

servocylinder

A1 and A2 Series Servo Cylinder Actuators

The [Servo Cylinder](#) is an Electromechanical Linear Actuator with a fully integrated [Phase Index™](#) Field-Oriented (FOC) Brushless DC (BLDC) motor control and positioning system. Each Servo Cylinder can be software configured to operate with a wide variety of operating modes and command types.

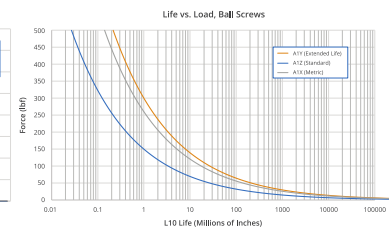
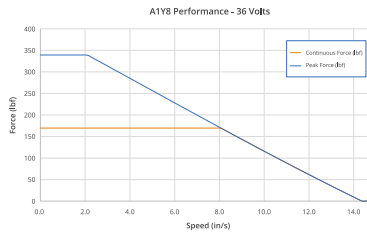


Features

- **Integrated Controller:** *Input a compatible control signal (see below) for plug and play operation.*
- **Absolute Positioning:** *No homing/battery required.*
- **Full Command Line (CLI) language:** *For control, feedback, and communication.*
- **Easy Configuration:** *Editable text file (CONFIG.TXT) in USB Mass Storage (Windows and Linux).*
- **Optically Isolated Digital Inputs:** *Provides reliable, high-speed, low-noise signal transmission.*
- **Modular GPIOs:** *General Purpose Input / Output pins for Status and several PWM output functions.*
- **100% RoHS Compliant**
- **Made in the USA**
- **Custom models:** *For semi- and fully custom capabilities, contact Ultra Motion Engineering.*
- *For more information, visit the [Product Page](#) or download the full [Servo Cylinder Product Manual](#).*

Performance Characteristics

Rating	Value
Force (Peak)	Up to 530 lbf (For standard models)
Force (Cont.)	Up to 270 lbf (For standard models)
Speed	Up to 14 in/s (For standard models)
Stroke Length	Up to 7.75 in (For standard models)
Resolution	Up to 0.000061 inch [1.55 μm]
Operating Voltage	8 to 36 VDC
Ingress Protection	IP65 (A2 Series) or IP50 (A1 Series)
Temperature Range	-40°C to 80°C [-40°F to 176°F]



Compatible Control Signals & Operating Modes



Command Line Interface (CLI)
RS232 Serial



Analog Voltage
-10 to +10V Signal (Configurable)



Analog Current
4-20mA Signal (Configurable)



1-2ms Pulse (PWM)
PWM Servo Control (Configurable)



Step & Direction
Stepper Motor Control Signal



A/B Quadrature
Stepper Motor Control Signal



CW/CCW
Stepper Motor Control Signal



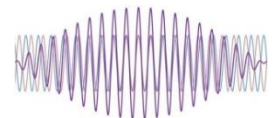
Toggle
Digital I/O Signal to Extend and Retract



Preset Position
Digital I/O to travel between up to 4 programmed positions

phaseindex™

Phase Index is Ultra Motion's proprietary absolute position sensing technology. With high resolution, non-contact, non-battery operation, it offers significant advantages over existing sensors with regards to reliability, performance, and cost. First utilized in a human spaceflight application, it has been qualified and rigorously tested, and we are thrilled to deliver this technology in our Servo Cylinder actuator line.



WEB INQUIRY
Answered within one business day
ultramotion.com/contact

LIVE CHAT
Chat with an engineer at
ultramotion.com

EMAIL
Answered within one business day
info@ultramotion.com

ULTRAMOTION

CALL
PH: 888-321-9178
Fax: 631-298-6593

ADDRESS
Ultra Motion
22355 CR 48, #21
Cutchogue, NY 11935

HOURS
Hours of Operation
Monday - Friday
9AM - 5PM EST