CNC4PC THC-2 Plasma Torch Height Control User Manual

Contents

CNC4PC
Integration Solutions for CNC Projects

CNC4PC THC-2 Plasma Torch Height Control

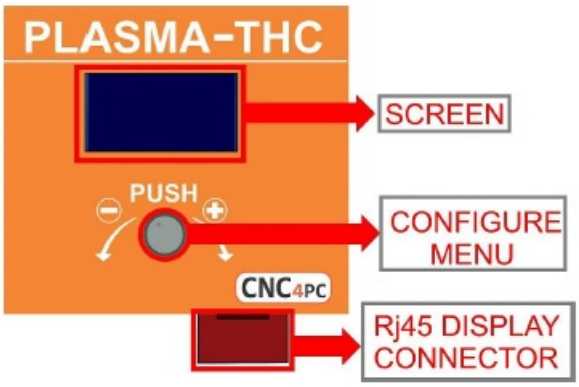
OVERVIEW

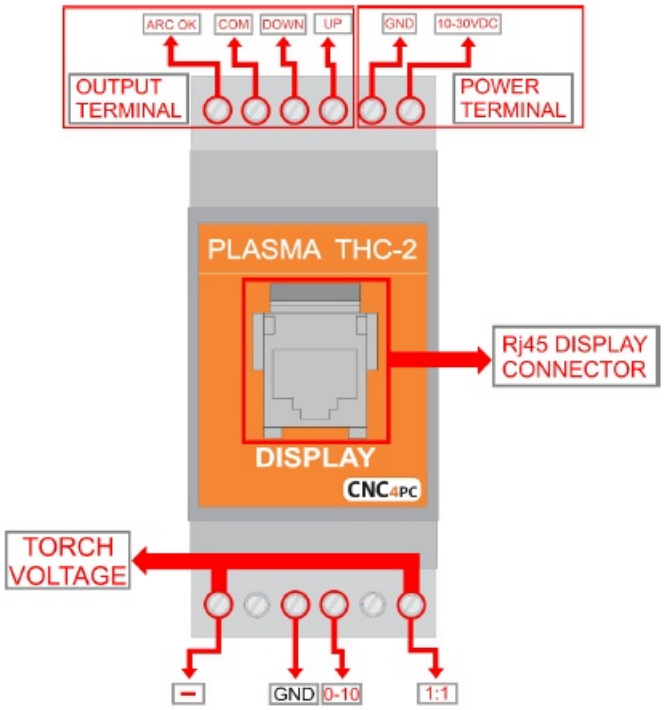
This module allows you to control the height of the plasma torch head relative to the workpiece during plasma CNC operation, it supports either raw torch head voltage or input of 0-10VDC, the ARC OK, UP and DOWN outputs are isolated.

FEATURES

- Optoisolated output working at 5 to 24VDC or open collector
- Built-in Voltage Divider for connecting to the voltage on the torch or can use the 0-10VDC from a voltage divider from the plasma.
- LCD Screen
- 10 to 30VDC Power Terminal (+24 Typical)
- Isolated Power Connection
- Magnetic base can place anywhere on the machine steel surface
- Din Rail Mountable.
- Voltage Divided software adjustable
- Divided input (– – GND – 0-10 – 1:1)

DESCRIPTION

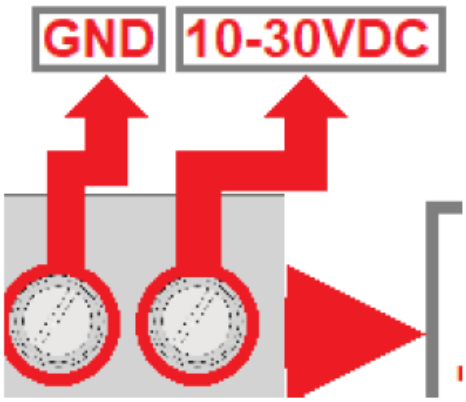




TERMINAL BOARD

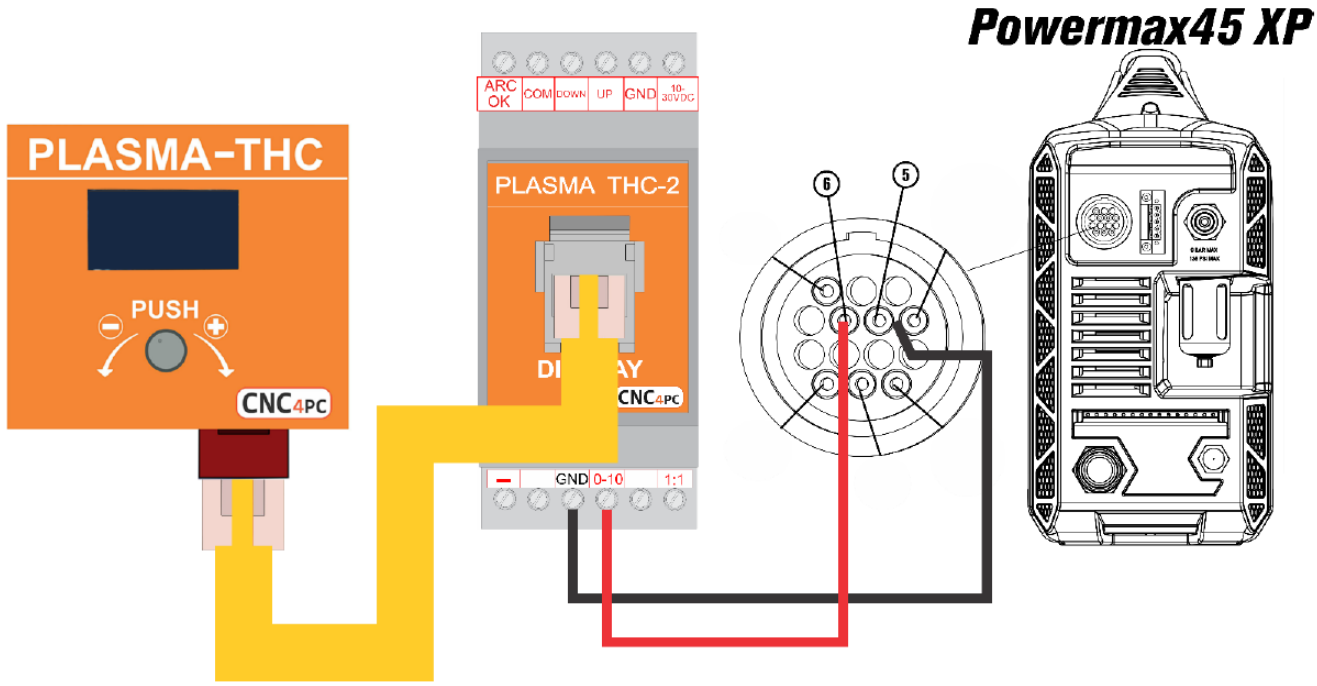
POWER

Requires a 10 to 30VDC at 100mA Power Supply. Typically, +24vdc are used. “This board is electrically isolated through a DC-DC converter

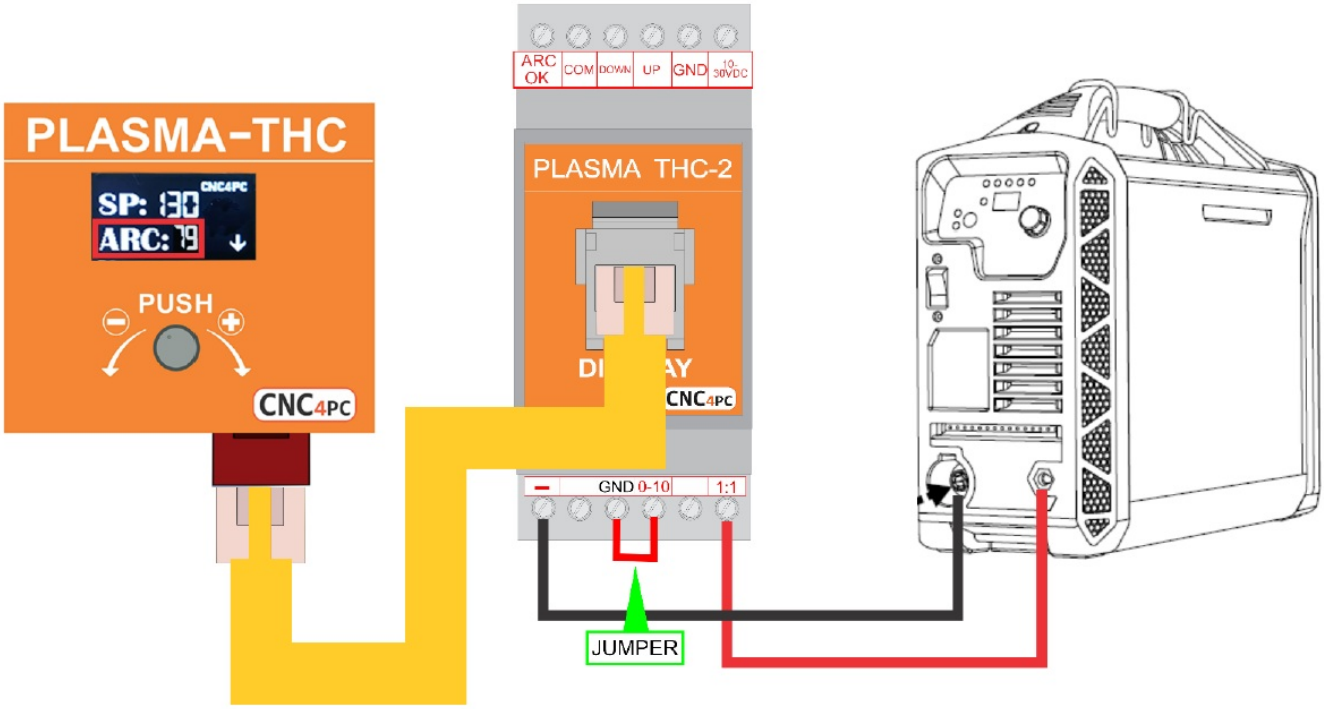


WARNING: Check the polarity and voltage of the external power source and connect the 10VDC to 30VDC and GND. Overvoltage or reverse-polarity power applied to these terminals can cause damage to the board, and/or the power source

DIVIDED INPUT (– – GND – 0-10 – 1:1)



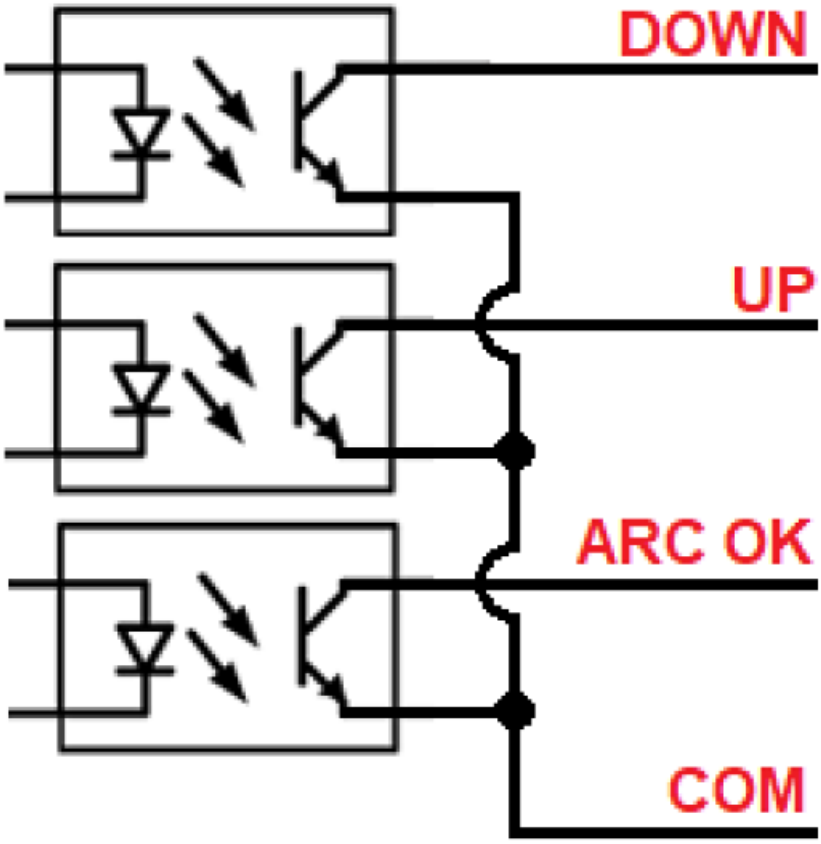
TORCH VOLTAGE



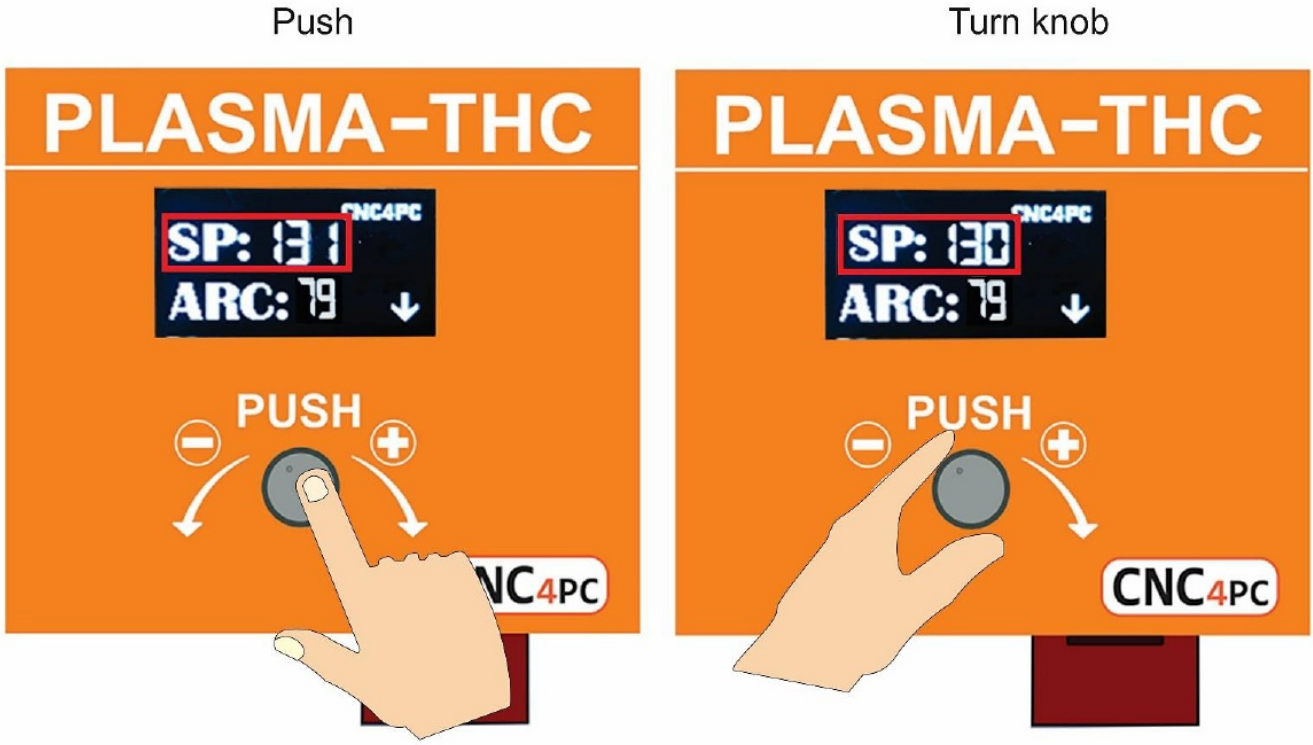
NOTE: It is preferable to use the divided voltage instead of the torch voltage. The Torch voltage can be very high and there could be many safety implications in wiring this to the controller. The high voltage could also be a possible source of noise. Use it as a last resource.

OUTPUT SIGNALS

Voltage applied can be from 5 to 80VDC@50mA, outputs signal optoisolated Open Collector



CONFIGURE MENU



- Push the knob to enter configuration mode.
- Navigate through the configuration menu by pressing the knob.
- Turn the knob to adjust the value.
- Push the knob to set the value and navigate to the next parameter or until you reach the run mode.

DESCRIPTION SCREEN

1. **SET POINT (SP)**

   SP is the target voltage to be achieved.

2. **VOLTAGE ARC (ARC)**

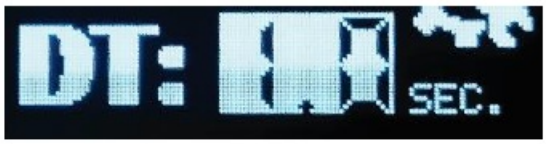
   Limit from 40 to 400VDC, True Voltage measured at the terminals or the voltage divider.

3. **HYSTERESIS (HYS)**

   Is the tolerance or (+/-) voltage range used to generate an adjustment. The torch height is not commanded to adjust if the true voltage is inside the specified range. It can be between 2 to 32VDC.

4. **DELAY TIME (DT)**

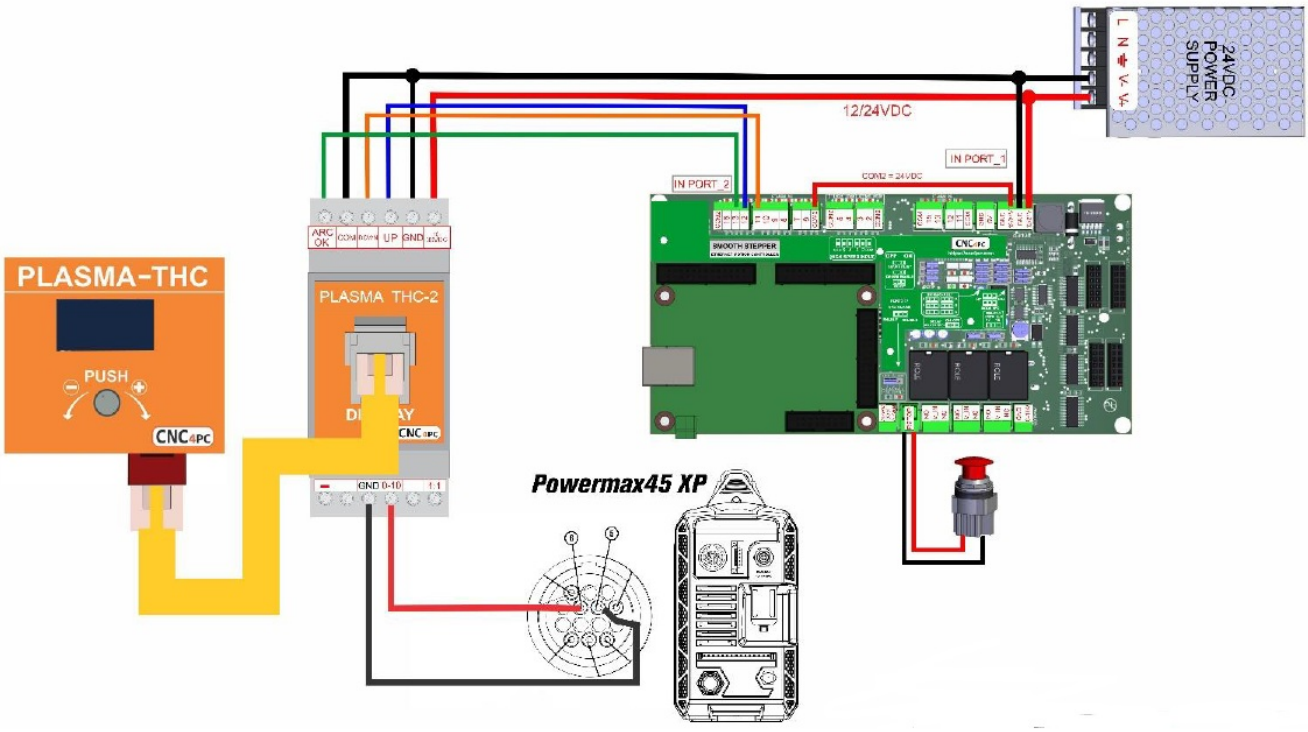
   Torch motion starts the number of seconds you set as DT after the ARC signal is determined. This can be a value between 0.1 to 9.9 seconds



5. **TEST MODE (TEST)**
   1. Press the knob four times to enter test mode.
   2. Turn the knob up or down to make the spindle move.
   3. To exit test mode, press the knob once.

6. **DIVIDED VOLTAGE CONFIGURATION**
   1. Press the knob three times to enter the setting mode
   2. Turn the knob to adjust the value.
   3. Press the knob to set the split voltage

WAIRING SAMPLE



Designed : HVM	Date : OCT-25-2022
Revised : KPG	Status : Preliminary
Item : WS_325	Ver. : 2
Description : Wiring sample for THC2 Rev.2 with C82 Rev.4	

Note This wiring is just to illustrate a sample product application. Specific wiring may vary from system to system. It is the users responsibility to implement it correctly.
Note: Open the Waring Sample here

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

http://www.cnc4pc.com

Documents / Resources

	CNC4PC THC-2 Plasma Torch Height Control [pdf] User Manual THC-2 Plasma Torch Height Control, THC-2, Plasma Torch Height Control, Torch Height Control, Height Control