

Positioner product portfolio

Smart positioners



Electro-pneumatic Positioners



Pneumatic positioners



Valve positioners

Get the most of your valve

Schneider Electric instruments are in operation at more than a million different facilities throughout the world. We are producing control valve positioners of the highest quality since 1961 and offer the widest range of valve positioners to complement any application in any industry. Our quality and performance solutions for valves are made to optimize your CapEx and OpEx.

Highest performance

Easy to use

Reliability and robustness

Premium technologies

Partial Stroke Test (PST)

Widest application coverage universal solution



Smart positioner

SRD998

Intelligent Control Valve Positioner SRD998

The SRD998 offers a larger choice of pneumatic performance including high flow versions and up to 10 bars air supply and output pressure is available. High output pressure allows the positioner to work at a higher torque on the actuator and valve; therefore, smaller actuator sizes can be used. Very high flow capacity versions allow you to realize savings since small volume boosters are not necessary.

Robust and reliable design

- Savings in maintenance and spares with innovative modular design
- Reduced accidental damage during commissioning with a single user dedicated compartment for cabling and configuration
- Increased lifetime thanks to a 2-stage filtering system and overpressure protection of the internal I/P

User friendly interface

- Fast commissioning with one “Turn and Push” rotary selector and intuitive menu
- Increased comfort of use with large backlit full text display
- Reduced installation and shutdown time thanks to online troubleshooting with local help files

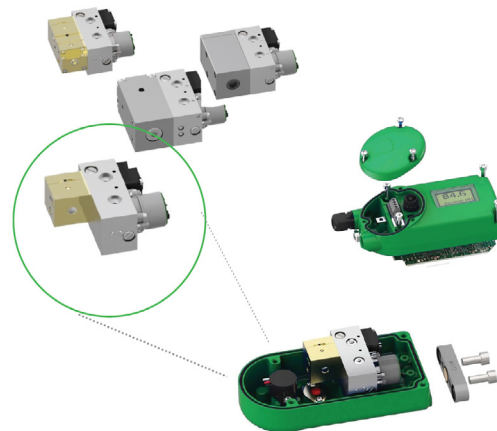
User-friendly interface

- Designed to be mounted to control any valve in any application
- Inventory and installation cost reduced with integrated high air flow capacity versions (up to Cv 0.85)
- Seamless DCS integration



Modular optional choices

- Plug & play 4-20mA position feedback (optional)
- Backlighted LCD display
- Remote mounting up to 10m



Smart positioner

SRD998



Designed to protect

With a single user dedicated compartment for cabling and configuration, the pneumatic and electronic parts remain isolated to avoid accidental



Fast commissioning

With a “Turn and Push” selector and intuitive menu, this positioner provides fast, local configuration and easy troubleshooting.



Sustainability

Sustainability of the new SRD998 is achieved thanks to the increased life-time and an innovative modular design enabling the engineer to simply and easily change the defective part.



Full valve compatibility

Proven in use with direct mechanical linkage, the new SRD998 is supplied with the largest range of mounting kits without size or model restriction to support any revamps.

SRD998 with Basic Diagnostics

Full interoperability and seamless integration into DCS

Communication protocol

HART 7

- Continuous diagnostic status monitoring
- Long 32-character tag for seamless reference to applications in the plant

Basic diagnostics

- Auto diagnostics with local alert pictograms according to NAMUR NE107 (Good, Maintenance, Alarm, or Out of Specifications)
- Easy access to local Help file for troubleshooting through the rotary selector
- Configuration is also possible anytime using a local HIM or via the DTM

SRD998 with Advanced Diagnostics

Full interoperability and integration into DCS for improved process performance, online diagnostics for predictive and proactive maintenance

Communication protocol

HART 7

- Continuous diagnostic status monitoring
- Long 32-character tag for seamless reference to applications in the plant

Advanced Diagnostics

- Best-in-Class DTM (Device Type Manager)
- Online monitoring of key parameters allows the adapted maintenance on the right valve assembly.
- Advanced Diagnostic with SRD998 will support the planning effort for maintenance since several control valves parameters can be monitored online for predictive and proactive maintenance.
- Comprehensive graphical data for Proactive and Predictive Valve maintenance (EDD for Host using EDD Technology).

Smart positioners



SRD960 Positioner Intelligent Valve Control - Ex d

The SRD960 offers the most advanced technology available on the market today. This includes among others an infrared interface for wireless operation and configuration, a multi-lingual full-text graphic LCD, and an availability with the choice of all in the process automation applied communication protocols. It offers enhanced applications and methods to analyze recorded stroke data. All the diagnostics features can be easily configured and display by the Positioner DTM (VALcare). The Positioner DTM enables to edit a complete “health” report of the valve with all data of configuration and diagnostics. The SRD960 has also the capability to control a Partial Stroke Test (PST) that offers operators a tool to identify the trouble proof function of ESD (Emergency Shut Down) valves.



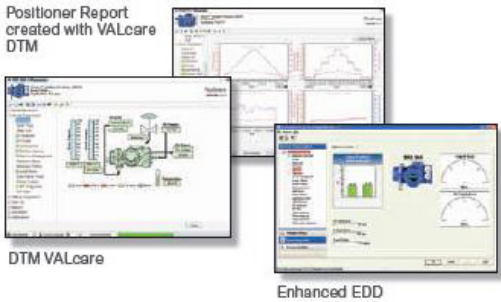
SRD991 Intelligent Valve Control

The SRD991 offers the most advanced technology available on the market today. This includes among others an infrared interface for wireless operation and configuration, a multilingual full-text graphic LCD, and an availability with the choice of all in the process automation applied communication protocols. It offers enhanced applications and methods to analyze recorded stroke data. All the diagnostics features can be easily configured and display by the Positioner DTM (VALcare). Moreover, the Positioner DTM enables to edit a complete “health” report of the valve with all data of configuration and diagnostics. The SRD991 has also the capability to control a Partial Stroke Test (PST) that offers operators a tool to identify the trouble proof function of ESD (Emergency Shut Down) valves.

Valve Diagnostics for Predictive Maintenance

The valve diagnostic software is available as Device Type Manager (DTM) for integration into control systems based on the Field Device Tool (FDT) technology such as the Foxboro I/A Series System. It is designed to support methods for evaluation of valve health, operation and configuration. The DTMs support the communication protocols HART, Profibus PA and FOUNDATION Fieldbus H1.

- Predictive maintenance capabilities
- Intelligent alarm management
- Self-surveillance in accordance with NE107
- Service management
- Histograms for valve position and response history
- Data collected up to 60 months
- Data stored inside the positioner memory
- Determination of stem friction to prevent leakage and stuck stem
- Histogram for friction-history



Analog and traditional positioners

- SRP981 — the result of more than 50 years’ experience with pneumatic positioners
- SRI986 — more than 1 million applications worldwide
- SRI983 — the classic explosion-proof solution
- SRI990 — the analog positioner — easy operation and compact design

Our traditional range of positioners, SRP981, SRI986, and SRI983, are the results of 50 years’ experience in the field. These positioners are designed for operation of pneumatic valve actuators with pneumatic (SRP981) or 4-20mA (SRI986 and SRI983) control signals. They are used to reduce the adverse effects of valve friction for higher thrust and shorter positioning time. Extraordinary reliability and economy are reached with our durable pneumatic components, even under difficult climatic conditions.

The analog positioner SRI990 with analog input 4 to 20 mA is designed to operate pneumatic valve actuators. It offers easy adjustment by means of switches and potentiometers. The modular structure of this positioner series enables conversion from an analog to an “intelligent” positioner by exchanging the electronics.



Model	SRI990	SRI986	SRI983	SRP981
Analog valve control with fast control behavior	√	√	√	√
Valve action and rotation configurable by DIP switches	√			
Gain and damping independently adjustable	√	√	√	√
Switch for pneumatic test	√			
Load	300 Ohm	200 Ohm	260 Ohm	
Easy mounting to all linear and rotary actuators	√	√	√	√
Easy local mechanical configuration		√	√	√
Mechanical adaptations by setting screws		√	√	√
Independent adjustment of zero and span	√	√	√	√
Electrical adaptation of zero and span by potentiometer	√			
Electrical I/P converter separate from pneumatic unit			√	
Input signal	4 – 20 mA	4 – 20 mA / 0 – 20 mA or 0 – 10 V		0.2 to 1 bar (3 to 15 psig)
ATEX approved	√	√	√	√
Basic device without electrical parts				√
Split range				√
Up to 4-fold possible	2 Fold Possible	3 Fold Possible		4 fold possible

PST positioner with SOV monitoring

A Partial Stroke Test (PST) application with solenoid valve (SOV) monitoring offers the highest level of safety, in avoiding any spurious trips and testing of the SOV.

Schneider Electric provides Partial Stroke Testing solutions with SRD991 and SRD960 positioners for Safety Systems and Emergency Shutdown (ESD) applications.

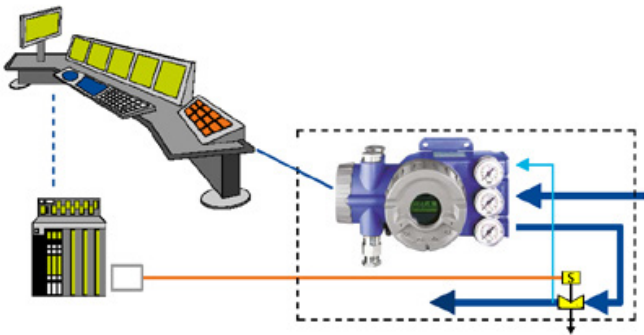
Benefits

- Test interval of the ESD valves extended up to 5 years
- Increased safety in testing the SOV
- Spurious trip kept to the lowest level

About valve positioners

We have been producing On-Off and Modulating Control valve positioners of the highest quality since 1961 and offers the widest range of valve positioners, from pneumatic and analogue devices to the most advanced smart positioners with Hart, Profibus or Fieldbus communication, to work alongside any application in any industry.

One particular application is Partial Stroke Testing. PST is a method where the ESD valve is typically moved 10-20% and returned to its original position in a short period of time. As the most common dangerous failure mode in a static ESD valve is “failure to move,” On-line Partial Stroke Testing generated by the smart positioner SRD991 (intrinsic safety application) and SRD960 (Explosion-proof application) is the key to safety. Moreover, the PST positioner can offer operators a tool to enable predictive maintenance on the ESD valves with data history and friction analysis.



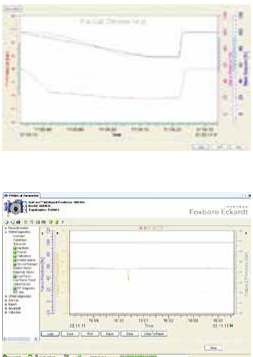
The test can be easily executed via the FDT/DTM based configuration and diagnostic tool VALcare® and Valve Monitor.

Customer benefits and value

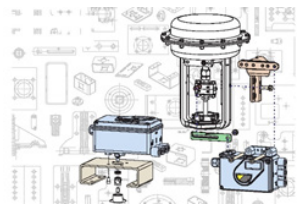
On critical Emergency Shutdown Valves controlled by a solenoid valve, Schneider Electric provides a solution to check not only the valve status and the friction of the final element, but also the SOV in charge of cutting air to the actuator in case of emergency shutdown.

Moreover, the positioner is now pneumatically designed not to impair the spurious trip of the final element.

Premium diagnostics, the PST status and the SOV status are available through HART communication. And finally, the cost of implementation has been reduced since it only requires a limited number of input/output from the SIS.

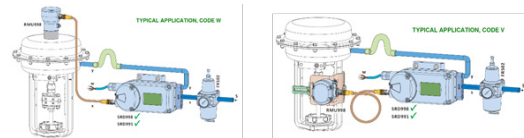


Accessories



Attachment kits

Positioners can be mounted onto any actuator/valve thanks to a wide range of attachment kits. We have the right solution for all linear actuators (diaphragm, piston or cylinder). For any rotary actuator we can provide the coupling part and mounting bracket.



Remote mounting versions

The RMU998 Remote Mounting Units are intended for use in case of:

- High vibrations
- Extreme temperature
- Mounting limitation (valve too small or direct positioner mounting)
- Positioner inaccessible when mounted to the valve/actuator

The remote mount option consists of two components, the SRD991 or SRD998 intelligent valve positioner configured for remote mount operation, and a choice of two potentiometer units RMU998-V (Side Mounting) and RMU998-W (Top Mounting).

Need more accessories...

IP26 — Compact Field Rugged Current to Pneumatic Converter

- Accurate and reliable
- Reduced inventory thanks to the dual certification IS/XP (ATEX, FM, CSA)
- Easy fit for universal replacement
- Achieve operational saving
- Extreme low temperature version -55 °C (-67 °F) available



Volume Boosters Series VBS

More and more end user specs requesting fast response/movements and this on large actuators. The purpose of the booster is to achieve higher air flow that is not reachable by using a positioner alone. The global system will have a better performance by being able to reach requested stroking times. Schneider Electric offers a large choice of boosters with direct or remote mounting covering a Cv range from 1,4 up to 7.



Filter Regulators Series FRS

A positioner needs always a filter regulator, to regulate the pressure so that it doesn't exceed maximum allowed pressure supply to the positioner and to have a filtration barrier in case of rupture in the pneumatic loop.

Schneider Electric offers a large choice of filters in aluminum or 316Stainless Steel housings with high flow versions to best match your application.



Smart positioners

Model		SRD998 BD Standard performance	SRD998 AD High performance	SRD960	SRD991
Protection	Weatherproof	√	√	√	√
	Intrinsically safe	√	√		√
	Flameproof/explosion proof			√	
Input communication	4-20 mA and HART 5			√	√
	4-20 mA and HART 7	√	√	HART 7	HART 7
	Foundation Fieldbus H1			√	√
	Profibus PA			√	√
	4-20 mA (only)				√
HMI	LCD	√	√	√	√
	Language	14 embedded	14 embedded	3 embedded by model code	3 embedded by model code
	Backlighted LCD		√	√	
	Autocalibration	√	√	√	√
Diagnostics	Basic diagnostics	√	√		
	Advanced diagnostics		√	√	√
	Premium diagnostics			√	√
	Valve signatures			√	√
	PST			√	√
Options	Position feedback 4-20mA		√	√	√
	Digital input/output			√	√
	Limit switches (inductive or mechanical)			√	√

Model		SRD998 BD Standard performance	SRD998 AD High performance	SRD960	SRD991
Housing material	Aluminum (low copper)	√	√	√	√
	Stainless steel 316L				√
Pneumatic pressure	Max. air supply pressure	6 bar (90psi)	10 bar (150psi)	6 bar (90psi)/ opt. 7 bar	6 bar (90psi)/ opt.10 bar in st. steel
Airflow capacity @ 6 bar	Up to 14,000 nL/h	√	√	√	√
	Up to 42,000 nL/h		√		
	Up to 52,000 nL/h		√		
Certifications	ATEX	√	√		√
	IECEEx	√	√		√
	FM/CSA			√	√
	EAC	√	√	√	√
	INMETRO	√	√	√	√
	NEPSI	√	√	√	√
	PESO	√	√		√
	TIIS	√	√		
	KOSHA	√	√		√
Ambient conditions	Protection class	IP66	IP66/Type 4x (-50° C on request)	IP66/Type 4x	IP66/Type 4x
	Temperature range	-40°...+80 °C	-40°...+80° C (-50° C on request)	-40°...+80 °C	-40°...+80 °C
Accessories	Volume boosters direct	√	√	√	√
	Volume booster remote	√	√	√	√
	Remote mounting	√	√	√	√
	Gauges	√	√	√	√

Electro-pneumatic positioners

Model		SRI990	SRI983	SRI986
Protection	Weatherproof	√	√	√
	Intrinsically safe	√		√
	Flameproof/explosion proof		√	
Options	4-20 mA (only)	√	√	√
	Position feedback 4-20 mA	√		√
	Limit switches (inductive or mechanical)	√		√
Housing material	Aluminum (low copper)	√	√	√
	Stainless steel 316L	√		
Pneumatic pressure	Max. air supply pressure	6 bar (90psi)/ opt. 7 bar	6 bar (90psi)	6 bar (90psi)
Airflow capacity @ 6 bar	Up to 14,000 nL/h	√	√	√
	Up to 20 000 nL/h	√		
Certifications	ATEX	√	√	√
	IECEX	√		
	FM/CSA	√	√	√
	EAC	√	√	√
	INMETRO	√	√	√
Ambient conditions	Protection class	IP66/Type 4x	IP54 (opt. IP65)	IP54 (opt. IP65)
	Temperature range	-40°...+80 °C	-40°...+80 °C	-40°...+80 °C
Accessories	Volume boosters direct	√		√
	Volume booster remote	√		√
	Gauges	√		√

Pneumatic positioner

Model		SRP981
Protection	Weatherproof	√
	Intrinsically safe	√ (options)
	Flameproof/explosion proof	
Options	4-20 mA (only)	
	0.2 – 1 bar (3 – 15 psi)	√
	Position feedback 4-20 mA	√
	Limit switches (inductive or mechanical)	√
Housing material	Aluminum (low copper)	√
Pneumatic pressure	Max. air supply pressure	6 bar (90psi)
Airflow capacity @ 6 bar	Up to 14,000 nL/h	√
	Up to 52,000 nL/h	
Certifications	ATEX	√ (ATEX constructive Design)
	IECEX	
	FM/CSA	
	EAC	
	INMETRO	
Ambient conditions	Protection class	IP54 (opt. IP65)
	Temperature range	-40°...+80 °C
Accessories	Volume boosters direct	√
	Volume booster remote	√
	Gauges	√