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1. PRODUCT DESCRIPTION

The Mini-Torxis 2.0 is a smaller version of the well-proven and robust Torxis Servo. It comes with a CNC aluminum machined housing and output horn and up to 800 oz*in of torque. It uses a non-contact absolute encoder to resolve position. The output shaft is supported with precision ball bearings at both ends. This product is intended to provide slightly less torque than the Torxis line in a much smaller, lighter package.

2. APPLICATIONS

- Robotics
- Large scale RC models
- Research projects
- Factory Automation

3. FEATURES

- 800 oz-in (58 kg*cm , 5.6 N*M) of peak torque
- Aluminum 6061-T6 housing
- Aluminum 6061-T6 output wheel (horn)
- Weight 8.6oz (244 grams)
- Digital position control circuitry provides noise immunity in complex electrical environments
- Holds position with power off for typical loads
- Reverse connection protected
- Compact package
- 12VDC, 1.5A
- Dimensions (inches): 3.4 x 3.4 x 2.0, (8.6 x 8.6 x 5.1cm)



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4. APPLICABILITY

This document applies to the following part numbers:

Part Number	Description	Speed
i06324	Mini-Torxis, 12VDC Version	60 deg in 1.2 sec

5. PERFORMANCE

5.1 SERVO TRAVEL

The Mini-Torxis servo is capable of 270 degrees of travel. There is no mechanical stop for servo travel and the servo is not damaged by over rotation.

6. INPUT DETAILS

Wire Color	Wire Gauge	Description
Black	20	0VDC Motor Power
Red	20	6VDC or 12VDC Motor Power Depending on Version
Black	24	Ground for command signal (in RC connector)
White	24	PWM command signal (5VDC max, in RC connector)

6.1 INPUT POWER REQUIREMENTS

6.1.1 12VDC Version:

Input power is 12 VDC, up to 1.5A peak, tolerant of input voltages between 10VDC-14VDC. No load current is approximately 70ma. At start or stop, the current requirement of the motor surges. It is strongly recommended to use an inductive load rated power supply equivalent to our i04251. See GearWurx.com for details. Alternatively, a 12VDC battery is a good solution if it is sized to handle the current surges.

12VDC power is applied on the heavy gauge red and black wires leading into the servo.

6.2 SIGNAL INPUT

The signal input wires are connected into a RC hobby style connector compatible with most RC radio receivers and 0.1" pitch headers.

The control signal for the servo is TTL level (5VDC) typical RC hobby servo signal.

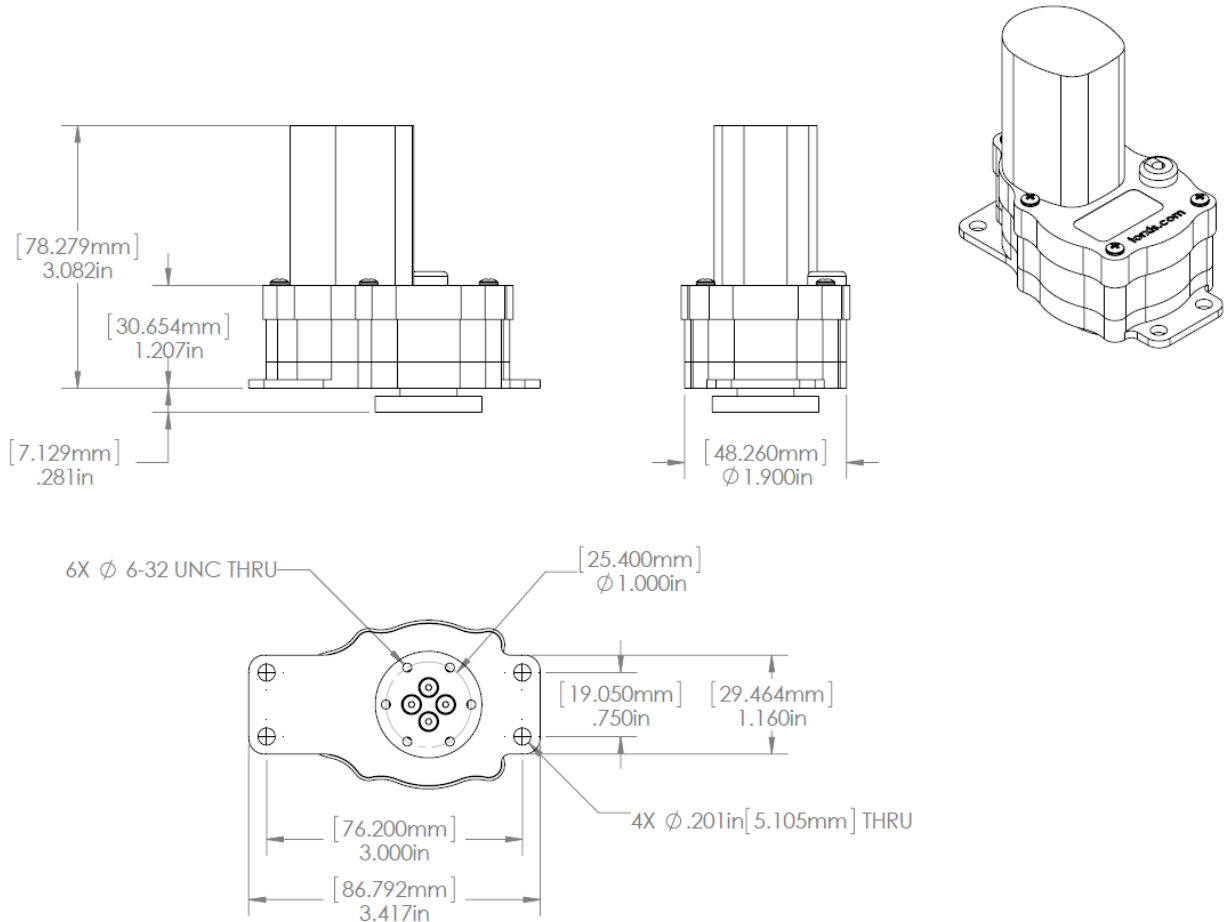
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The period of the pwm signal is 20ms (50Hz) with duty cycle ranging from .5ms to 2.5ms with 1.5ms being the center point.

7. DRAWING



8. RELATED PRODUCTS

The following products are related to or accessories for this product.

Part Number	Description
i03901	USB Programmable Controller
i03813	6 Channel Simple Slider Controller
i02070	PS2 Joystick Controller
i04251	Inductive rated power supply



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9. PACKAGING DETAILS

The following items are included in the package:

- Mini-Torxis servo with output wheel (horn)
- No power supply or controller is included in the package.

10. CHANGE LOG

Revision	Date	Description of Changes
01	161019	Document Initial Release