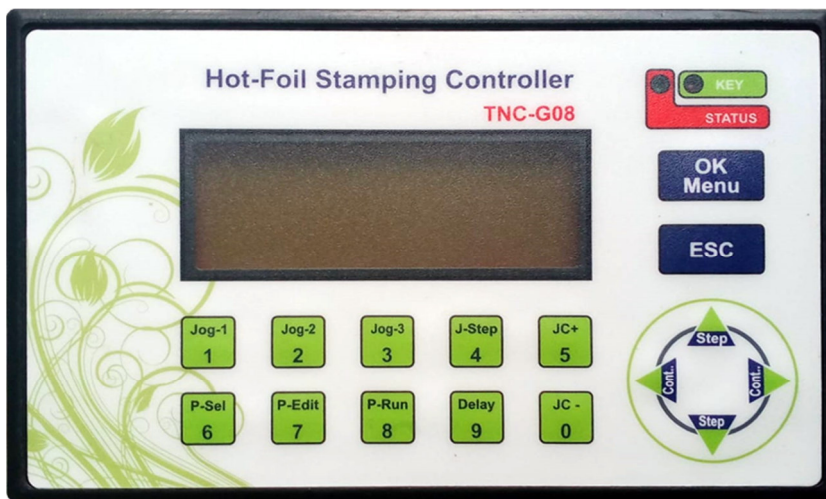




Hotfoil Stamping Controller – TNC-G08



*Document: Operation
Manual
Document #: TNC-G08-2
Document Rev: 4
Product: TNC-G08
(Single Axis Indexing
Controller)
Product Rev: 2.0
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This manual contains information for installing and operating the following product:

- TNC-G08 , Hotfoil Stamping Controller

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General Description

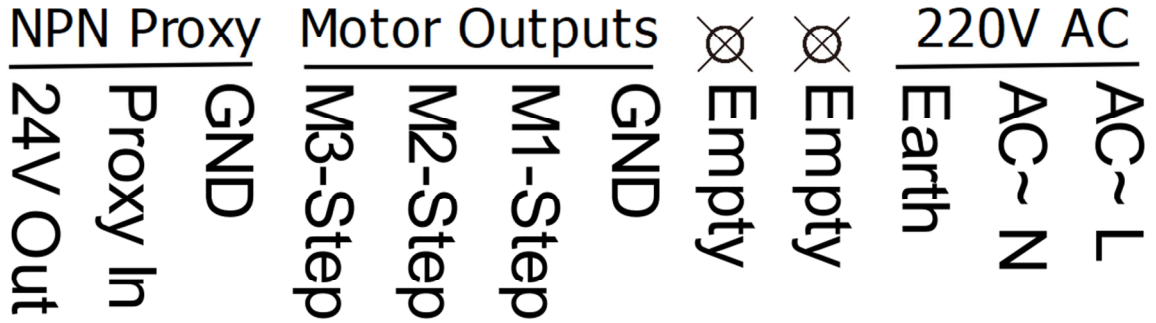
Hot Foil Stamper is a programmable controller intended to control the Hot Foil stamping machines.

It can control three motors with independent parameter setting for each like motor speed, acceleration; steps per mm etc are independently configurable.

Specifications

- **Supply Voltage:** 90V to 250V AC 50Hz/60Hz
- **Pulse Rate:** 50 KHz
- **Overall Size:** 165mm x 102mm x 76 mm
- **Mounting:** Panel Cutout 155mmx92mm
- **Inputs:** One NPN NO Inputs
- **Outputs:** Three Outputs for Motors Step Signals
- **Display:** 20x4 Line alphanumeric
- **Temperature:** 55 Degree C Max operation temperature

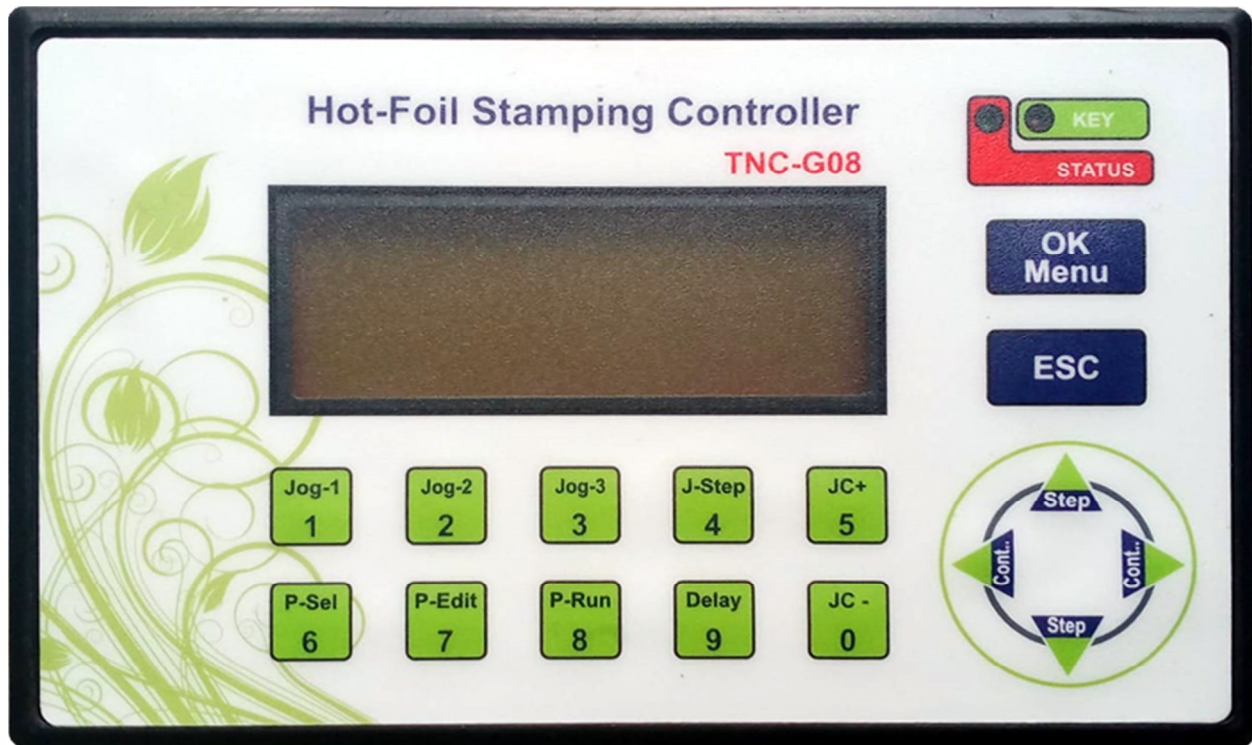
Connection



Pin Number (From Left to Right)

1-3	Power Supply Input (90V to 260V) AC 50Hz/60Hz & Earth
4-5	N/A, not to be used, reserved for future use
6-9	Step (Pulse) outputs and Common (Gnd) connection for Motor Drivers
10-12	Connection for NPN N/O Sensor Input

Keypad



Numeric keys are used to enter values in editing or menu settings, alternate functions assigned to the numeric keys are explained below:

P-Sel: Program set (values Step, Count & Jump values for each motor) can be selected using this key

P-Edit: Use this to edit the program set values for current selected program

P-Run : Enters the Program run mode, this is the default mode on power up

Jog-1, Jog-2 & Jog-3 : Used to enter Jogging screen for respective motor

Jstep : In Jog mode, sets the value of "Js" and used for Step movement

JC+ : In Jog mode, each press Increases the motor speed by 10%

JC- : In Jog mode, each press decreases the motor speed by 10%

Step : Moves the motor in +ve direction by one "Jstep" Degrees

Cont.. : Moves motor continuously at set speed in -ve Direction

OK/Menu : On main screen used to view and reset "Production Counter".

Long press to enter Setting menu.

ESC : Cancel saving of values, exits menu etc while editing mode.

In Program mode, the controller simply does the pulling function:

- *Use P-Edit key to edit the values for current program set*
- *On each external pulse (proxy input), the controller moves the motor by one Step until the number of count are reached on then for one pulse it moves the motor by Jump value.*
- *Delay can be inserted between reception of input and motors movement if required by "Delay" key*
- **For example:** If user wants to move the motors 10 mm for 5 times and after that user has to move motor with 7 mm. then he can fill the step size with 10mm, step with 5 and jump size with 7 mm. Steps per mm can be calculated with formula $StpMM = (\text{no of pulses required for one revolution}) / (\pi * d)$; where $\pi = 22/7$ and d is the diameter of pulley in mm. Spd, StpMM and acceleration of respective motor can be set in set mode.
- **Note:** If in some application, user wants all the motion of the same size, he can fill same value in **step size** and **jump size**. Step can be filled with any value.

In Jog mode, the Jog screen is shown as below

- *"Up/Down" keys moves the motor by "Js" step value*
- *"Left/Right" keys moves the motor for*
- *"JC+" key increases motor speed by in 10% increments*
- *"JC-" key increases motor speed by in 10% increments*
- *"J-step" key edits the Js (step size) value*

Program Run Screen

In program run mode following screen is shown. Three set of programs (Profiles) can be saved and can be selected anytime.

User can use following keys to customize the run time parameters:

P-Sel : Use this key to select the current Profile (0 to 2), total 3 profiles

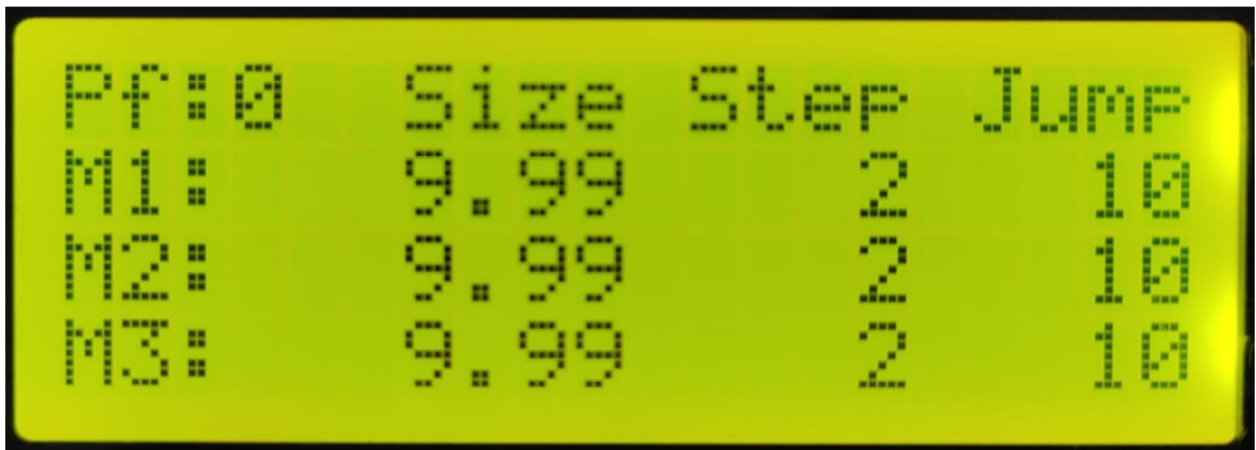
P-Edit : use this key to edit parameters for the currently selected profile

P-Run : To enter program run mode, Note: on power up the controllers boots in this mode.

Delay : A delay between motor movement and sensor input can be inserted if required using this setting (0 – 9999 mSec)

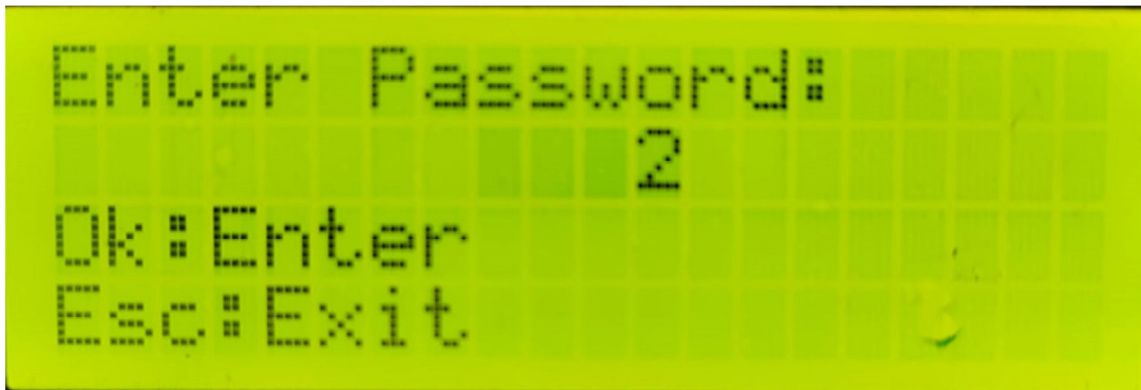
Foil pulling process : On receiving Sensor input Motors are moved by respective “Size” setting, this process repeats till number of time entered set in the “Step” setting. Then the motors moves by size set in the “Jump” setting once. The process is then repeated.

If on each proxy input same movement is required, user can enter same values in the “Jump” and “Size” settings and ignore the “Step” setting.



Settings Menu

Long press OK key to enter Setting menu, default password is "2626"



Following settings can be changed from this menu:

SN	Setting Name	Description	Range / Allowed Values / Selectable Options
1	NubOfMotor	Number of motors to be Enabled	1- 3
2	PxyDbnc	Debounce for Procy Sensor Input	1 - 999 mS
3	M1 Step/mm	Motor 1 Step/mm setting	1.00 – 9999.99 steps/mm
4	M1 Step/mm	Motor 2 Step/mm setting	1.00 - 9999.99 steps/mm
5	M1 Step/mm	Motor 3 Step/mm setting	1.00 - 9999.99 steps/mm
6	M1 mm/sec	Motor 1 Speed	1.00 - 9999.99 mm/sec
7	M2 mm/sec	Motor 2 Speed	1.00 - 9999.99 mm/sec
8	M3 mm/sec	Motor 3 Speed	1.00 - 9999.99 mm/sec
9	M1 Accel	Motor 1 Acceleration/Deceleration	1 - 99999
10	M2 Accel	Motor2 Acceleration/Deceleration	1 - 99999
11	M3 Accel	Motor 3 Acceleration/Deceleration	1 - 99999
12	M1 JogSped	Motor 1 Max Jogging Speed	1 - 99999 steps/mm
13	M2 JogSped	Motor 3 Max Jogging Speed	1 - 99999 steps/mm
14	M3 JogSped	Motor31 Max Jogging Speed	1 - 99999 steps/mm
15	FactoryRst	Reset Settings or Programs	Resets all Settings to to defaults
16	Ucnt	Lifetime Motion Counter	Displays number of moves executed so far, can be reset only with "FactoryRst"
17	TNC-G08 V	Displays Software version	Only of information about the controller

