

# Extended diagnostics for even more process security

Positioner SIPART PS2



## SIPART PS2

Answers for industry.

**SIEMENS**

# Intelligent positioner SIPART PS2 for linear and part-turn actuators

When it comes to precision control of valves in different industries and applications, the SIPART PS2 is the first choice. It is number 1 in its field by a very wide margin. Our past experience gathered from over 15 years in the field speaks for itself and means reliability for your future applications as well.

The SIPART PS2 guarantees simple operation via either local operation through pushbuttons and LCD display or remotely over well established buses, and also with SIMATIC PDM (for HART or PROFIBUS).



Fast setup due to an automatic commissioning, and extremely low air consumption saves operational costs.

## More process security via extended diagnostic functions

The SIPART PS2 is a diagnostic specialist and will support you with security process control. It provides diagnostic data about itself and its environment, valve and actuator. To fulfill increasing process requirements the SIPART PS2 now offers extended diagnostic functionality.



(OK, no maintenance request)



Maintenance request



Urgent maintenance request



(Imminent) positioner, valve or actuator failure

Icons on the distributed control system: show the respective maintenance status.



## Your benefits at a glance

### Cost-efficient

- Extended on-line diagnostics features as standard (without additional charge)
- One device for all your applications (standard and emergency shutdown), saves money on stocking

### Less maintenance

- On-line functions such as the Partial Stroke Test (PST), leakage test and valve friction detection will eliminate unnecessary valve maintenance and unexpected valve failures

### Increased process safety

- You will always know your valve status with alarms based on NAMUR NE107 industry standard!
- Restricted access to pushbuttons

### Higher reliability in emergency situations

- The integrated PST function ensures safe valve control in critical situations
- SIL 2 certification guarantees safe venting of the positioner in case of emergency

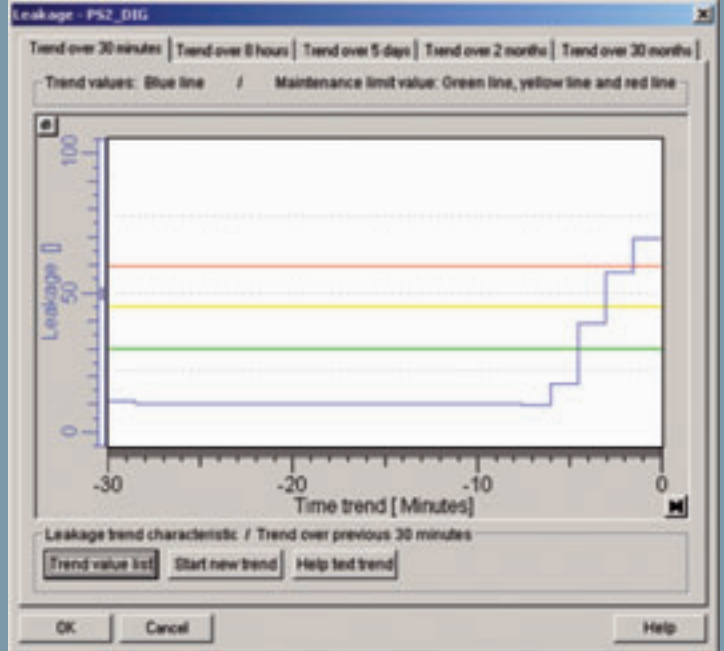


SIPART PS2 LCD: The display reports the error message (4) and the existing position (60.2) – next to it 3 bars are displayed representing the imminent positioner, valve or actuator failure (red symbol from DCS).



## Extended diagnostics at a glance

- Alarm status based on NAMUR NE107 industry standard!
- "Partial Stroke Test" for ESD (Emergency Shut Down), on/off & control valves
- Pneumatic leakage (e.g. tear in actuator diaphragm)
- Friction and blockage of a valve (stiction)
- Wear/tear of valve seat or valve plug
- Deposits or build-up on valve seat/valve plug
- Increasing deposits within the pipeline (constant flow process)
- Trend diagrams
- Histograms
- Valve stroke counter
- Direction change counter
- Operating hours counter
- Dead band
- Temperature measurement
- Valve operating position over time



The increasing leakage value signals imminent control valve failure.

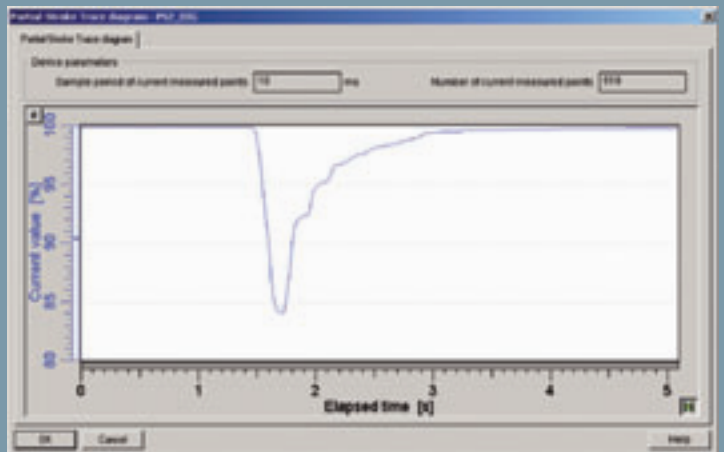


## Partial Stroke Test (PST) – trend diagram with high resolution

The PST is a method to check the condition of a valve which has remained in the same position over a long period of time, increasing the possibility that corrosion or build-up may make the valve difficult to move. The SIPART PS2 moves the actuator over a specific partial stroke, removing possible process build-up, recording movement and insuring proper valve performance.

### Trend diagrams:

- Trend interval: 30 min, 8 hr, 5 days, 2 months, 2.5 years
- Pneumatic leakage
- Friction / slipstick effect
- Seat wear / build-up
- Upper travel limit changes
- Automatic dead band
- Temperature
- Existing value
- Control deviation



Shows the detailed progress of the PST.

### Histograms:

- Existing position
- Control deviation
- Temperature

## Get more information

Find a Siemens contact in your area at  
[www.siemens.com/processinstrumentation](http://www.siemens.com/processinstrumentation)

For additional information, visit  
[www.siemens.com/sipartps2](http://www.siemens.com/sipartps2)

Questions on the SIPART PS2 – please send an email to:  
[support.automation@siemens.com](mailto:support.automation@siemens.com)

Siemens AG  
Industry Sector  
Sensors and Communication  
76181 KARLSRUHE  
GERMANY

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

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