

# SUM-40 Smart Ultrasonic Motor

## Description

The SUM-40 servomotor is a direct drive piezo motor stage with an integrated amplifier, controller, and optical encoder that gives the user closed loop control in a compact package. Despite its small size, the SUM-40 boasts a continuous torque of 50 mN-m while the integrated optical encoder provides 130 microradian resolution.

## Highlights

- Zero Power Hold
- High Precision
- Integrated electronics
- Does not use magnets
- Zero backlash
- USB Type-C / RS232 Serial
- Compact, lightweight design
- Quiet operation



## Specifications

- Controller: Integrated
- Total Rotation: 360° Continuous
- Max Velocity: 300 RPM (1800deg/s)
- Max Rated Torque: 100 mN-m
- Continuous Torque: 50 mN-m
- 0V Holding Torque: 100 mN-m
- Feedback: Optical Encoder
- Encoder Resolution: 46,592 counts/rev  
130 microradians
- Mass: 82g
- Rotary Inertia: 0.35 kg-mm<sup>2</sup>
- Operational Temp: -10C to 55C
- Max Dimensions: 40mm x 40mm x 34.4mm
- Shaft Diameter: 4mm
- Shaft Radial Load: 20N
- Shaft Axial Load: 20N away from motor  
10N toward motor
- Driver Peak Power: 12 W
- Input Voltage: 12V
- Frame size: NEMA 17
- Motor Housing: Aluminum
- Communication: USB-C / RS232 Serial

