CNC4PC THC1 Torch Height Control User Manual

CNC4PC
Integration Solutions for CNC Projects

THC1 Torch Height Control
User Manual

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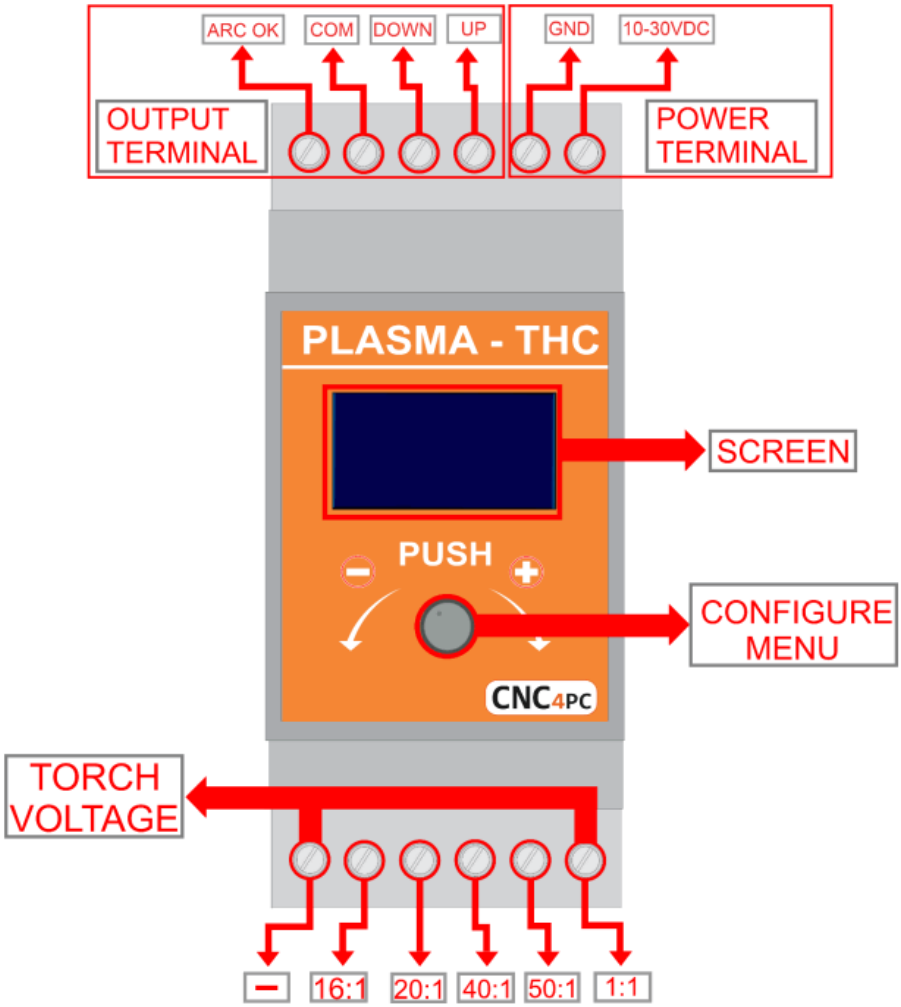
OVERVIEW

This module allows you to control the height the plasma torch head relative to work piece during plasma CNC operation, it supports either raw torch head voltage or an 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 010VDC from a voltage divider from the plasma.
- LCD Screen
- 10 to 30VDC Terminal power
- Isolated powered
- Din rail mountable.
- Divider input (16:1 – 20:1 – 40:1 – 50:1 – 1:1) New*

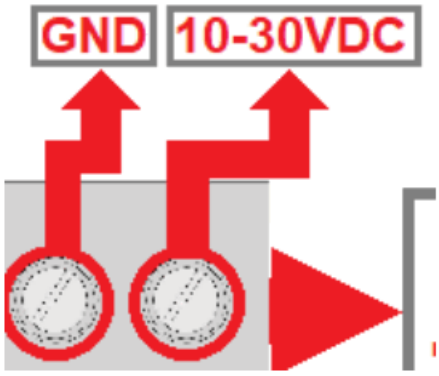
DESCRIPTION



TERMINAL BOARD

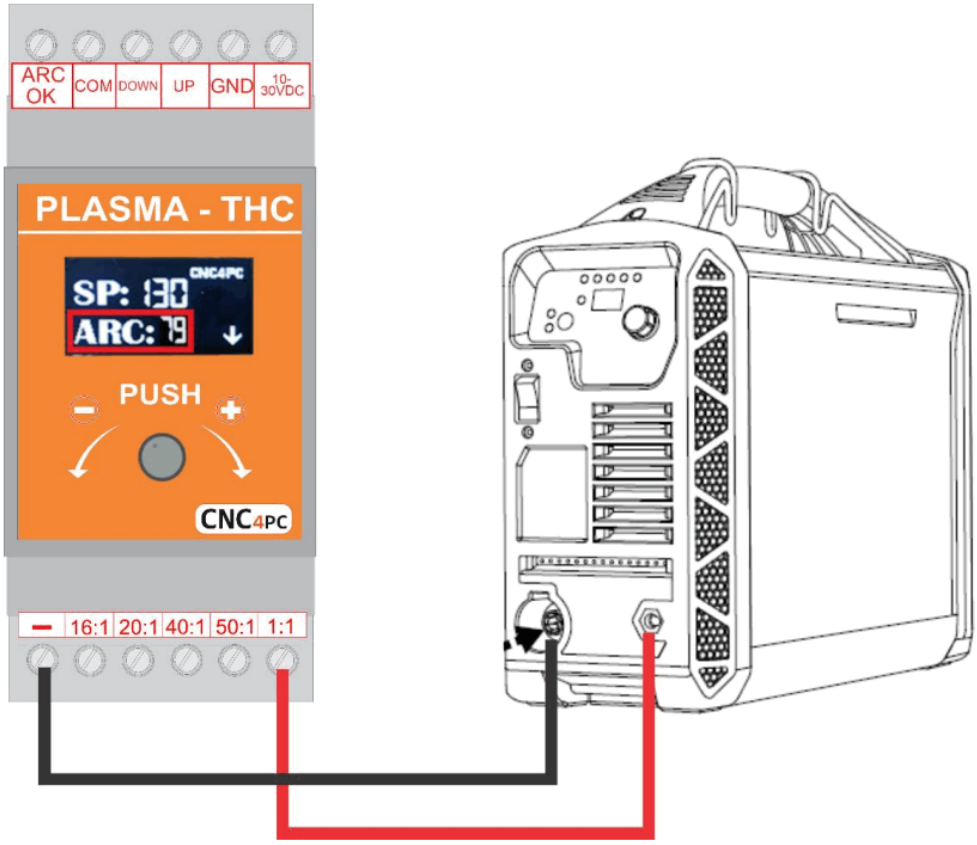
4.1 POWER

Requires a 10 to 30VDC at 100mA Power Supply, “This board is electrically isolated through a DC-DC **converter.**”

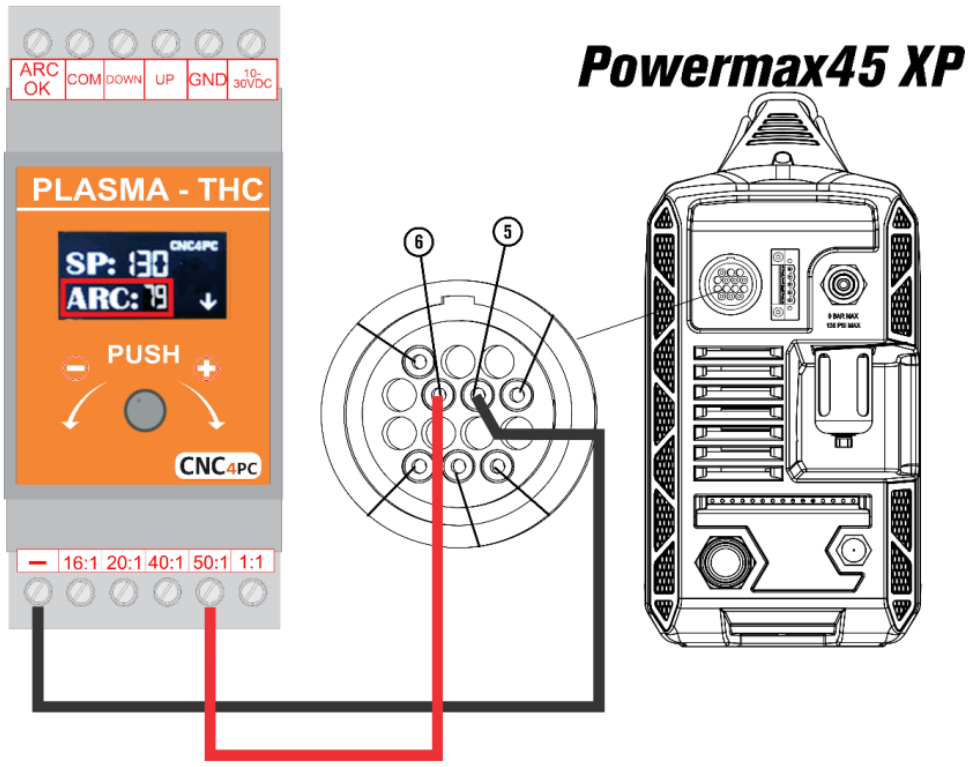


WARNING: Check the polarity and voltage of the external power source and connect the 10VDC to 30VDC and GND. Overvoltage or reverse-polarity power applied to these terminals can cause damage to the board, and/or the power source.

4.2 TORCH VOLTAGE

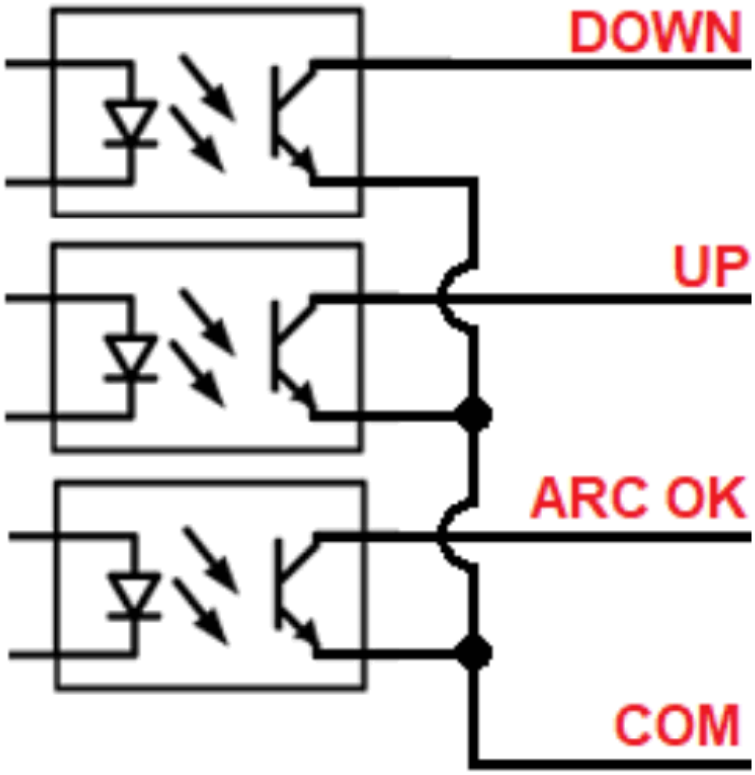


4.3 DIVIDER INPUT (16:1 – 20:1 – 40:1 – 50:1 – 1:1)

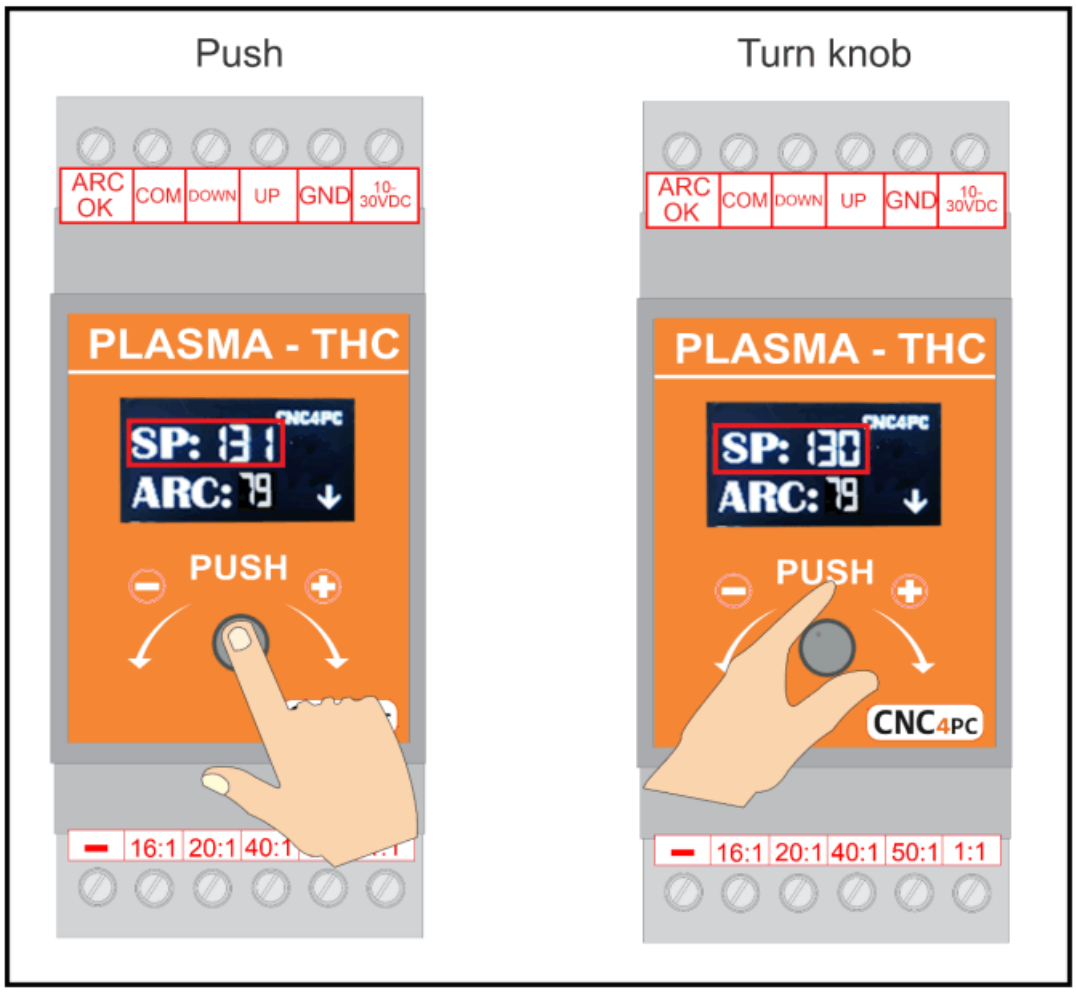


4.4 OUTPUT SIGNALS

Voltage applied can be from 5 to 80VDC@50mA, outputs signal opt isolated 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

6.1 SET POINT (SP)

SP is the target voltage to be achieved.

6.2 VOLTAGE ARC (ARC)

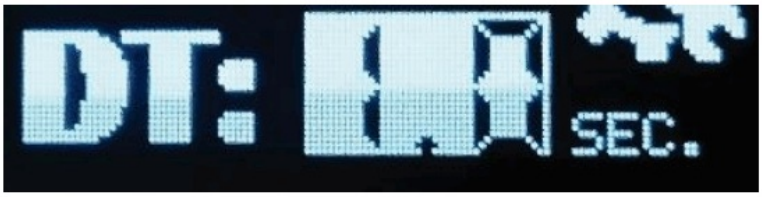
Limit from 40 to 400VDC, True Voltage measured at the terminals or the voltage divider.

6.3 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.

6.4 DELAY TIME (DT)

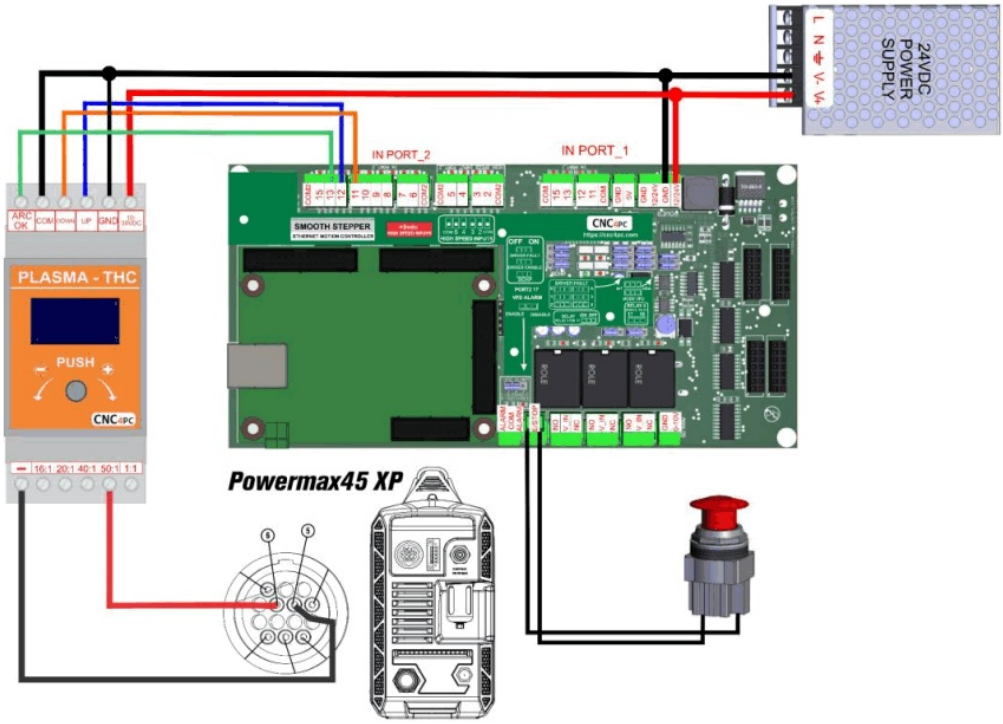
Torch motion starts the number of seconds you set as DT after the ARC signal is determined. This can be a value between 0.1 to 9.9 seconds.



6.4 TEST MODE (TEST)

Press the knob three times to enter test mode.
Turn the knob up or down to make the spindle move.
To exit test mode, press the knob once.

WIRING SAMPLE



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.

http://www.cnc4pc.com	
Designed : HVM i Date : APRIL-20-2022	
Revised : KPG	Date :
Item : WS_260	Ver. : 2
Description : Wiring sample for THC1 with C82	

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

	CNC4PC THC1 Torch Height Control [pdf] User Manual THC1 Torch Height Control, THC1, Torch Height Control, Height Control