

High-precision valve control –  
using intelligent positioners



sipart  
PS2

SIEMENS





The SIPART® PS2 electropneumatic positioner is number 1 in its field by a very wide margin. Our past experience gathered from 15 years in the field speaks for itself and means reliability for your future applications as well.

## The most widely used intelligent positioner for linear and rotary actuators

SIPART PS2 is not the type to rest on its laurels. On the contrary: innovation, and lots of it, is the buzzword. A single model, for instance, works for both linear and rotary actuators. The SIPART PS2 excels through its PROFIBUS PA or HART protocol, which equips it with communications capabilities. It can be operated for Windows-based HMI with the simplest PC software, and it can be used with even the smallest actuators because the fully-integrated valve block makes the SIPART PS2 a lot more compact and it comprehends external position signals also.

And what's more, SIPART PS2 has a user-friendly digital display, shows operating states clearly and can be operated directly at the machine without the need for additional equipment. SIPART PS2 excels through its reduced installation overheads, simple functional expansion with low-cost option modules and its enhanced diagnostic functions. And these are only a few examples from a very long list of innovations.

You can choose between conventional 0/4 to 20 mA control technology with or without HART interface, or devices for use with PROFIBUS PA or FOUNDATION Fieldbus Protocol, permitting simple connection and extremely user-friendly higher-level operation and monitoring. Just a single two-wire lead provides the unit with the auxiliary power required and simultaneously facilitates communication with the control system thus enabling complete integration. The great thing about all this is that a splendid specimen such as the SIPART PS2 can be delivered to you within three days!





### Quick as a wink in the process

In contrast to conventional units, SIPART PS2's automatic start-up means you need just 5 minutes for an optimum process start – with the highest control accuracy, of course!

Automatic online adaptation enables permanent optimization of the dynamic performance. This means considerably higher product quality in comparison to conventional solutions.



### SIPART PS2 saves more than it costs

One popular trademark of SIPART PS2 is the almost legendary minimum air loss. The air loss associated with conventional positioners is very expensive. SIPART PS2, by comparison, uses air only when it is required, with the result that the SIPART PS2 quickly pays for itself.

### You need diagnostics?

The SIPART PS2 provides diagnostic data about itself and its environment, that is about the valve or actuator. Thus it provides online monitoring of, for example, pneumatic leaks, changes in static friction, wear and tear on the valve seat or valve plug, and control deviations. For shut-off devices or shut-down valves, a user-friendly partial-stroke test function is available for increasing plant safety. A three-stage service request can be displayed or reported when programmable limit values are exceeded.

### PROFIBUS PA/FOUNDATION Fieldbus Protocol and HART

An outstanding product feature of SIPART PS2 is the facility for communication via PROFIBUS PA, FOUNDATION Fieldbus Protocol or HART Protocol. This offers full and user-friendly information exchange between positioner and the higher-level system.

Additionally saved trend values, histograms and start-up/operating data from the SIPART PS2 can be clearly presented and documented via HART and PROFIBUS PA using SIMATIC PDM.

### Programming know-how unnecessary

The integration of additional functions in the configuring menu has made SIPART PS2 a lot more versatile. And without added programming overhead! You simply select the menus that deviate from the standard application. Needless to say, they are easy to use. Add to this the new, two-line LCD display and simplified operat-



ing techniques and you don't need to know anything about programming in order to communicate with your SIPART PS2!

### Protected against a rough environment

With its standard IP66 protection, the SIPART PS2 defies even the roughest environment. And an integrated, maintenance-free water separator can even cope with moist compressed air for a few days. You can also forget problems caused by temperature variations. Not even pressure changes in the pneumatic supply affect control, making a pressure regulator a thing of the past.

No matter what "atmosphere" surrounds your SIPART PS2 positioner, the plastic, aluminum and stainless steel housings ensure you are perfectly equipped for all occasions.

For especially critical applications, external position sensors can be used.

### Extensive travel capabilities

A large number of variations in actuators and a growing number of "minivalves" with very little travel are currently in fashion. SIPART PS2 has reacted to this trend with a wide range and an infinitely adjustable 3-mm to 130-mm stroke range. By the way, positioners such as SIPART PS2 can be directly integrated "without pipe work" and without additional overhead to modern actuators.

### The "all-inclusive" package

SIPART PS2 already has full functionality "on board". Simple to operate without the need for auxiliary devices – just three operator keys and a display. It is familiar with the characteristics of all valves, thus making cam plates unnecessary. Just like additional devices for position feedback and limit values. Should the compressed-air supply fail, an option module can be used to generate a fault signal.

Additional auxiliary electrical power is also not required thanks to the two-wire principle. Thus it is possible to replace your conventional technology with the innovative SIPART positioner with no complications whatsoever.

## Technical specifications

Setpoint signal	0/4–20 mA with choice of HART signal or PROFIBUS PA/FOUNDATION Fieldbus Protocol
Travel range	3 to 130 mm (standard)
Slewing angle	30° to 100° (standard)
Auxiliary power:	1.4 to 7 bar 4–20 mA (two-wire circuit) or 18–30 V (four-wire circuit) or 10.5 mA supplied from the bus in the case of PROFIBUS/FOUNDATION Fieldbus
• pneumatic • electrical	
Air consumption in max. power state	Negligible
Binary inputs	Floating contacts or 24 V
Explosion protection	II 2G EEx ia/ib II C T6 or II 2G EEx d II C T6 or II 3G EEx n A L [L] IIC T6
Other approvals	FM (factory mutual) CSA SIL 2 in accordance with IEC 61508/IEC 61551 Additional modules on request
Ambient temperature	–30 °C to +80 °C
Accessories / Options (can be retrofitted)	Alarm outputs/fault message output (with slot-type initiators if required) Mounting kits Pressure gauge block Solenoid valve block Position feedback module, 4–20 mA External position sensor Also non-contact

### Lightweight keys in explosion-proof housing

SIPART PS2 is also available in explosion-proof housing with EExd IIC T4/T5/T6 protection. With the help of three operating keys hidden behind a flap, the unit can be controlled even during operation without opening the housing. The display can be easily read from behind heavy-duty glass.





## A dozen airtight reasons for choosing SIPART PS2

1. One device for both linear and rotary actuators
2. Choice of 0/4–20 mA without/with HART or PROFIBUS PA/FOUNDATION Fieldbus Protocol
3. Intrinsically safe version with explosion protection type EEx ia/ib or EEx n or explosion-proof housing for protection type EExd IIC
4. Minimal own air consumption thanks to piezo technology – payback within short space of time
5. Superb control accuracy through on-line adaptation
6. Significant time savings thanks to automatic start-up
7. Simple operation and configuration as well as manual operation via the front panel with two-line LCD display
8. Simple expansion of functions using optional supplementary modules (can also be retrofitted), e.g. for
  - Position feedback
  - Alarms
  - Fault signaling
9. Online diagnostics functions direct or by calling PROFIBUS PA/FOUNDATION Fieldbus Protocol or HART Protocol
10. IP66 protection – insensitive to environmental influences
11. Operating mode can be viewed during operation
12. Famous SIPART quality and reliability



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## **Siemens AG**

Automation and Drives (A&D)  
Sensors and Communication  
Process Sensors  
76181 KARLSRUHE  
GERMANY

[www.siemens.com/processautomation](http://www.siemens.com/processautomation)

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