



CNC4PC C80 Expansion Board User Manual

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CNC4PC C80 Expansion Board



OVERVIEW

This card provides an easy way to connect your inputs and outputs from your port using a LPH26pin Ribbon Cable or parallel port. Provides terminals for connections and conditions signals for use in CNC applications, this version can be easily mounted on control boxes using DIN rails and can also accommodate ribbon cables or DB25 connectors.

FEATURES

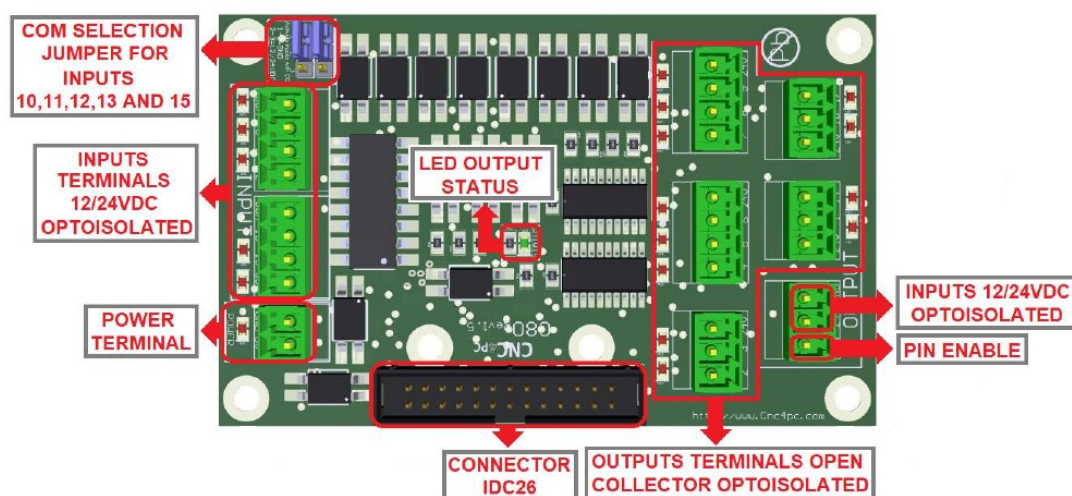
- Terminal Block for all I/Os.
- Expansion port for Mother Board. Connect the C76 or ESS expansion board.
- Open collector Outputs pins optoisolated 2, 3, 4, 5, 6, 7, 8, 9, 1, 14, 16, 17.
- Input pins 10, 11, 12, 13, 15.
- Terminal Block input with close by ground or +5VDC connections, COM and outputs with + 24VDC and ground
- Screw-On connections for all terminals. You only have to screw-on the wires to make all your connections.
- Status LEDs for enable.
- Fully Optoisolated Inputs and Outputs.
- External Enable Pin.
- Din rail mountable. *NEW*.
- Pluggable Screw-On Terminals. *NEW*.

SPECIFICATIONS

DIGITAL INPUT SPECIFICATIONS	
On-state voltage range	24V DC
Maximum off-state voltage	0.8V
Maximum operation frequency	4 MHz
Typical signal delay	10nS

DIGITAL OUTPUT OPEN COLLECTOR SPECIFICATIONS	
Maximum output voltage	(24V power supply voltage) + 0.5V
Typical output current	6A
Maximum operation frequency	4 MHz
Typical signal delay	0.25 μ S
Time of transition to high impedance state	12 s*

BOARD DESCRIPTION



REQUIREMENTS

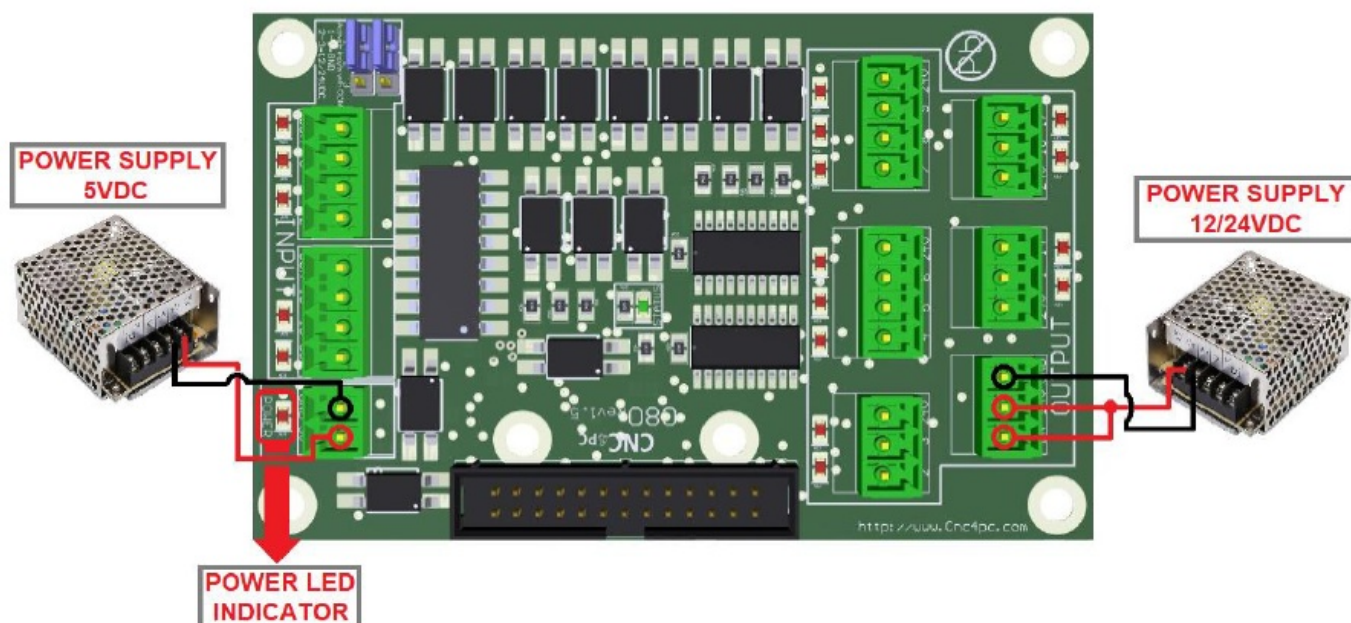
Power Requirements

Regulated +5VDC and + 24VDC is required to power this board.

WARNING

Check the polarity and voltage of the external power source and connect the 5VDC and GND. Overvoltage or reverse-polarity power applied to these terminals can cause damage to the board, and/or the power source.

POWER TERMINAL

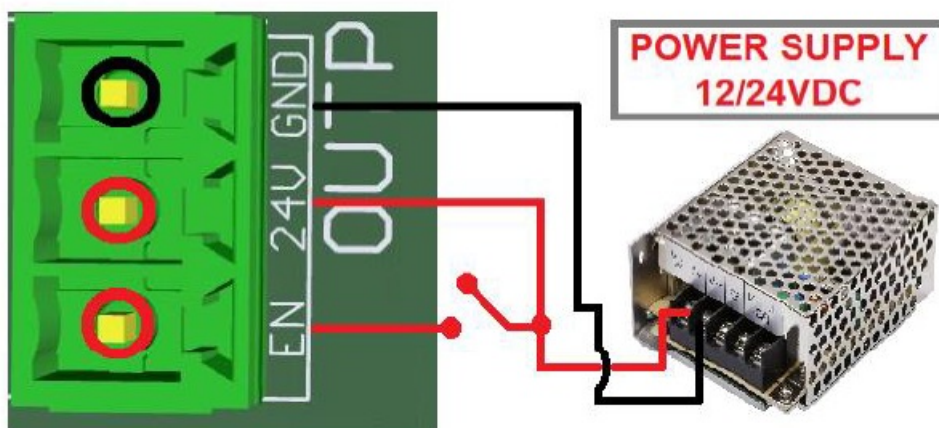


To preserve optoisolation two independent power sources should be used. A +5vdc to power the optos that interact with the controller (which could be a USB cable) and a +24vdc at 200mA to power the board.

Note. It can be powered by using Pin 26 of the IDC26

Enable pin.

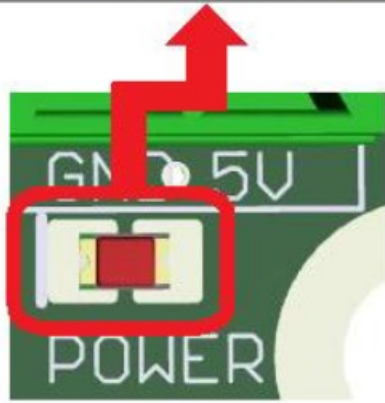
The card must be provided with a 24VDC signal to enable operation. This feature has been added to externally control the status of the outputs. An external switch or a Safety Charge Pump can be added to provide the enabling signal. If this function is not required, a jumper can be placed between 24VDC and the EN terminal



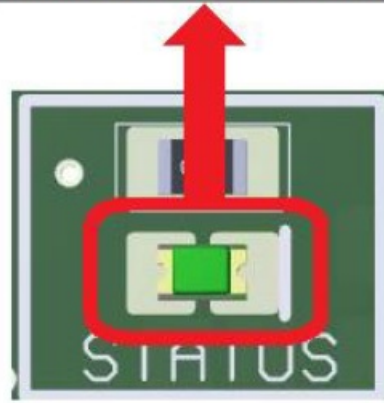
LED INDICATOR

The power LED lights indicate that the system is ready but disabled. When Status LED, (Green LED) lights, it indicates that the system is enabled.

POWER LED INDICATOR

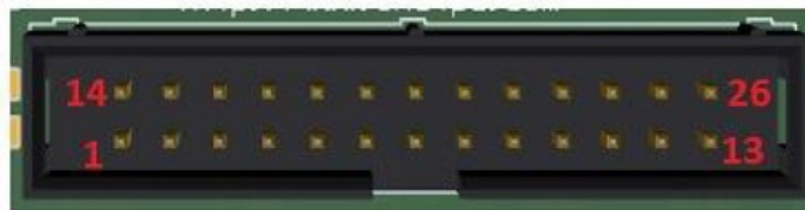


LED OUTPUT STATUS



PINOUT

Pin Numbering



IDC26

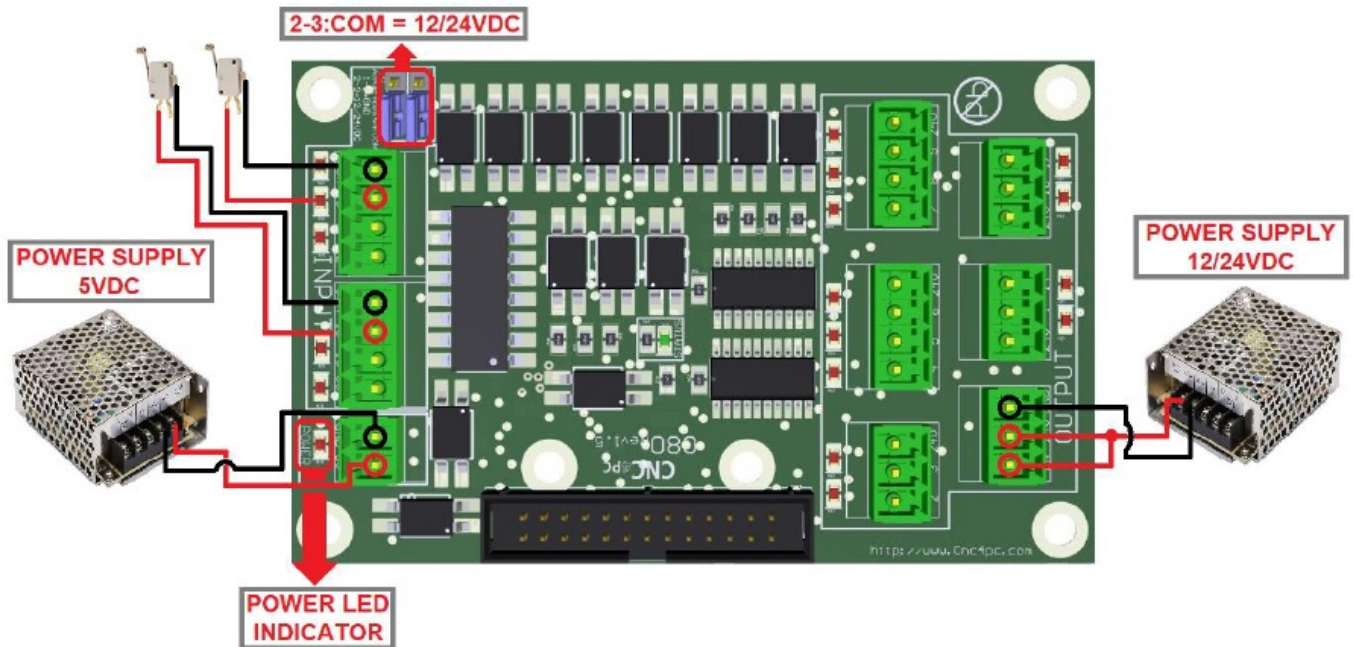
IDC26 Pin number	LPT port direction signal
1	Output 1
2	Output 2
3	Output 3
4	Output 4
5	Output 5
6	Output 6
7	Output 7
8	Output 8
9	Output 9
10	Input 10
11	Input 11
12	Input 12
13	Input 13
14	Output 14
15	Input 15
16	Output 16
17	Output 17
18	Watchdog (Ground to Enable)
19 – 25	GND
26	+5VDC
COMPATIBILITY Regular Parallel Port, ESS, 5LPT, C76, UC100	

CONFIGURATION JUMPERS

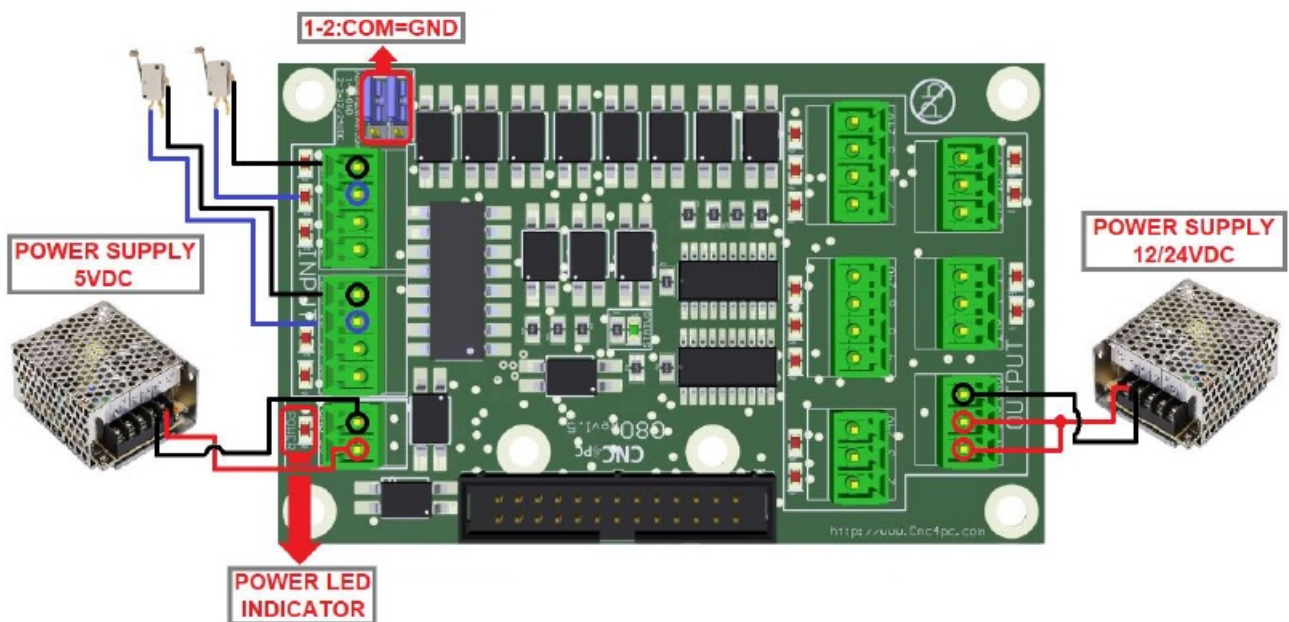
Connecting Switches Using the COM = 12/24VDC

There is a jumper that allows you to select +12/24VDC or GND for the COM pins. While this board supports input +24VDC signals, different kind of sensors, switches using different voltages can be connected using the diagrams that follow:

Note. This board has one Input bank, (pins: 10, 11, 12, 13, and 15) and (dedicated outputs: pins 1, 14, 16, and 17 or 2-9), and all the inputs of the same bank have the same configuration. The below wiring diagrams are an example, any input can be used for the connections.



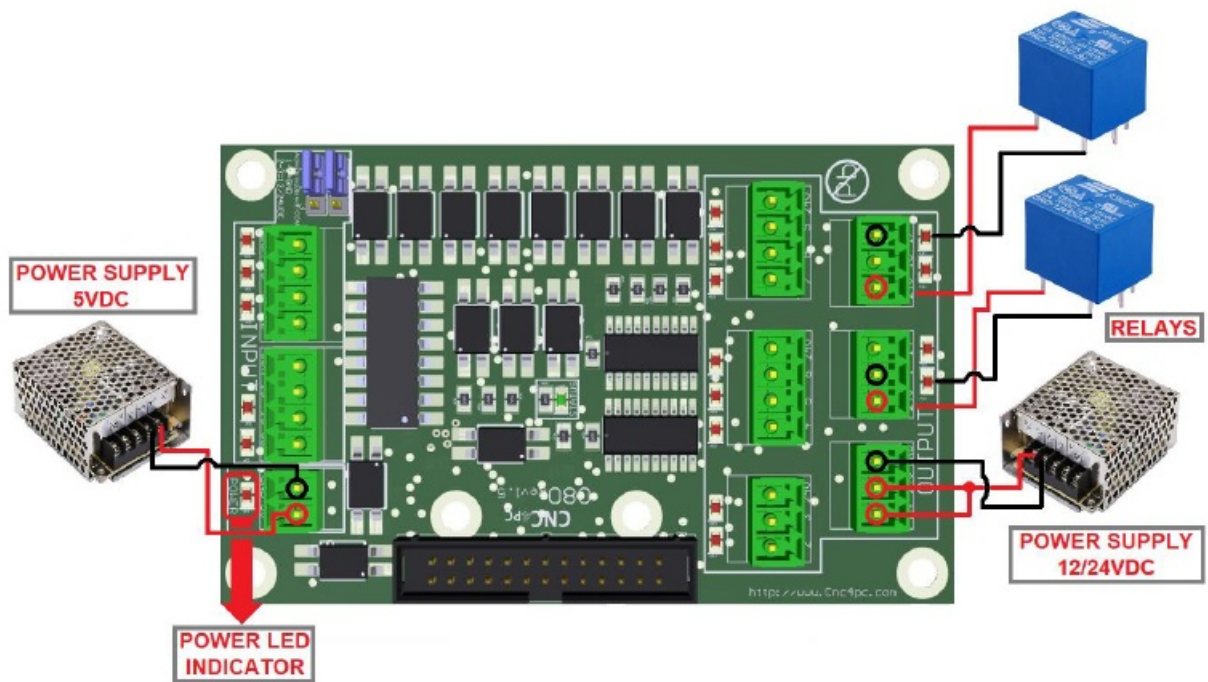
Connecting Switches Using the COM = GND



Wiring diagram to connect switches

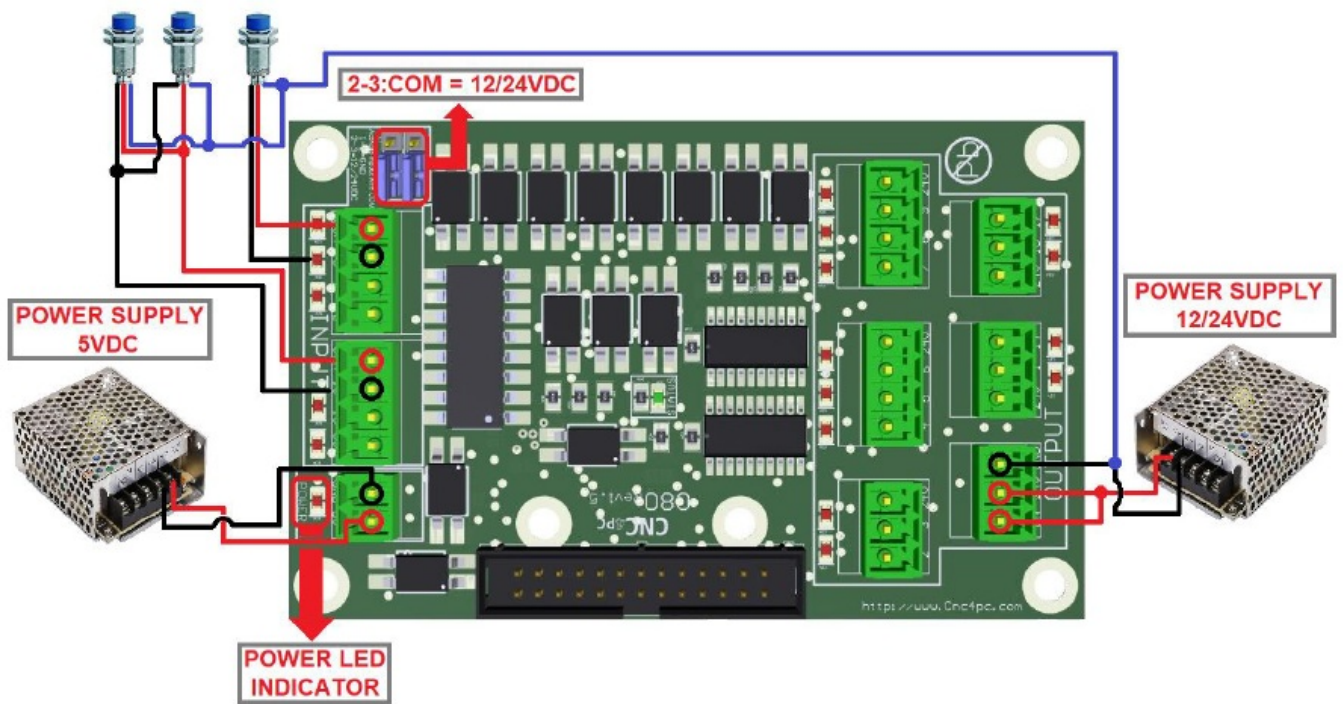
EXAMPLE WIRING OPTOISOLATED OUTPUT

The power source of 12/24 VDC is for the correct functioning of the outputs of (2-9) and (1,14,16,17).



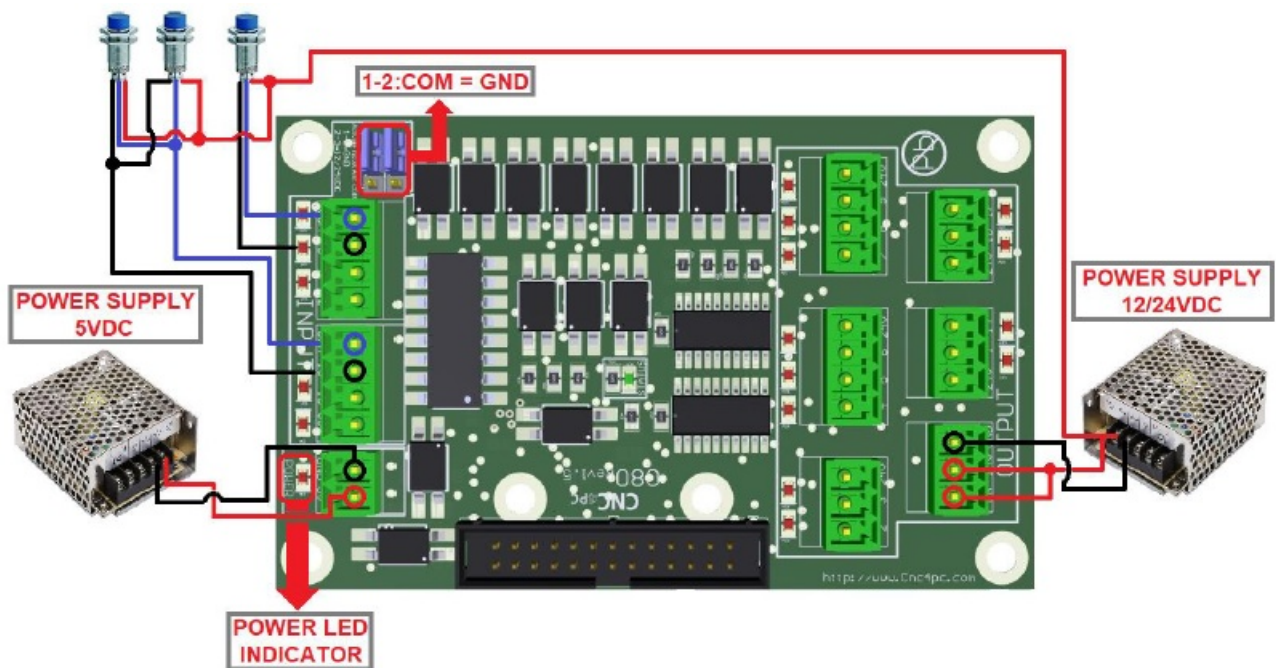
WIRING DIAGRAM SENSORS

Connecting PNP sensors



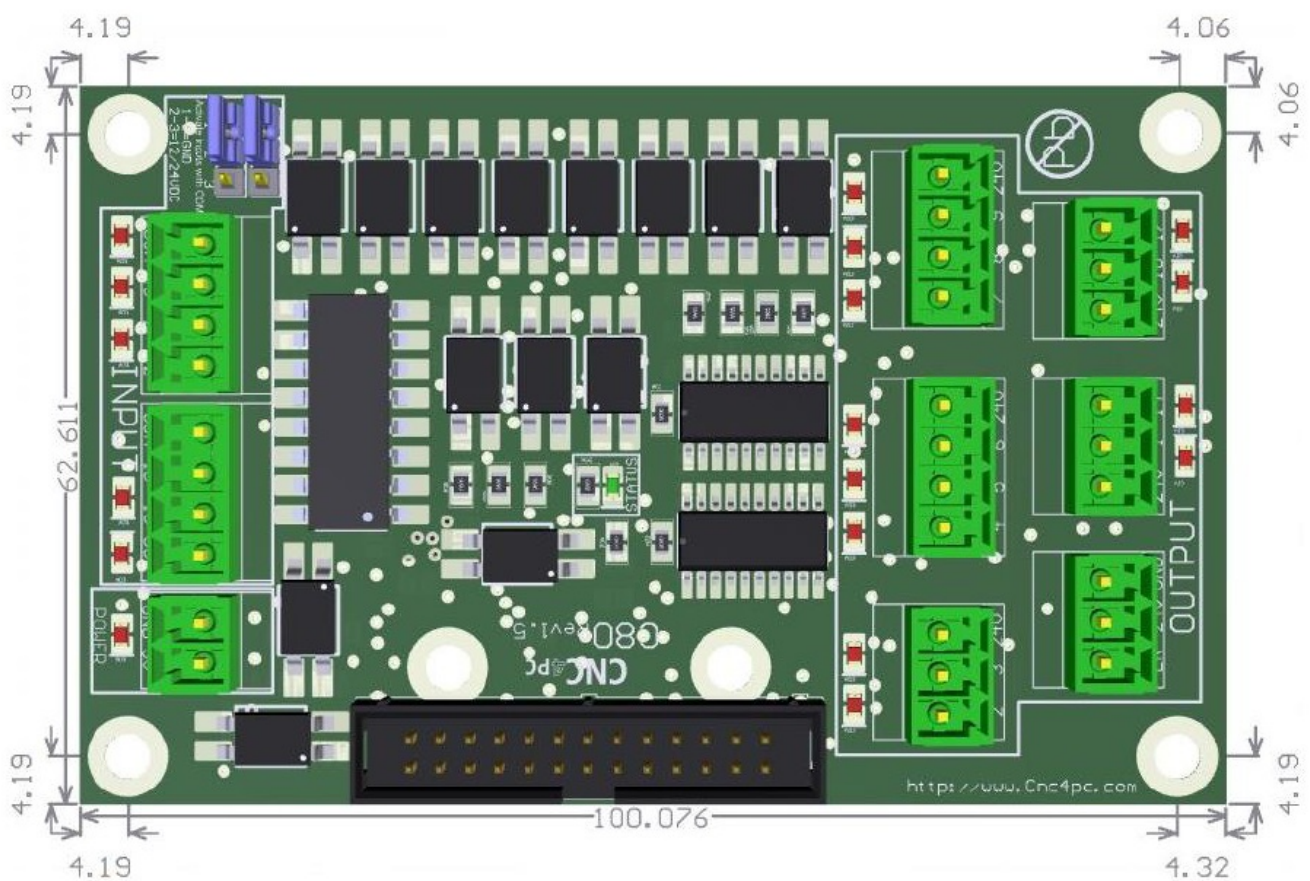
Wiring diagram to connect PNP open collector proximity sensors.

Connecting NPN sensors



Wiring diagram to connect in parallel NPN open collector proximity sensors.

DIMENSIONS



All dimensions are in Millimeters.


Fixing holes (4mm).

DISCLAIMER

Use caution. CNC machines can be dangerous machines. Neither DUNCAN USA, LLC nor Arturo Duncan are

liable for any accidents resulting from the improper use of these devices. This product is not a fail-safe device and it should not be used in life support systems or in other devices where its failure or possible erratic operation could cause property damage, bodily injury or loss of life.

Documents / Resources

	<p>CNC4PC C80 Expansion Board [pdf] User Manual C80 Expansion Board, C80, Expansion Board, Board</p>
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Manuals+.