

SIEMENS



Process instrumentation

# One that masters everything: SIPART PS2

Welcome to the next level

[usa.siemens.com/valveinst](http://usa.siemens.com/valveinst)

From standard applications to the fastest particle accelerator in the world – SIPART PS2 masters all control tasks



## The proven multi-talent SIPART PS2

SIPART PS2 is currently the most widely used positioner for linear and part-turn actuators in a wide range of process industries. This is not without reason. The proven all-rounder offers comprehensive functionality and diagnostics capability, controls a wide range of valves both safely and dependably and also fulfills a multitude of specific requirements optimally.

For reliable control of final control elements in chemical or oil and gas sectors, or for precise control of valves in the pharmaceutical or food industry: SIPART PS2 provides the right solution for every valve.

Another point in favor of our positioner is the low consumption of compressed air. SIPART PS2 minimizes it as well as the CO<sub>2</sub> emission which is caused by the compressors. This means our positioner offers savings of up to 90 percent compared to conventional devices.



### The Siemens promise:

- **Quality:** Production and development based on the latest standards
- **Know-how:** 20 years of experience in process instrumentation
- **Control performance:** Precise control with a large variety of valves
- **Ruggedness:** Depending on application in matching enclosure
- **Reliability:** With diagnostics functions comprehensive view of valve
- **Integration:** Seamless integration into control systems
- **Service:** Modular design of device for easier servicing

[www.siemens.com/pia-portal](http://www.siemens.com/pia-portal)

Scan for more information on PIA Life Cycle Portal



# Product highlights

## Flexible in any position

SIPART PS2 is the most widely used positioner for linear and part-turn actuators as well as for single-acting and double-acting actuators in all process industries. Regardless if “mini valves” with very small strokes or steam valves with large strokes – the intelligent positioner masters any task without problems. In addition to linear actuators, SIPART PS2 also controls part-turn actuators with a rotary angle range from 30° to 100°. For easier mounting of the SIPART PS2 to standardized or manufacturer-specific actuators, you can choose from 400 mounting kits. You start initialization using three push buttons and the display, and commissioning is complete within a few minutes.

## Protected against hostile environments

In an optional Makrolon, aluminum or stainless steel enclosure, SIPART PS2 is best equipped to withstand any conditions. With degree of protection IP66 or NEMA 4X as standard, it withstands the most hostile environmental conditions. Thanks to its large number of international certificates, the positioner is well-equipped for use in hazardous, maritime applications. The flameproof version can be conveniently operated thanks to a display and push buttons that are protected by bulletproof glass. In addition to the flameproof device, SIPART PS2 is also available as intrinsically safe version.

## Extremely communicative

In dialog with host systems, the SIPART PS2 demonstrates its communicative side. It can be integrated in the communication landscape by means of the PROFIBUS PA, Foundation Fieldbus or HART protocols. SIPART PS2 supports both commonly used parameterization concepts EDD (Enhanced Device Description) and DTM (Device Type Manager). It also stands out through its proven interoperability with the Siemens process control system SIMATIC PCS 7 and SIMATIC PDM, and with process con-



trol systems and asset management systems from other vendors. Plant operators therefore benefit from the complete diagnostics range of the positioner.

## Always the right diagnostics

During operation or in the workshop – SIPART PS2 offers the correct, standard diagnostics functions for each operating state. During operation, our positioner monitors the following properties of the valve, among other things: pneumatic leaks, number of strokes, stiction of the stuffing box or wear of the valve seat. With a regular partial stroke test, the SIPART PS2 ensures that ESD (Emergency Shut Down) valves and other open/close valves remain free to move in emergency situations. For ongoing operation to not be affected, the timing of the PST can be set.

# Product range for your application

The positioner – a multi-talent that optimally fulfills a multitude of requirements. Whether in a compact design for a wide range of standard applications or as a remote version for special applications.



## Positioner in compact design

- Available with Makrolon, aluminum or stainless steel enclosure or as flameproof aluminum version
- Different types of communication: HART 7, PROFIBUS PA and Foundation Fieldbus
- Comprehensive diagnostics functions: From histograms to Partial Stroke Test all the way to the Valve Performance Test
- Suitable for use in SIL2 control loops
- Optionally with "Fail in Place" function or "Fail Safe" function
- Fast control with integrated booster

[siemens.com/positioner/compact](https://www.siemens.com/positioner/compact)



## Positioner with remote position detection

- Suitable for use in extreme environmental conditions
- Non-contacting sensor (NCS): Resistant to permanent vibrations and shocks (e.g. steam hammer) as well as water (IP68)
- External position detection system: Easier access to the positioner with hard-to-reach valves
- EMC filter module: Integration of electrical actuating signals for special applications

[siemens.com/positioner/ncs](https://www.siemens.com/positioner/ncs)



## Positioner with remote control electronics

- Suitable for use in environmental conditions with high-energy radiation
- Easier access to control electronics through control cabinet
- Distance between control electronics and valve can be up to one kilometer
- Available as an mA version with three channels or as a PROFIBUS PA version with five, ten or fifteen channels

[siemens.com/positioner/rack unit](https://www.siemens.com/positioner/rack unit)

# Welcome to the next level

New processes always come with new requirements. SIPART PS2 meets these with the following innovations:

## Our all-round talent

Functions which turn our talent into a multi-talent are the "Fail in Place" and "Fail Safe" functions. The "Fail in Place" function causes the valve to remain in the last position should the power supply fail. Alternatively, the "Fail Safe" function makes sure that the valve moves to the safety position. This function is even suitable for use in SIL2 measuring circuits.

## Challenges even larger opponents

Our all-rounder can do even more: together with the SIPART PS2 booster, it allows fast control of large actuators with a Cv value of 2.0. Due to direct mounting on the positioner, the manual piping requirements are reduced to a minimum.

## The complete package

Thanks to the Valve Performance Test (VPT), the maintenance requirement of the valve can be quickly assessed on site during a scheduled plant standstill. The VPT thus reduces the maintenance time. The diagnostics package of our positioner is rounded off by the full stroke test, step response test, and multistep response test.

The diagnostics cockpit enables the user to assess the status of the valve at a glance at any time.






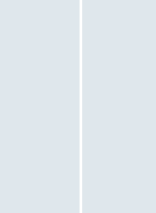

Scan the QR code to watch the video













Technical specifications	
Construction	Compact
Setpoint signal	0/4–20 mA without / with HART 7 signal or PROFIBUS PA / Foundation Fieldbus protocol
Range of stroke	3 to 130 mm (larger strokes on request)
Rotary angle range	30° to 100°
Ambient temperature	–30 °C to +80 °C (other temperature ranges on request)
Required air quality	Class 2 in accordance with ISO 8573-1
Max. air bleed in settled state	< 0.036 m <sup>3</sup> n / h
Pneumatic auxiliary power	1.4 to 7 bar
Airflow	
– Supply to actuator (for Δp = 6 bar)	9.8 m <sup>3</sup> n / h
– Actuator to exhaust (for Δp = 6 bar)	19.2 m <sup>3</sup> n / h
– Integrated booster option	Cv 2.0
Types of protection	Ex i; Ex n; Ex t; Ex d; IS; NI; DIP; XP
Certificates and approvals	Explosion protection: IECEx; ATEX; FM; CSA; NEPSI; INMETRO; EAC; KCS General safety: CE; FM Functional safety: SIL2 Shipbuilding: ABS; BV; GL; LR; DNV
More information	<a href="https://www.siemens.com/positioner">siemens.com/positioner</a>



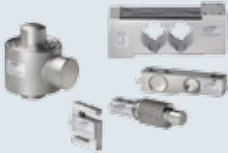

# Comprehensive portfolio for all applications





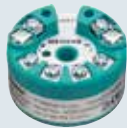
Siemens process instrumentation offers a comprehensive and proven product portfolio for demanding environments.

 Level			
Radar	Guided radar	Ultrasound	Level detection
			
<p>When it comes to level measurement of liquids, sludges and bulk material, Siemens offers the right technology for continuous level measurement as well as level detection.</p>			

 Flow rate			
Magnetic-inductive	Ultrasound	Coriolis	Vortex
			
<p>Our flowmeters enable very precise and reliable measurement and monitoring of the flow of gas, vapor and liquids with different consistency.</p>			

 Process monitoring		 Positioner
Acoustic sensors	Speed sensors	Positioner
		
<p>Blockages in pneumatic conveying systems can be detected with acoustic sensors. Motion sensors guarantee the set speed in mechanical conveying systems.</p>		<p>The electro-pneumatic positioner offers easy integration as well as comprehensive diagnostic functions and minimum consumption of process air.</p>

 Weighing technology		
Conveyor scales	Load cells	PLC-based weighing electronics
		
<p>The comprehensive Siemens portfolio includes, among other things, conveyor scales, dosing conveyor scales, solids flowmeters and static weighing technology. In addition, our PLC-based weighing electronics, SIWAREX, supports direct integration into Siemens automation components.</p>		

 Pressure	 Temperature	
Pressure measurement	Sensors	Transmitters
		
<p>Siemens offers a complete range of measuring instruments to measure relative, differential and absolute pressure.</p>	<p>Our product line includes head-mounted, rail-mounted, and field transmitters as well as sensors.</p>	

 WirelessHART		
(WirelessHART) sensor	Device adapters	Interface
		
<p>With our WirelessHART solutions, users benefit not only from lower lifecycle costs but also from significant improvements in process diagnostics, productivity and security.</p>		

**FURTHER INFORMATION:**  
[usa.siemens.com/valveinst](http://usa.siemens.com/valveinst)

**LEARN MORE ABOUT  
OUR PRODUCTS IN THE  
AREA OF PROCESS  
INSTRUMENTATION AND  
ANALYSIS FOR YOUR  
INDUSTRY.**



Subject to change without prior notice  
Order No.: PIBR-00011-1016  
All rights reserved  
Printed in USA  
© 2016 Siemens Industry, Inc.

**Comprehensive Instrumentation Portfolio**

Siemens offers a comprehensive range of process instrumentation for pressure, temperature, flow and level measurement. Pneumatic valve positioners, process recorders, and process protection devices – in addition to weighing technology – complete the package. Whether you need a single transmitter or a complete instrumentation package, Siemens has the technical expertise for your project.

**Service and Support: your partner for success**

Siemens backs up every instrument with top-of-the-line service and support, including:

- 24/7 technical support
- Field Service personnel with years of experience
- A Quick Ship program for fast replacement of instruments
- State-of-the-art training facilities and CEU credits

More information:  
[usa.siemens.com/pi](http://usa.siemens.com/pi)  
[usa.siemens.com/valveinst](http://usa.siemens.com/valveinst)

Follow us on:  
[www.facebook.com/siemensii](https://www.facebook.com/siemensii)  
<https://twitter.com/siemensii>  
[www.youtube.com/siemens](https://www.youtube.com/siemens)  
<https://blogs.siemens.com/measuringsuccess>

Siemens Industry, Inc.  
Process Industries and Drives  
100 Technology Drive  
Alpharetta, GA 30005  
1-800-365-8766  
[info.us@siemens.com](mailto:info.us@siemens.com)