servocylinder

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.

Features & Ratings:

- Integrated Controller: Input a compatible control signal for plug-and-play operation
- Absolute Encoding: No homing/battery required
- Full Command Line (CLI) language: For control, feedback, and communication
- Easy Configuration: Configured via editable text file in USB Mass Storage, or with serial commands

Rating	Value	
Force (Peak)	Up to 530 lbf (2.36 kN)	
Force (Continuous)	Up to 270 lbf (1.20 kN)	
Speed	Up to 14 in/s (356 mm/s)	
Stroke Length	Up to 7.75 in (197 mm)	
Resolution	Up to 0.000061 in [1.55 µm]	
Operating Voltage	8 to 36 VDC	
Ingress Protection	IP50 to IP68 (Varies by Model)	
Temp. Range	-40° F to 176° F [-40° C to 80° C]	



A1 Series: Standard Servo Cylinder

The A1 Series actuator is our standard Servo Cylinder model. It is best suited to cleaner indoor environments, and is available at a lower cost than our other sealed models.

- IP50 Environmental protection
- Molex Micro-fit Connector



AM Series: Ruggedized Servo Cylinder

The AM series actuator is our most heavily ruggedized Servo Cylinder model. It features high performance mil-spec connectors and has been hardened to higher magnitude mechanical shock and vibrations. This actuator is suitable for harsh military environments.

- Type III Hard Anodize coating
- Conformal coated controller PCB
- MIL-D-38999 electrical connectors
- IP67 Static, IP65 Dynamic



A2 Series: Industrial Servo Cylinder

The A2 Series actuator is our industrialized Servo Cylinder model. It is sealed to a level suitable for wash-down, outdoor, or more debris laden industrial environments.

- IP65 Environmental protection
- IP Rated metal shell connectors



AU Series: Subsea Servo Cylinder

The AU series actuator is our underwater Servo Cylinder model. It has been designed with an oil-filled internal pressure compensation system for operation in subsea environments of both salt and fresh water

- Type III Hard Anodize coating
- Wet-Mate electrical connectors
- Sacrificial anodes for corrosion resistance (replaceable)
- Fully Sealed, Oil filled enclosure
- Pressure balanced, 250 ft (~75 m)





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Control Modes & Features	Classic Controller Option Code "N"	Industrial Controller Option Code "P"	CAN Controller Option Code "C"
RS232 Serial w/ Command Line Interface (CLI)	\checkmark		
RS422 Serial (Full-Duplex, 4-wire) w/ Command Line Interface (CLI)		\checkmark	
RS485 Serial (Half-Duplex, 2-wire) w/ Command Line Interface (CLI) *Does not command motion			\checkmark
CAN (Configurable Protocol)			\checkmark
CANopen (CiA DS301, CiA DS402)			\checkmark
Analog Voltage (-10 V to +10 V) Control	\checkmark	\checkmark	
Analog Current (4-20 mA) Control Input	\checkmark	\checkmark	
Isolated Analog Current (4-20 mA) Output (Configurable Data Source)		\checkmark	
1-2 ms Pulse (RC PWM)	\checkmark		
Toggle (Simple On/Off for Extend/Retract) Control	\checkmark		
Pre-set Position Control	\checkmark		
Isolated Digital Inputs	2X	1X	ЗХ
Transient Voltage Protection on Signal Lines		\checkmark	\checkmark

Choose Any Controller

phase index[™] A Completely New Absolute Position Sensing Technology

Why is it better?

- Phase Index is the only sensor you need: eliminate limit switches, potentiometer, optical encoder, LVDT, resolver, Hall effect devices, etc.
- Robust digital contactless position feedback that reliably operates throughout extreme temperature ranges and at high levels of shock and vibration.
- No homing: full accuracy on startup.

How does it work?

Phase Index works by using the phase relationship between two cyclic signals with different periods to determine absolute position within a larger interefence cycle of the combined signals.





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