



M-VALVES
PROCESS IN CONTROL

▀ **SD610 INTELLIGENT
DIGITAL POSITIONER**



▼ **SD610 COMPACT DIGITAL POSITIONER**

M-VALVES SD610 Digital Positioner Series can provide Intelligent and Reliable Valve Control. The compact modular design and wide range of mounting options make it the perfect unit for controlling all major types of valves. It is suitable for 4-20 mA, Hart, Profibus and Fieldbus communication, as well as a wide range of optional integrated limit switches and continuous position feedback.

Communication through DTM can provide more information from the process, enabling convenient remote configuration of the unit. A user-friendly menu system and graphical LCD and LED indicators are available for local operation. The enclosure's weatherproof design meets IP66 requirements, which can also be remotely mounted under extreme conditions.

▼ **ADVANTAGE**

- Rugged, efficient design for reliable valve operation
- Suitable for almost any control valve
- Easy to install, configure and operate
- Suitable for small or large, rotary or linear valves
- Fast to calibrate and commissioning

▼ **FEATURES**

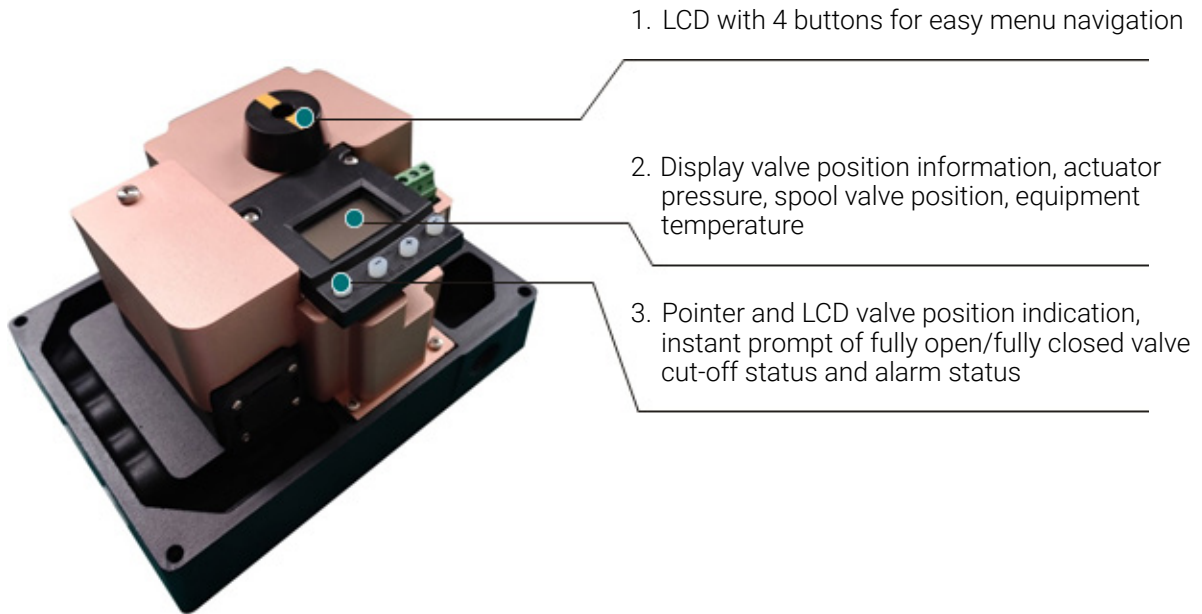
- Quick calibration, simple adjustment, fast response and high precision
- Rugged enclosure, powerful large spool valve and proven digital technology ensure years of trouble-free operation, even in very harsh factory environments
- SD610 is suitable for both rotary and linear valves as well as single and double acting actuators Both high precision for small valves and large air capacity to handle large valves
- Predictive valve diagnostics based on ValveshineMDTM provide an overview of valve health, helping to avoid unplanned downtime and reduce maintenance costs
- Scheduled or manual partial stroke testing ensures/verifies that „on/off” operation opens or closes the valve when required
- Wide range of mandrels and mounting kits available with 1/2 thread control range Modular air source interface, easy to replace PT/NPT interface
- Short stroke test (PST), and alarm function

▼ **ACCESSORIES**

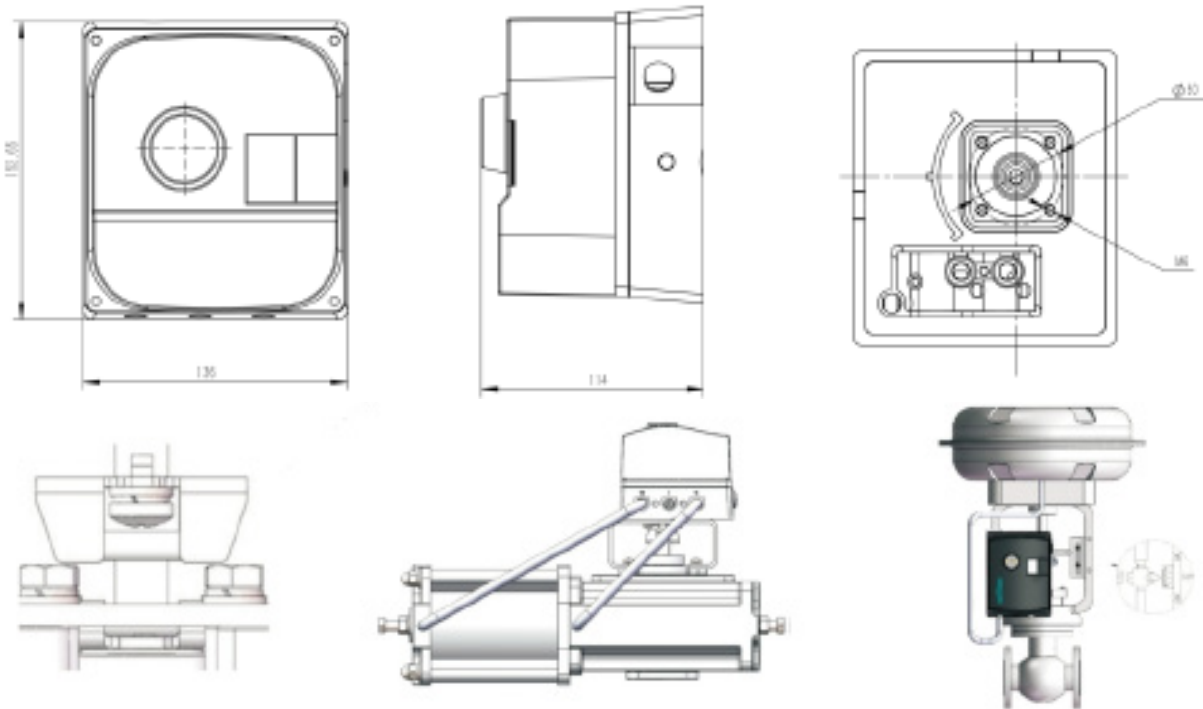
- Optional embedded limit switches and 4-20mA feedback Hart, Profibus Pa or Fieldbus
- External module
- Embedded pressure sensor for diagnostics with Valveshine. Remote or integrated installation



SD610 UP AND RUNNING IN MINUTES



INSTALLATION DIMENSION DRAWING



Mounting options include bracket mount and direct mount for rotary and in-line linear valves

SD610 HELPS MAXIMIZE DEVICE UPTIME

The Valveshine T predictive diagnostic system can provide a dashboard for two-way communication between the valve and the operator. This dashboard will be connected to the valve, not only allowing the installation personnel to understand the detailed current status of the valve and equipment, but also prompting the impending conditions, helping to avoid unplanned downtime of the installation.

VALVESHINE AVAILABLE

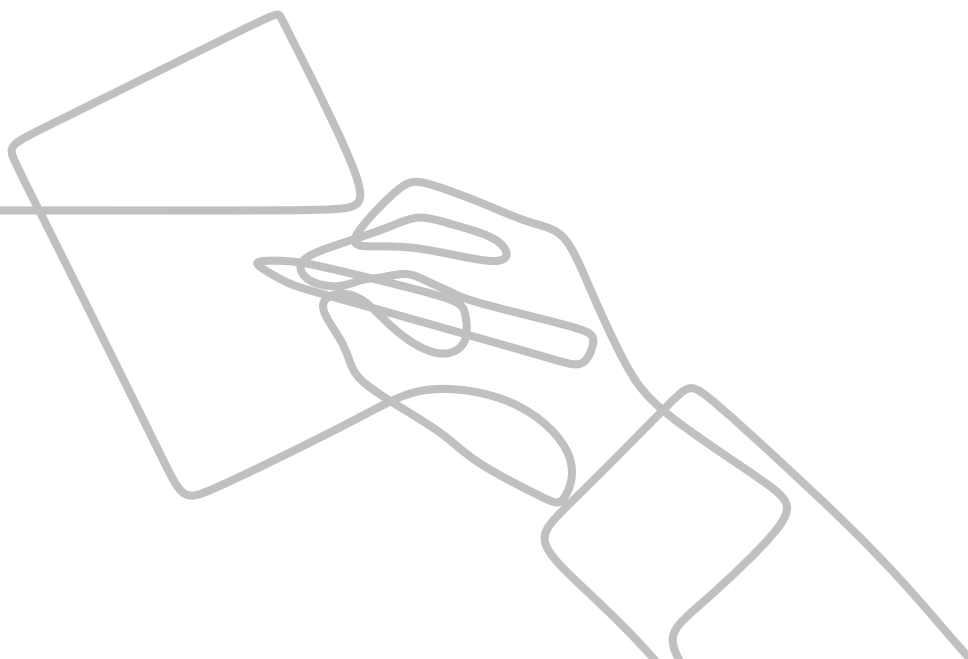
Online and offline diagnostics for valves, actuators and positioners Alarm content explained in plain English. Health status bar to help predict repair needs, plan maintenance and reduce Costly downtime PSH (partial stroke) - scheduled automatic test or manual test Alarm limits are easily customizable.

THERE ARE SEVERAL WAYS TO SET UP AND COMMUNICATE WITH THE SD610

Implemented locally on the valve via an intuitive menu system in the SD610 graphic display In-situ implementation with Hart operator. Remote or local implementation through Valveshine TMDTM using PC (as shown).

PREDICTIVE MAINTENANCE FOR SD610

- Easy access to acquired data with software
- The original intelligent valve multi-parameter bar diagnostic chart can intuitively reflect the valve's control performance and diagnostic results Information collection under operating conditions
- Logical trend and bar graph display
- Offline detection with computation of important properties Online alarm quick warning





SD610 MATERIALS AND RELATED PARAMETERS

Rotation Angle	Min 2.5°, Max 100°
Stroke	5 mm (0.2") Start at 5mm (0.2")
Input Signal	4-20 mA DC
Air Supply	1.4-8 bar (20-115 psi) DIN/ISO 8573-1 3.2.3 Free from oil, water and moisture
Air Output	760 nl/min @6 bar (29.3 scfm @ 87 psi)
Air Consumption	8 nl/min @ 6 bar (0.31 scfm @87 psi)
Air Interface	1/4" PT NPT
Cable Entry	M16x1.5
Electrical connections	2.5mm ² /AWG14 screw terminal
Linearity	<1%
Repeatability	<0.5%
Hysteresis	<1%
Dead Band	0.1-10%, adjustable
Display	20x 30 mm (0.8x 1.2") Graphic display, display size 20x30 mm (0.8x1.2")
Uiuser Interface	4 buttons
Ce	93/68EEC,89/336/EEC,92/31/EEC
Hart Voltage Drop, no Hart	8 v
Hart Voltage Drop, With Hart	9.4 v
Vibration	<0.25% FS 10-500 Hz 2gmax
Seal	Lp66
Material	Die-cast aluminum alloy
Surface Finish	epoxy resin powder
Temperature Range	-40°C + 80°C (-40°F 176°F)
Weight	1.8 kg (4 lbs)
Installation Location	Any
Communication Agreement	Hart Profibus Pa Fieldbus



AVAILABLE MOUNTING MODULE

Mechanical Switch	
Type	SPDT
Size	Ultra Small
Rated Value	3A/125 VAC/ 2A/30 vDc
Temperature Range	-30°C -80°C (-22°F -180°F)
Namur (nj2-v3-n) Sensor	
Type	DIN EN60947-5-6:2000
Load Current	1 mA ≤ I ≤ 3 mA
Voltage Range	8 VDC
Hysteresis	0.2%
Temperature Range	-25°C -85°C (-13°F -185°F)
Proximity Switch	
Type	SPDT
Rated Value	0.4A@24VDC,10 w
Operation Time	1.0 ms
Maximum Voltage	200 VDC
Contact Resistance	0.2Q
Temperature Range	-30°C*80°C (-22°F -180°F)
Namur (sj2-s1 N, sj2-sn) slot Namur Switch	
Type	DIN EN60947-5-6:2000
Load Current	1 mA ≤ I ≤ 3 mA
Voltage	8 vDC
Hysteresis	0.2%
Temperature Range	-25°C -85°C (-13°F -185°F)
4-20ma 4-20ma Transmitter	
Power	11-28 vDc
Output	4-20 mA
Resolution	0.1%
Linear Full Scale	+/-0.5%
Output Current Limit	30 mA DC
Load Impedance	800@24VDC

VALVE MODEL SELECTION

SD 610	F	N	N	N	R	P	D	S	N
1	2	3	4	5	6	7	8	9	10

1. Product Series	SD 610	Intelligent Valve Positioner
2. Spool Valve	T	4S+1/4NPT DN≤DN25
	F	4+1/4NPT DN25<DN≤ DN200
	S	6+1/4NPT DN200<DN≤DN400
	E	6B+3/8NPT DN400<DN
3. Signal	N	Input4-20ma; output None
	F	Input4-20ma; output 4-20ma
	S	Inputn4-20ma; output 4-20ma, X2 Limit Switch X2
4. Communication	N	Output None
	H	HART
	A	Profibus PA
	D	Foundation Fieldbus
5. Explosionproof Class	N	None
	I	EX ia IIC T5/T6
6. Shaft Selection	R	Angle Stroke
	D	Linear Stroke
7. Threaded Connection	P	Air Connection Cipt1/4; electrical Connection Cim16x 1.5
	N	Air Connection Dnpt1/4; electrical Connection Dm16 X 1.5
8. Acting Type	S	Single-acting
	D	Double-acting
9. Temperature	S	-20°C +70°C
	H	-20°C +120°C
	L	-45°C +70°C
10. Accessories	N	No Accessories
	G	Pressure Gauge Module
	E	Exhaust Silencer

▼ **ORDERING INSTRUCTIONS**

M-VALVES warm reminds you to provide media, temperature, pressure class, valve size and other relevant parameters to your service staff before ordering. When the valve needs to be processed by special process, you need to inform your service staff. If actuators are required, provide maximum differential pressure of valve, air source pressure, etc. In addition, the valve needs to be installed with other accessories (such as positioner, strainer, etc.) please specify separately.

▼ **STATEMENT**

While M-VALVES can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. Therefore, the purchaser / user must assume ultimate responsibility for the correct sizing and selection, installation, operation and maintenance of the M-VALVES product. Prior to use, purchasers/users should carefully read and understand the IMO attached to the product, and train their employees and contractors to safely use application-specific M-VALVES products.

While the information and specifications contained herein are considered to be accurate, they are for informational purposes only and should not be construed as certifying or relying on them as a guarantee of satisfactory results. Nothing contained herein constitutes any warranty or warranty, express or implied, with respect to any matter relating to this Product. As M-VALVES continues to improve and upgrade its product design, the specifications, dimensions and information contained herein are subject to change without notice.

If there is any doubt about these rules, buyer/user can consult at any of its operating offices worldwide.



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info@mvalves.com
www.mvalves.com