



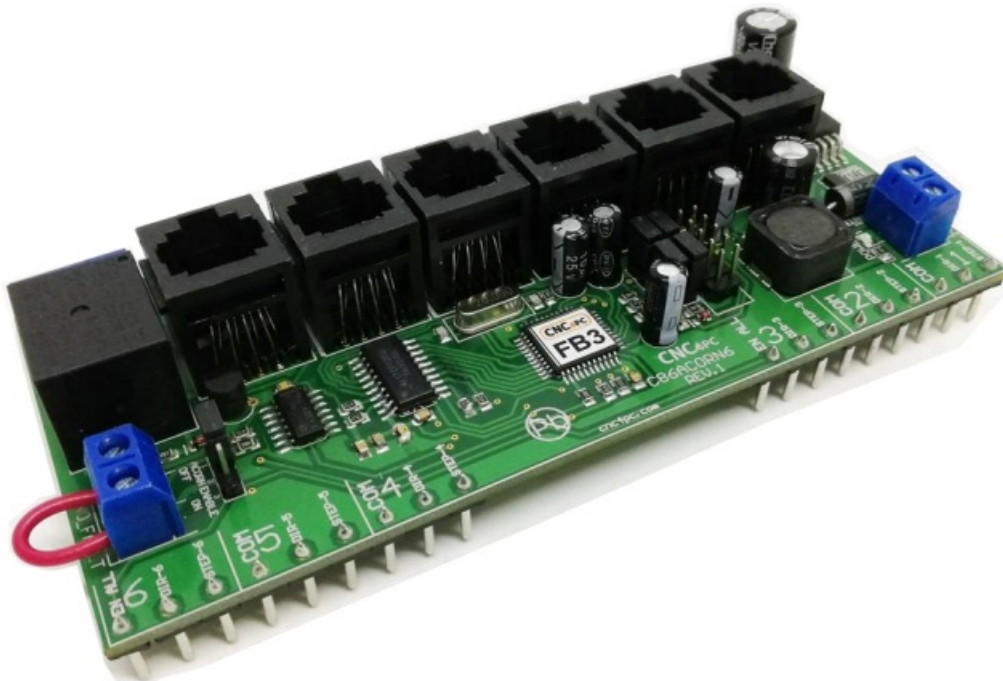
CNC4PC C86 Connector Board User Manual

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CNC⁴PC

Integration Solutions for CNC Projects

USER'S MANUAL VER.1
C86 Connector Board for the
AcornSix 6-axis CNC controller Rev. 1



NOVEMBER, 2022

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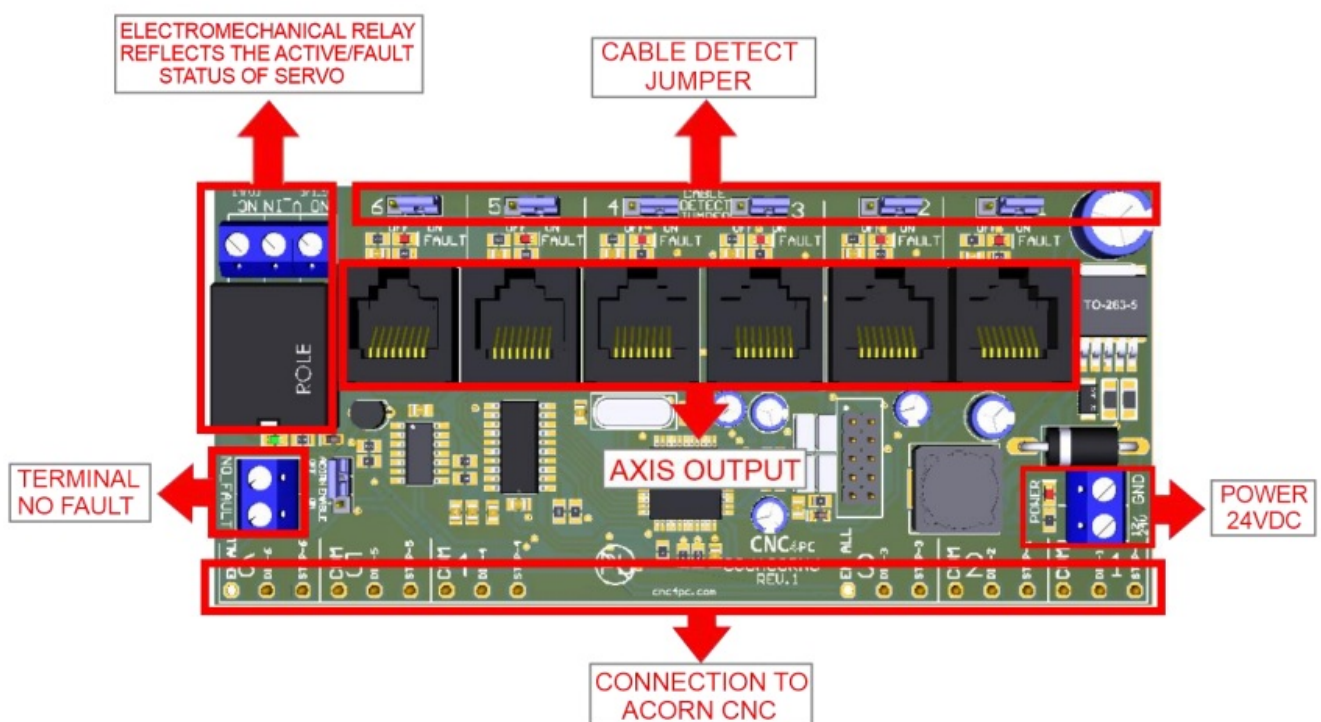
OVERVIEW

This board interface is used for the connection between the AcornSix 6-axis CNC controller and C34 Boards.

FEATURES

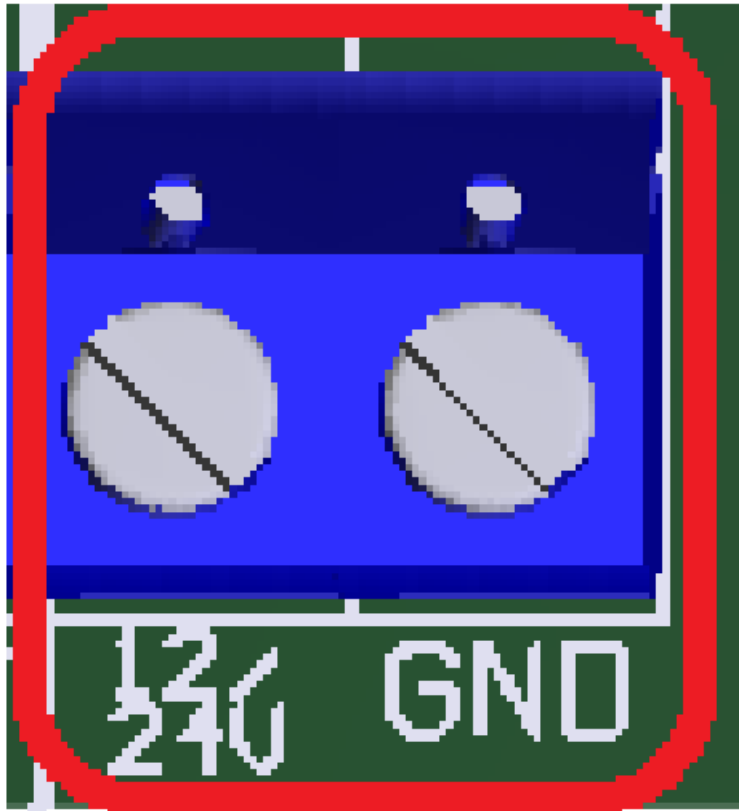
- Enable and disable the drives.
- RJ45 connectors for the axis.
- Electromechanical relay reflects the ACTIVE / FAULT Status of a servo.
- Power terminal (12VDC / 24VDC).
- Status LEDs for fault axis and relay status.

BOARD DESCRIPTION



REQUIREMENTS

4.1 Power Requirements



Regulated +12VDC or +24VDC is required to power this board.



WARNING

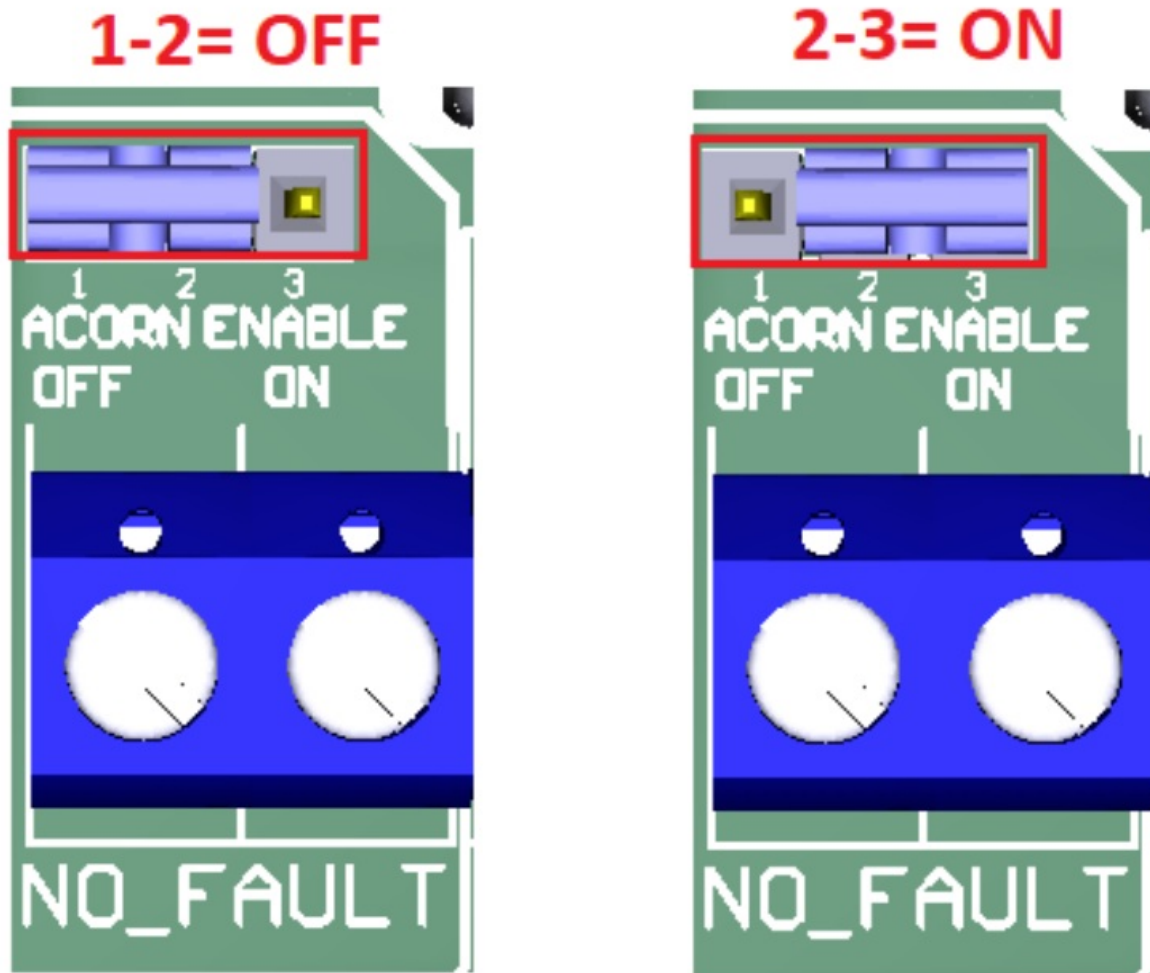
Check the polarity and voltage of the external power source and connect the 12VDC or 24VDC and GND. Overvoltage or reverse-polarity power applied to these terminals can cause damage to the board, and/or the power source.

ACTIVATING THE BOARD

Fault monitoring starts when the board is active. When the board is active the relay is activated and the green LED is on.

Two conditions must be met to activate the system and start monitoring for a fault:

1. At least one axis is receiving an active enable signal from the ACORN board or the jumper is set not to monitor the ACORN enable signals.
2. The contacts on the NO-FAULT terminal are closed. You can configure a relay and read the NO_FAULT signal from the ACORN, or you could just put a jumper on it if not used.



The board can be activated by the axis enable or the NO_FAULT signal, or a combination of both signals. It could also be hardwired to be permanently active if both inputs are jumped.

5.1 Operation Sequence:

1. Once the board gets enabled, it will take 5 seconds in order for it to start monitoring for a fault. This to preserve compatibility with some drivers which may need time to activate.
2. If a driver faults, the relay will trip and the green LED will go off. An LED indicating the which driver or drivers triggered the fault will light next to the RJ45 of the axis that tripped the fault.

CABLE DETECT JUMPER

System will detect a cable disconnect driver fault if jumper is set to ON.

1-2: OFF



STATUS LED FOR FAULT AXIS

2-3: ON

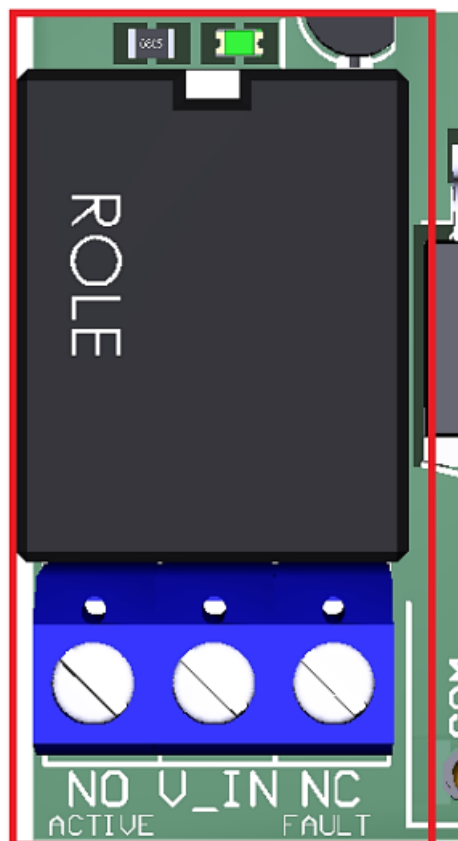


STATUS LED FOR FAULT AXIS

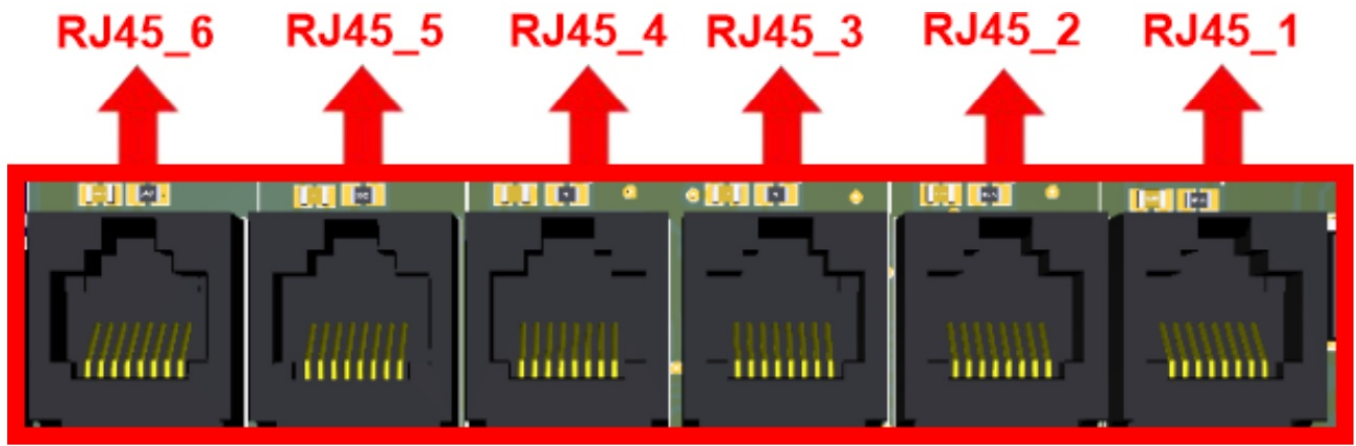
Note: Set the jumper to ON for connected axis and off if no drivers is connected.

LED INDICATOR

When Status LED, (Green LED) lights, it indicates that the system is enabled.



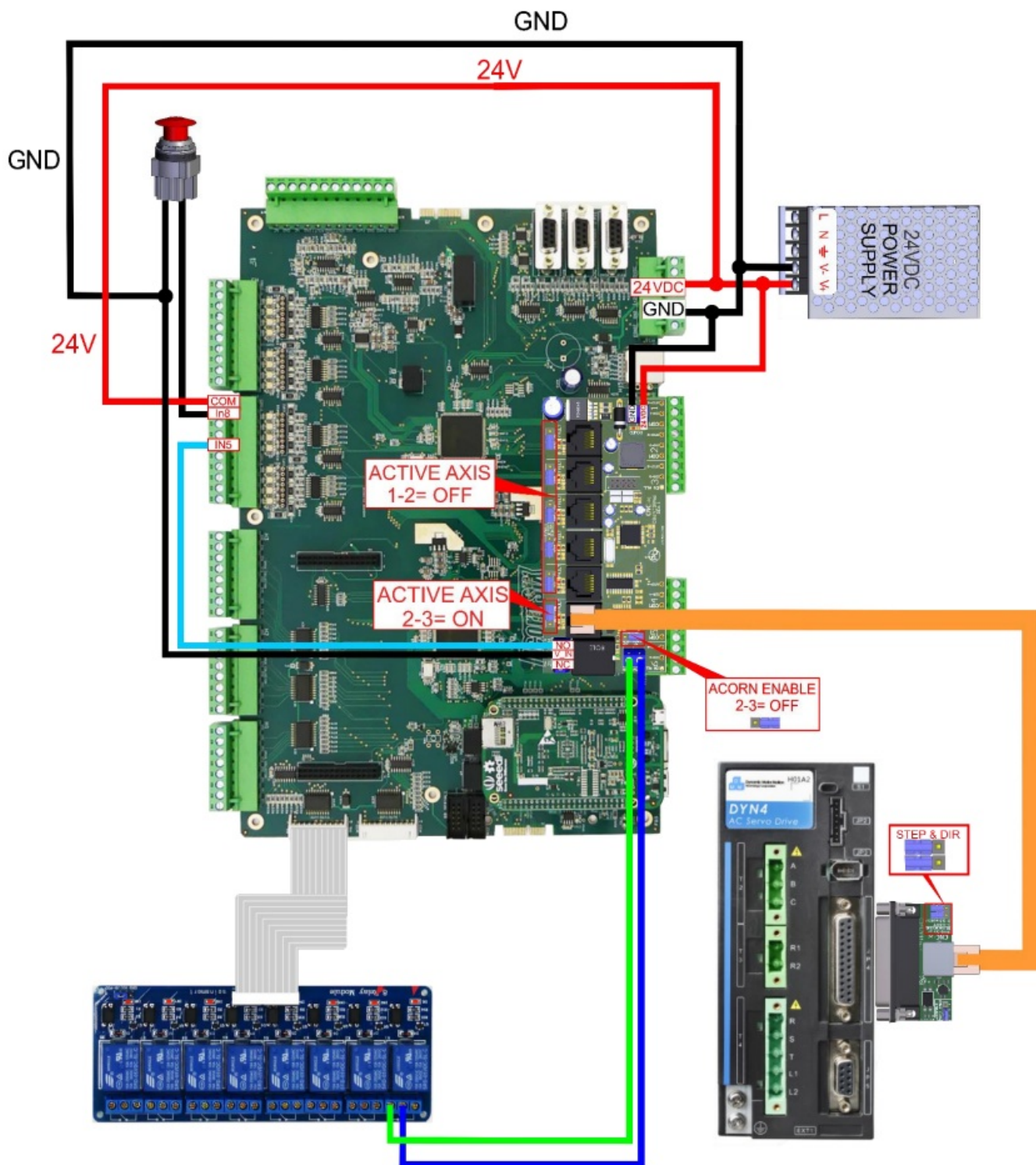
PINOUT



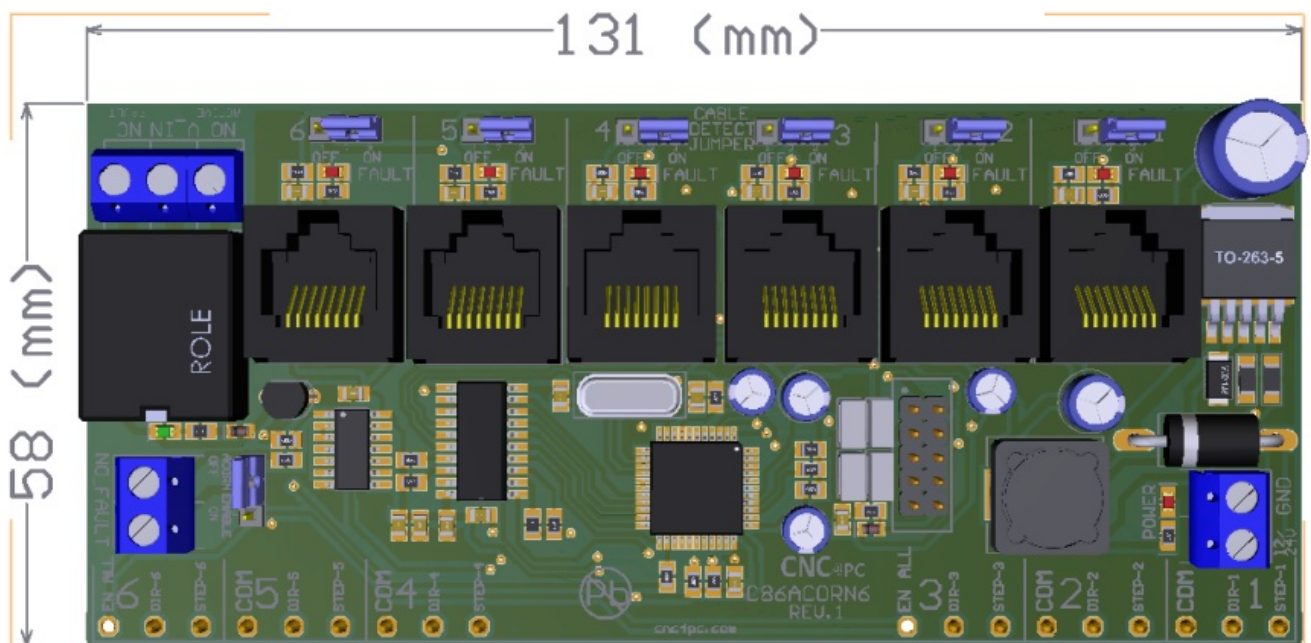
R.I45_1		R145_2		R145_3		R 45_4	
R145 PIN	P.P. PIN	R145 PIN	P.P. PIN	R145 PIN	P.P. PIN	R.I45 PIN	P.P. PIN
1	NC	1	NC	1	NC	1	NC
2	Step X	2	Step Y	2	Step Z	2	Step A
3	NC	3	NC	3	NC	3	NC
4	GND	4	GND	4	GND	4	GND
5	Err/res X	5	Err/res Y	5	Err/res Z	5	Err/res A
6	Dir. X	6	Dir. Y	6	Dir. Z	6	Dir. A
7	12/24V	7	12/24V	7	12/24V	7	12/24V
8	5V	8	5V	8	5V	8	5V

R.I45_5		R145_6	
R145 PIN	P.P. PIN	R145 PIN	P.P. PIN
1	NC	1	NC
2	Step 5	2	Step 6
3	NC	3	NC
4	GND	4	GND
5	Err/res 5	5	Err/res 6
6	Dir. 5	6	Dir. 6
7	12/24V	7	12/24V
8	5V	8	5V

WIRING EXAMPLE



DIMENSION



All dimensions are in Millimeters


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.

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Documents / Resources

	<p>CNC4PC C86 Connector Board [pdf] User Manual C86 Connector Board, C86, Connector Board, Board</p>
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