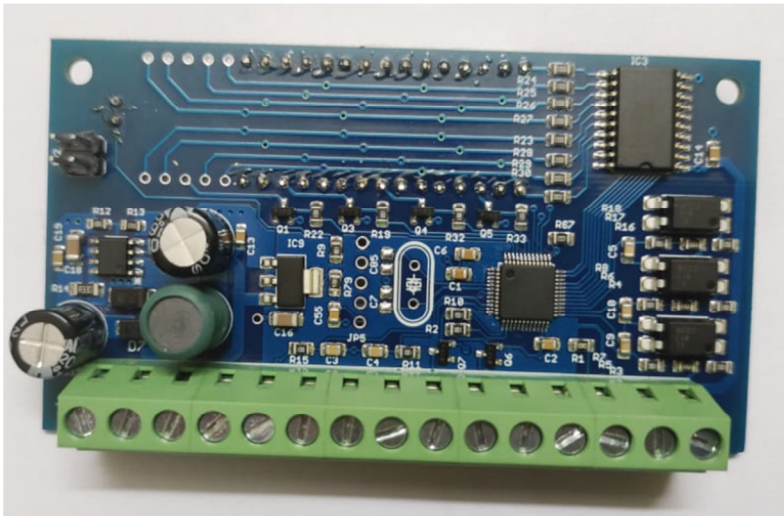


TNC-G12D Single Axis Pulse Generator



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THIS MANUAL CONTAINS INFORMATION FOR INSTALLING AND OPERATING THE FOLLOWING PRODUCT:

- SINGLE AXIS PULSE GENERATOR (TNC-G12D)

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GENERAL DESCRIPTION

The single axis pulse generator (SPG) is a powerful and versatile step pulse generator capable of generating step pulse and direction signal output for stepper drive. It is a standalone linear ramping pulse generator designed to be used with Pulse/Direction Stepper or Servo motor drives.

It drives very low jitter pulse train of frequency 60 KHz. The pulse train is smooth with linear ramps, preventing the motor stalling at high speeds. It accepts input in four manual modes.

Manual mode allows direct interface of sensors/ switches to fed respective input signals at the input terminals according to sub modes selected. These are Start/ Stop- Dir, Start Dir CW-Start Dir CCW and Start-Stop. These signals are given to controller at their respective inputs. These sub-modes in manual mode are configured by using jumper settings. The SPG features adjustable Starting Speed & Maximum speed along with an independent adjustment of acceleration.

Four ranges of speed are included and these ranges can be configured by jumper adjustments. The connectors are provided to attach potentiometers for speed and acceleration settings.

SPG consist three input terminals in which IN1 and IN2 are control inputs and IN3 is emergency / limit switch making the system flexible enough. All these inputs are opto-isolated for noise immunity.

FEATURES

- 3 opto-solated inputs.
- Low jitter 60 KHz Pulse rate.
- Continuously adjustable Max motor velocity (steps/sec).
- Adjustable Acceleration (steps/sec/sec)
- Smooth pulse train with linear ramps, no more motor stalls at high motor speeds.
- Open collector Step / Direction outputs interface to Stepper/Servo drives.

PHYSICAL AND ELECTRICAL CHARACTERISTICS

Contents	Specifications
Processor	32 bit processor
Axes	Single axis
Max frequency of Step signal	60 KHz
Digital inputs	3
Supply voltage	8V-24V DC
Max Power Consumption	2.5 W
Ambient temperature range	0°-55° Celsius
Relative Humidity	< 90% (without condensation)
Dimensions	70x40 (in mm)
Weight	20g

Operation Mode Setting JP1 & JP2		
<i>Mode</i>	JP1	JP2
IN1=StartCW, IN2=StartCCW (IN1 priority)	<i>Jumper mounted</i>	<i>Jumper mounted</i>
IN1=StartCW, IN2=StartCCW (IN2 priority)	<i>Jumper not mounted</i>	<i>Jumper mounted</i>
IN1=Start/Stop, IN2=Direction	<i>Jumper mounted</i>	<i>Jumper not mounted</i>
IN1=Start, IN2=Stop	<i>Jumper not mounted</i>	<i>Jumper not mounted</i>

<i>Frequency range</i>	JP3
16 KHz	<i>Jumper mounted on pins 3&4</i>
32 KHz	<i>Jumper mounted on pins 2&3</i>
64 KHz	<i>Jumper NOT mounted</i>

Connection Diagram:

