ELECTRO-PNEUMATIC POSITIONING SYSTEMS

DYNAMIC RESPONSE & ACCURACY FOR POSITION CONTROL

Pneumatics
It’s that easy
INCREASING PERFORMANCE & EFFICIENCY WITH AVENTICS PNEUMATIC POSITIONING SYSTEMS

Are you looking for infinite position control from your current pneumatic actuator?

Pneumatic-positioning systems offer a great solution for precise position control, because pneumatic-positioning systems have very few moving parts and do not require significant energy to move or position a load. This permits pneumatic-positioning systems to achieve high efficiency, while keeping production costs relatively low.

Unlike most pneumatic positioning systems on the market that control the positioning of an actuator through directional flow, the AVENTICS pneumatic positioning systems utilize advanced expertise in the principle of direct acting proportional pressure regulation.

This process permits the AVENTICS pneumatic positioning system, to achieve dynamic response and precise repeatability, resulting in higher performance and a more energy-efficient automated system.

- AVENTICS utilizes direct acting proportional pressure regulation, in Electro-Pneumatic Positioning Systems eliminating “dithering” problems associated with traditional methods.
- Systems adapt to a wide variety of actuator sizes, both piston and rodless cylinders.
- Externally mounted sensor eliminates the cost of a gun drilled piston rod.
- Simple analog command signal, using 0-10vdc & 4-20mA for stroke position set-point.
- Provides accuracy of 1% of stroke.
- High efficiency. 100% Duty cycle, eliminates erratic cycle rate.
Electro-Pneumatic pressure regulators are an essential interface between controller and actuator positioning

Unique positioning with direct acting proportional pressure regulators can be achieved with the EPPS. The EPPS offers true proportional pressure regulation for positioning, with increased resolution and 12 bit control.

Consistant pressure regulation during pneumatic positioning will eliminate cylinder drift, when compared to systems that use flow control. Common analog signals such as 0-10Vdc or 4-20mA can be used for command and feedback.

- External mounted sensor eliminates the need for gun drilled rod
- A variety of actuators allow for versatility with the positioning systems
- Customized solutions for pneumatic positioning applications

Electronic Positioning Controller

- Adjustable configurations made simple
- Common analog control signals
- Quick onboard electrical connections

Dynamic Proportional Pressure Control

- True closed-loop feedback control
- Consistent pressure regulation
- Panel mounting options available

Electro-Pneumatic Positioning System—EPPS

- Single part number kits reducing order complication
- Standard “Off the shelf” components
- Small footprint: saving space
Advanced pneumatic positioning comprised with FieldBus technology.

Accuracy and precision can be achieved in dynamic applications, with the AES electronic pneumatic positioning system. The AES utilizes a programmable control module and FieldBus technology, while quickly responding to changes in command signals for positioning.

Custom parameters for feedback are written to the control module via fieldbus/Ethernet connections and can be easily copied to multiple applications reducing valuable downtime during the process of machine modification.

Advanced Electronic Control Module

- Precision Positioning Control for E/P Pressure Regulators
  - M12x1 5 pin quick connections
  - Advanced regulation control through analog I/O signals
  - Broad ambient temperature ranges of –14°F to 140°F

AES - PID Standalone Advanced Positioning System

- Constructed on the AES platform, easily expandable for accessories such as valves to be quickly added.
- Compatible with a broad range of Fieldbus communication technologies.
- Customized parameters for positioning, optimizing performance and efficiency.
- Precise repeatability through a high resolution feedback signal provided by the SM6-AL sensor.

Complete Positioning System

Valves sold separately
SM6—AL
Distance Measurement Sensor

- IP65, IP67 protection class
- cULus certified and 2 LED displays
- 3 m/sec sampling speed with full stroke

Application Examples:

Welding Technology

Electro-Pneumatic Positioning Systems allow for precise positioning to be achieved with accurate repeatability in applications such as “BodyWeld”.

Positioning Systems for Industrial Automation

Electro-Pneumatic Material Handling Systems position parts with precision and reduce the overall power consumption of application process.

- Increase the overall cycle life and efficiency of the automated assembly.
- Improves performance with Electro-Pneumatic positioning.
- Reduce installation time and repair costs with fewer moving components.
- Customized parameters for positioning, optimizing performance and efficiency.
The data specified only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.