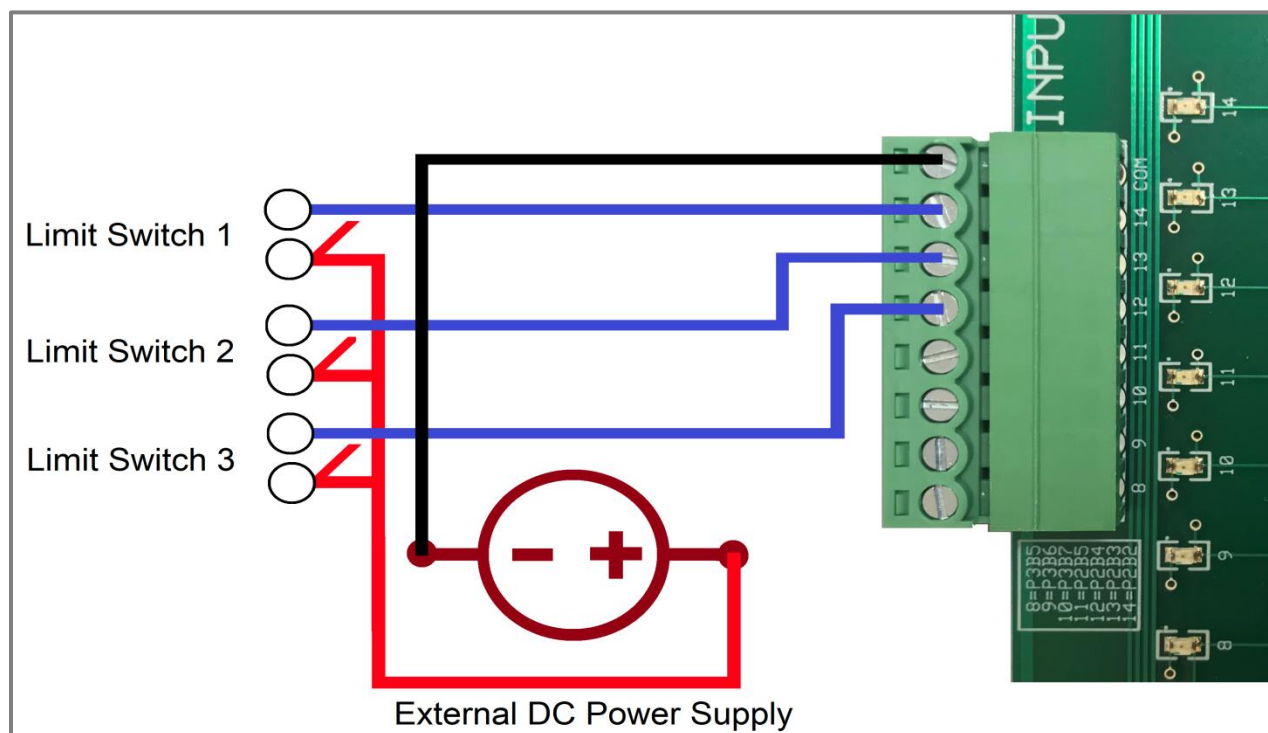
Input Wiring

Below is an example of wiring for multiple limit switches. There are two different ways to connect inputs to the board and if you are using transistor style switches you will need to use the correct method for NPN or PNP depending on your switch type. If using normal contact switches either method can be used.

NPN



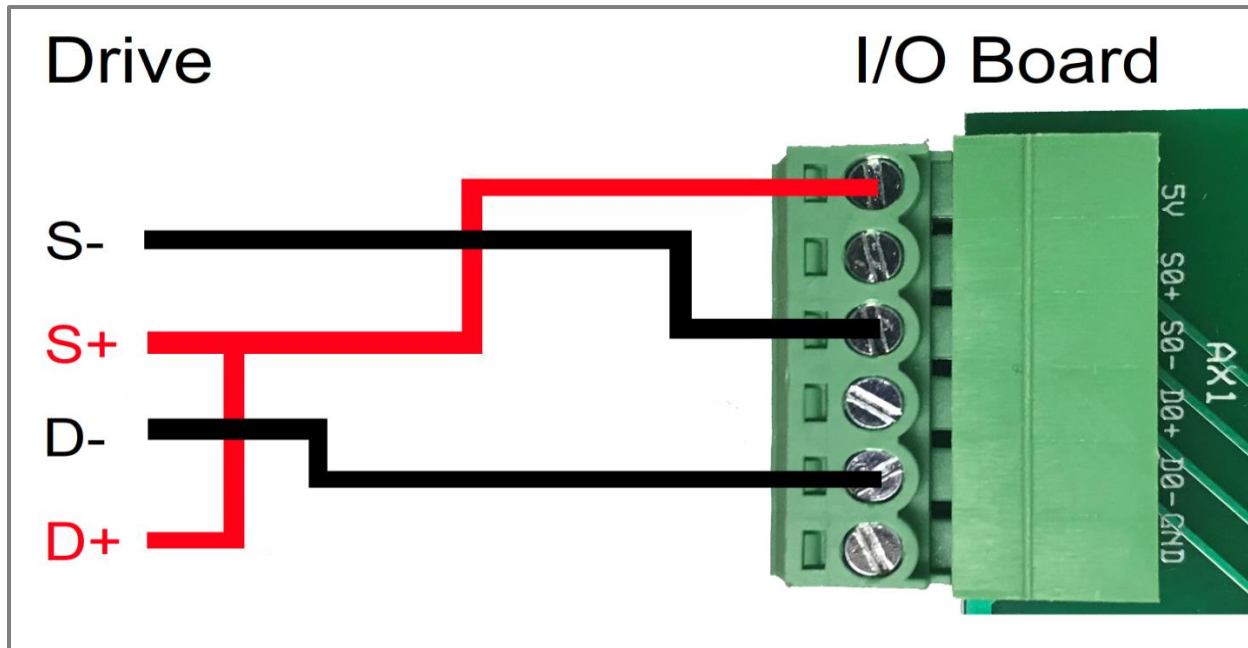
PNP



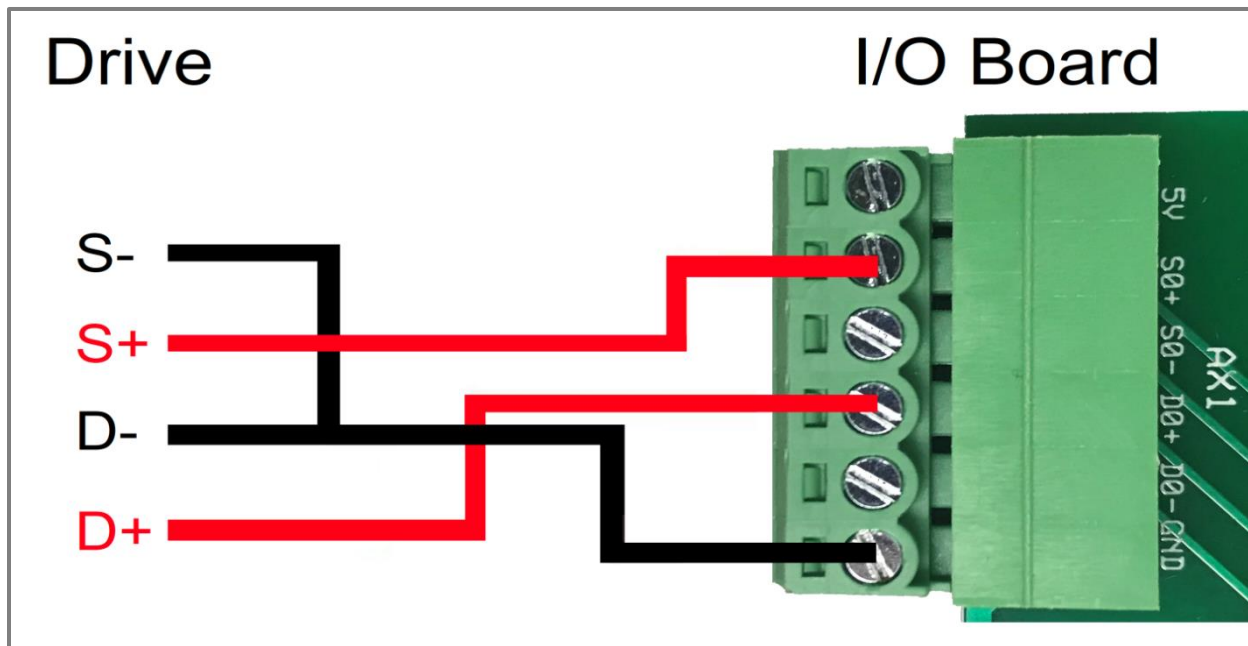
Step and Direction Wiring

Wiring examples for the step and direction portion of the board can be found here. As with the inputs there are two different methods of connecting a servo or stepper drive to the board.

Sink



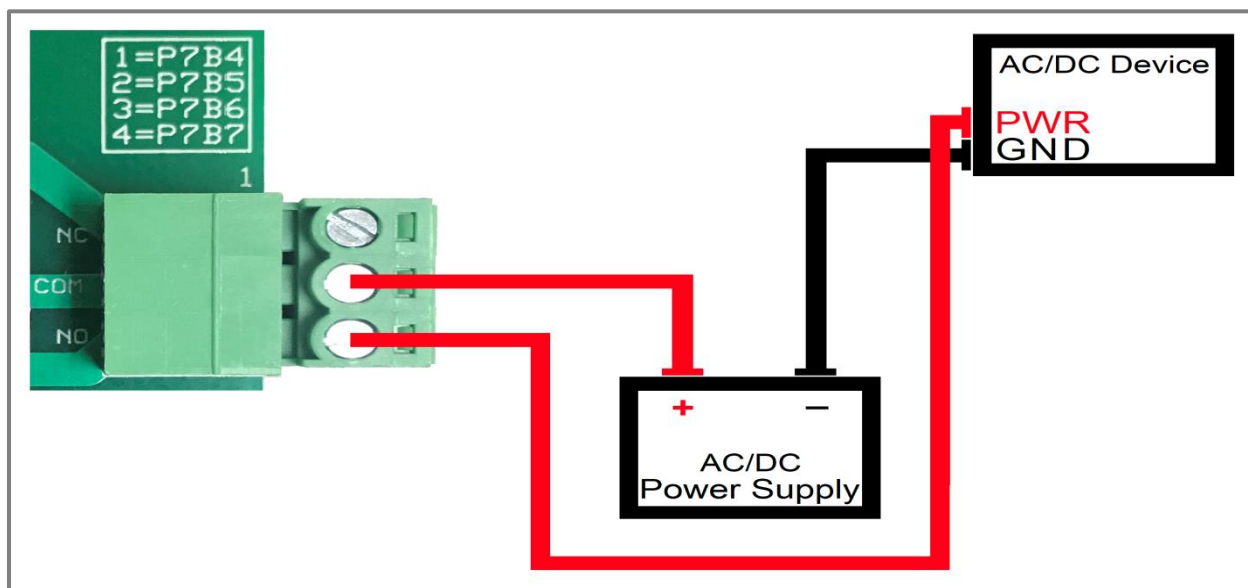
Source



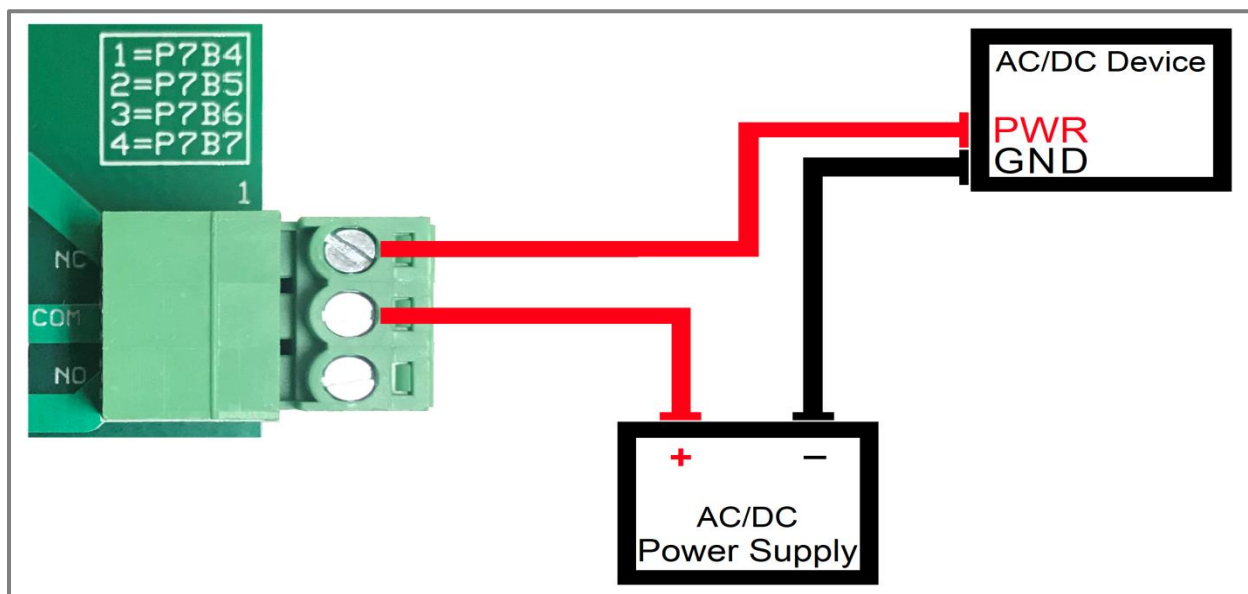
Outputs

The outputs on each board can be wired to turn on your spindle, dust collector, or any piece of equipment you would like to be able to control through the software. Your input power up to 240v AC goes into the COM terminal and depending on whether you want the equipment to be on while the control board is powered off (NC) or off while the control board is off (NO) you place another wire going from the corresponding terminal to the voltage input on your equipment.

NO

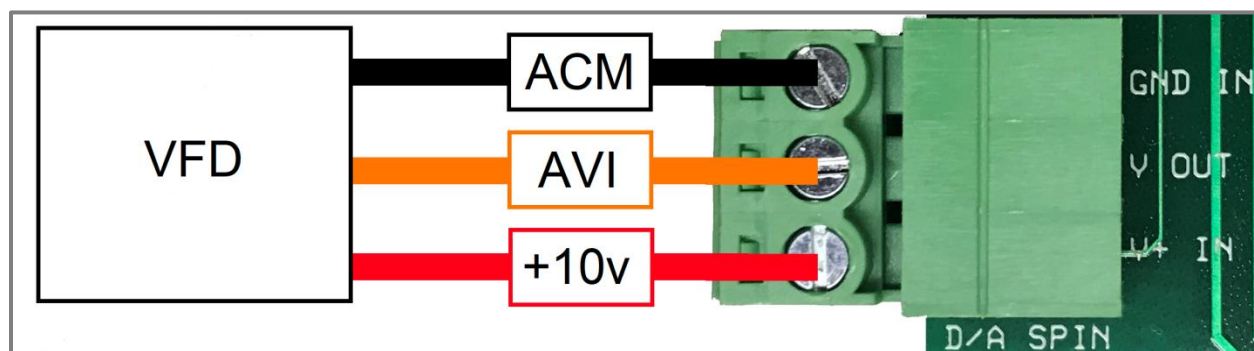


NC



Spindle Speed

In conjunction with a VFD (Variable Frequency Drive), the CN2 board is capable of Spindle Speed Control, formerly known as Digital to Analog Speed Control. +10v, ACM (Analog Common/Ground), and AVI (Analog Voltage Input) is wired into the board from the VFD as shown below. Terminology can vary between VFDs, however what is specified in this wiring example is common.



THC Size Specifications

