

Pneumatic slide valve position

Pneumatic control valves are employed in chemical engineering for regulating liquid and gaseous media. In order to achieve a constantly high level of process reliability, the flow rate must be controlled exactly. A slide is driven pneumatically, changing the opening for the flow. An inductive displacement sensor, which measures the slide position, is joined to the slide. A microcontroller handles the control and evaluation of the displacement sensor along with the closed-loop control, parameterization and bus linkage of the control valve. Due to the already existing controller, the position measurement is realized for practically no cost, apart from a few passive components.

Reasons for choosing the system

- Contactless measurement in rough industrial environment (vibration)
- LVDT-Principle DTA-6D-20 with economic microcontroller operation (patent MICRO-EPSILON)
- Calibration of measuring ranges with microcontroller
- Well-priced and customer-specific sensor design

However, the decisive factor for this application is the non-contact measurement principle: In contrast to potentiometers, it operates completely wear-free and also gives an unlimited service life even under arduous conditions (e.g. vibrations on pipework). These advantages of the solution from Micro-Epsilon enable the customer to release a high quality, simple to operate, rugged product onto the market at competitive prices.

