

Positioning and SIL: what goes together, grows together

Smart positioner CMSH from Festo with HART communication

Dosing, mixing, filling – the number of control applications in the process industries is steadily growing and demands high-performance positioners for process valves. Nowadays, extensive diagnostic options such as a pressure-assisted partial stroke test are vital for reliable operation. The new positioner CMSH from Festo for single-acting and double-acting actuators is therefore the perfect highly dynamic, low-wear positioning system for linear and rotary movements. Its 2-wire technology supports HART communication and condition monitoring functions.

The positioner CMSH is suitable for a broad range of applications for large and small actuators thanks to its high air flow rate. It is characterised by low internal air consumption, which makes it very energy-efficient. The safety functions on the CMSH are already integrated, resulting in cost savings of up to 30%. It offers extensive integrated functions for self-monitoring and diagnostics with clear recommendations for action. This includes numerous standard diagnostic options such as position monitoring and counters for control interventions and positioner changes.

Integrated pressure sensors also enable intelligent diagnostic functions like continuous monitoring of the break-away pressure of a process valve. The positioner can be used at ambient temperatures from -40 to 80°C. This makes it the perfect positioning system for applications in the chemical industry, in mining and mineral processing as well as in the fields of energy, biotech, pharmaceuticals, cosmetics, water and bulk goods.

Easy to operate

The positioner CMSH is user-friendly and easy to operate thanks to its large and rotatable plain-text display that can be read from various directions. The setup wizard makes it easy to commission. As part of this process, a fast or robust control mode can be selected. The device condition can be read off at a glance directly on the local display based on status feedback to NE107.

Classic installation or integrated air routing

There are two ways in which it can be installed directly on the actuator: in addition to the classic installation using a mounting adapter to VDE/VDI 3845-1 with external piping, it can also be installed easily and securely with integrated air routing to VDE/VDI 3847-2 either using the connection block DADG-FM-F9-... or the pneumatic adapter of the VTOP, the pneumatic extension modules from Festo for easy and flexible integration of additional functions. The integrated air routing eliminates the need for external piping. This reduces the susceptibility to

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leakages to a minimum. These variants also offer the possibility of attaching additional instruments like a pilot valve, volume booster or filter regulator.

Savings of up to 30% with integrated safety functions

For the first time, control and safety functions are implemented within the positioner. Both functions are realised via two completely independent, separate microcontrollers for control and safety. Safety-related digital and analogue inputs enable reliable switching of the process valve in combination with the integrated pilot valve. In addition, the internal self-test guarantees the cyclical monitoring of the safety function. This makes the CMSH suitable for use in safety-related systems up to and including SIL 2. There is no need for an additional solenoid valve with external piping for the emergency shutdown (ESD) functionality. The CMSH is easy to integrate into existing, safety-related installations.

Press Images



CMSH positioner

The new 2-wire positioner CMSH with HART communication from Festo.



CMSH positioner on quarter turn actuator with VTOP

Easy and safe installation of the CMSH on the actuator with VTOP with integrated air supply to VDE/VDI 3847-2. This eliminates the need for external piping and significantly reduces the susceptibility to leakages.

About Festo

Festo is a global player and an independent family-owned company with headquarters in Esslingen am Neckar, Germany. Festo has set standards in industrial automation technology and technical education ever since its establishment, thereby making a contribution to sustainable development of the environment, the economy and society. The company supplies pneumatic and electrical automation technology to 300,000 customers of factory and process automation in over 35 industries. Digitalization, AI and the LifeTech sector with medical technology and laboratory automation are becoming increasingly important. The products and services are available in 176 countries. With about 20,600 employees in over 250 branch offices in around 60 countries worldwide, Festo achieved a turnover of around €3.33 billion in 2025. More than 8% of this turnover is invested in research and development. In this learning company, 1.5 % of turnover is invested in basic and further training. Festo Didactic SE is a leading provider of technical education and training and offers its customers worldwide

comprehensive digital and physical learning solutions in the industrial environment.