



Controlling pneumatics via IO-Link

AirBoxes with IO-Link

- For decentralised control of cylinders and pneumatic actuators
- Combination of IO-Link I/O module and solenoid valve
- High energy efficiency due to application near the actuator
- Production data acquisition and diagnostics via IO-Link
- 4x 2 digital inputs, e.g. for the feedback of position sensors



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Applications

Pneumatic AirBoxes control cylinders or actuators using compressed air and are found in a wide range of industrial applications. They are used in almost all areas in which pneumatics are used for positioning. Examples include pick and place applications, machine tools, robotics, handling and conveyor belts. In filling systems, AirBoxes control actuators, for example during dosing or filling.

Thanks to their compact design, AirBoxes can be mounted close to the pneumatic actuators to be controlled. The short distance minimises the risk of leaks and therefore significantly increases energy efficiency. Besides, short pneumatic tubes allow for short switching times.

The AirBoxes provide digital inputs to which, for example, cylinder sensors for position feedback can be connected. Long, separate cable paths to the plant controller are not required.

IO-Link benefits

The electrical connection is made via a 24 V power supply, eliminating the need for additional auxiliary voltage and screened cables. This simplifies cabling considerably. Diagnostics are also made easier: Production data such as operating hours, switch-on operations and internal temperature are logged in the Air-Box. This enables predictive maintenance and offers maximum transparency, for example for remote service purposes. External faults such as short circuits at the digital inputs are reliably detected. All in all, these advantages improve the efficiency, reliability and process quality of machines and systems.

Valve version	Order no.
2x 3/2-way valve	AL5228
1x 5/2-way valve, monostable	AL5246
1x 5/2-way, bistable	AL5251
1x 5/3-way valve, blocked middle position	AL5270

Common technical data	
Inputs	4 ports with 2 digital inputs each
Pressure range [bar]	2/3...8
Air flow [l/min]	500 (at 6 bar Δp 1 bar)
Compressed air	lubricated and non-lubricated
Compressed air connection	8 mm push-in
Required master port class	A
Protection rating	IP65 IP67

BEST FRIENDS

We reserve the right to make technical alterations without prior notice. · 11.2024
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IO-Link masters
Masters with Profinet interface for use in the field



Cylinder sensors
End position detection for different cylinder designs



PQ pressure sensor
System pressure monitoring in pneumatic systems



For further technical details, please visit:
ifm.com/fs/AL5228