

CAP-HB 03 STAND ALONE TORCH LIFTER INTERFACE



Description:

Cap03HB can be use as an interface between Cap04 series (Capacitive Height Controller) and H-Bridge 9 (DC Motor Driver) for realizing stand alone torch lifter for plasma and oxy fuel cutter.

Electronics:

Cap03HB has two timers for RETRACT the torch and PIERCING TIME, can be adjusted separately. RETRACT adjustment made for piercing height. It has also manual UP/DOWN switch inputs and Cap04 interface inputs. Also 2 inputs for AUTO/MANUAL (for starring) and PIERCING. And 2 outputs for IN POSITOON and TOUCH signal for your controller. With another outputs for H-Bridge Up/Down movement

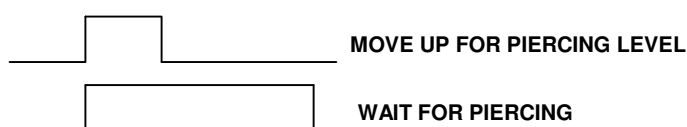
Piercing Time: If you use 470k potentiometer, it is about max 2.5 sec., min 0,05 sec. It is advisable to set time delay same as Plasma Generator's timing.

Retract Time: If you use 47k potentiometer, it is about max 140 msec., to min 2 msec.

If your Z axis speed say 4 meter/minute, piercing height would be about max., 7mm to min., 0,2mm upper than cutting level. All min value can be accept "0" for Oxy-Fuel Cutting

Operation:

- 1) Your X-Y controller, PC or other device gives LOW signal for MANUAL mode. With UP button/switch adjust the Torch level up for traveling.



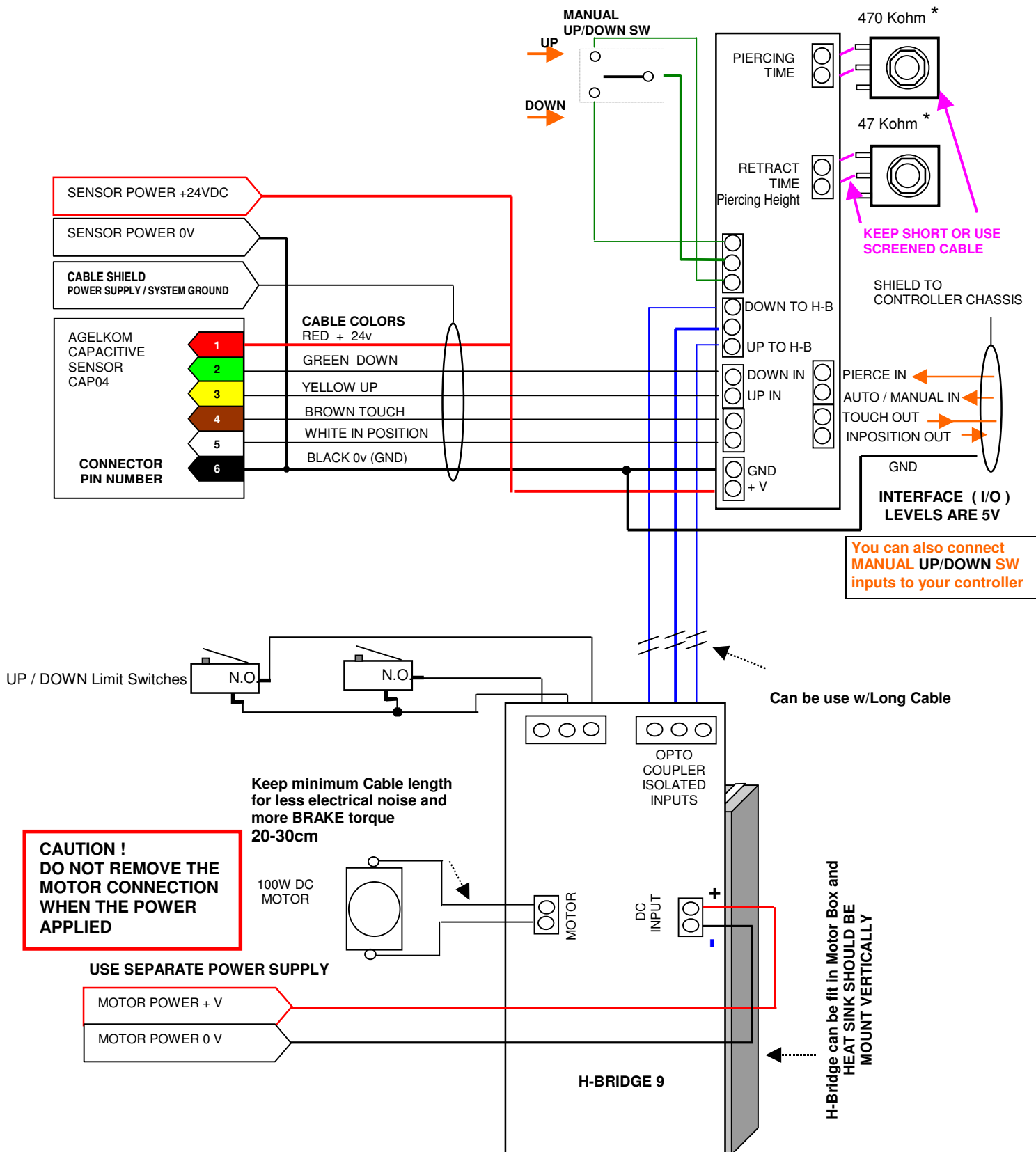
- 2) After X-Y position reach at cutting point, your controller gives HIGH signal for AUTO mode.
- 3) TORCH moves downward automatically and stop IN-POSITION then wait your PIERCING signal.
- 4) Your controller gives PIERCING signal. It allows retract the TORCH until piercing height reached. After adjusted PIERCING TIME elapsed, torch moves to cutting level.
- 5) When IN POSITION signal detected by your controller AND "Arc Okay" signal detected, you can start to (X/Y) move for cutting. (logical AND function)
If you have not input for IN POSITION, wait constant period with G-Code for start to cut.

Constructional Details:

It would be better to mount H-Bridge-9 near the Torch Motor and Cap-HB03 on operator console. Use short (10cm) or screened (shielded)(40cm) cable for potentiometer. Connect cable screen to chassis. It is also advice install in a metal box.

STAND ALONE TORCH LIFTER

Wiring diagram of CAP04 to H-Bridge9 with CAP-HB 03 interface card



* Potentiometers must be use and values may vary depends on your torch lifter mechanism and piercing time request of plasma generator.