

► Our technology. Your success.

Pumps • Valves • Service



AMTRONIC – SMARTRONIC

Safety and Precision
for Pneumatic Actuators



The specialist for innovative valve solutions

In the face of depleting natural resources and rising energy costs, industry is placing more and more emphasis on the integration of energy efficiency and life cycle cost considerations in products and services.

Our valve automation programme has been significantly expanded in support of this trend. KSB has developed a comprehensive range of intelligent positioners and control units which are able to process data, control valves and improve performance.



KSB has been the market leader for pumps and valves for more than 140 years and is one of very few manufacturers to offer an all-in-solution for valve automation.

The components are engineered to work perfectly together, allowing a reduction in space and time for installation and maintenance while increasing the valve/actuator set's performance. This combines straightforward planning and installation with reliable, improved processes.

Deploying KSB valves and automation products will increase your system's overall efficiency.





Customised solutions for unique process requirements



A wide range of functionalities makes KSB's intelligent positioners and control units highly versatile. They automate all types of processes with the precision they require. All products are built to exacting technical standards based on the experience KSB has gained in the valves and automation sector.

High flexibility

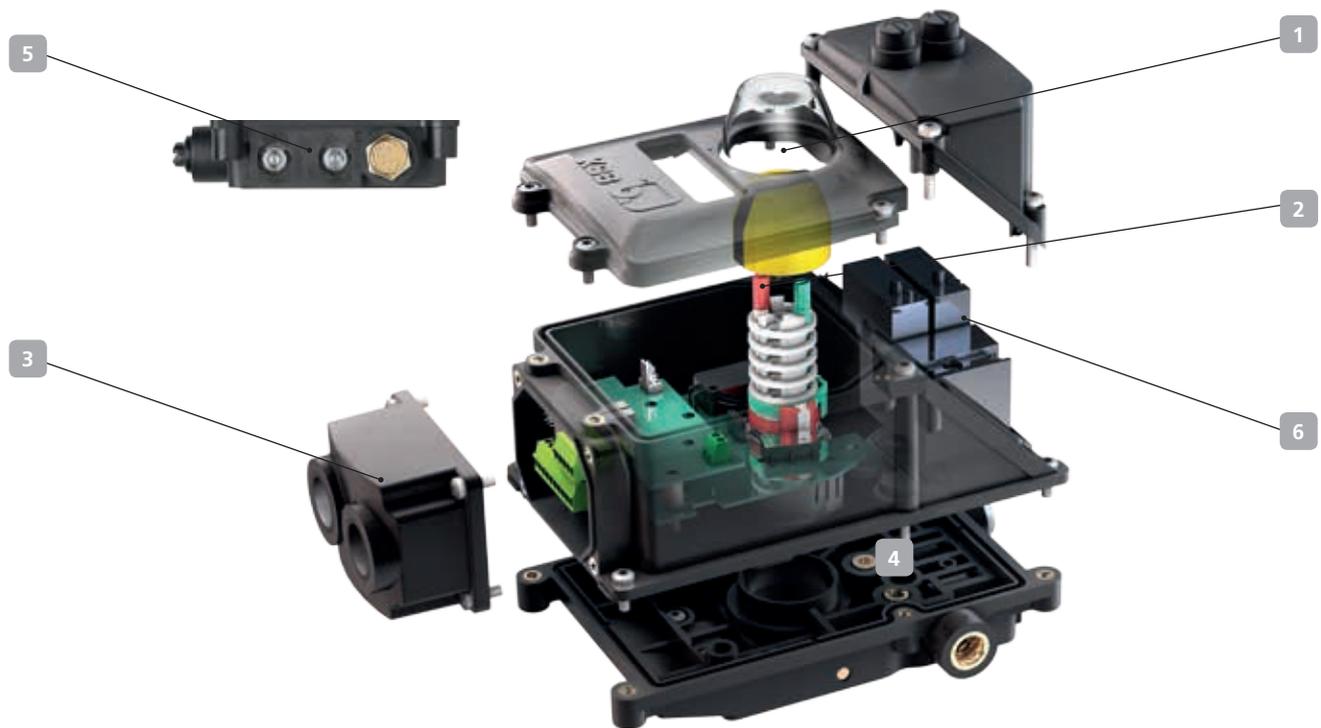
- KSB positioners and control units meet the requirements of numerous markets in the world.
- Various open and closed-loop control units are on offer.
- They can be equipped with sensors and switches from the most important manufacturers and are suitable for use with a wide range of communication interfaces.

Function	Product	Special feature	Applications
Process control	SMARTRONIC PC	4 programmable functions	Industry Water
Positioning	SMARTRONIC AS-i SMARTRONIC MA SMARTRONIC MA Ex ia	First positioner for the new generation of AS-i field buses Version to ATEX II 1 G	Waste water Energy Marine
Open/close control	AMTRONIC AMTRONIC Ex ia	Integrated position signalling and compressed air supply Version to ATEX II 1 G	Oil and gas



AMTRONIC: Open/close control unit for pneumatic actuators

AMTRONIC increases the safety and precision of your valves by transmitting information on the valve's position and controls valve opening/closing.



1 Visual position indicator

Straightforward, clear information, also visible from a distance

2 Setting of limit switches and proximity sensors along the entire valve travel

Easy to set

3 Electrical connection via screw-type terminal strip

Easy to connect

4 Base for mounting to actuators with VDI/VDE interface and direct compressed air supply to ACTAIR/DYNACTAIR

Quick installation and removal without installation components or external piping

5 Flow reducers accessible from outside

Straightforward setting of actuating times

6 Separate section for the compressed air supply (via directional control valve)

Easy to access

AMTRONIC



AMTRONIC is an open/close control unit suitable for mounting to ACTAIR/DYNACTAIR actuators from KSB with direct compressed air supply. It can be mounted either to quarter-turn actuators with VDI/VDE 3845 interface or linear actuators with NAMUR interface.

Key features

- Compressed air supply via a monostable 4/2, a bistable 4/2 or a 4/3 directional control valve closed in centre position
- Open/closed position signalling can be set via mechanical limit switches or proximity sensors from leading sensor equipment manufacturers: P&F, IFM, Honeywell, Crouzet, Schneider Electric ...
- Actual-position feedback via 4-20 mA signal (optional)
- Compatible with Profibus or AS-i field bus systems
- Manual override

AMTRONIC Ex ia



Intrinsically safe AMTRONIC version to ATEX II 1 G



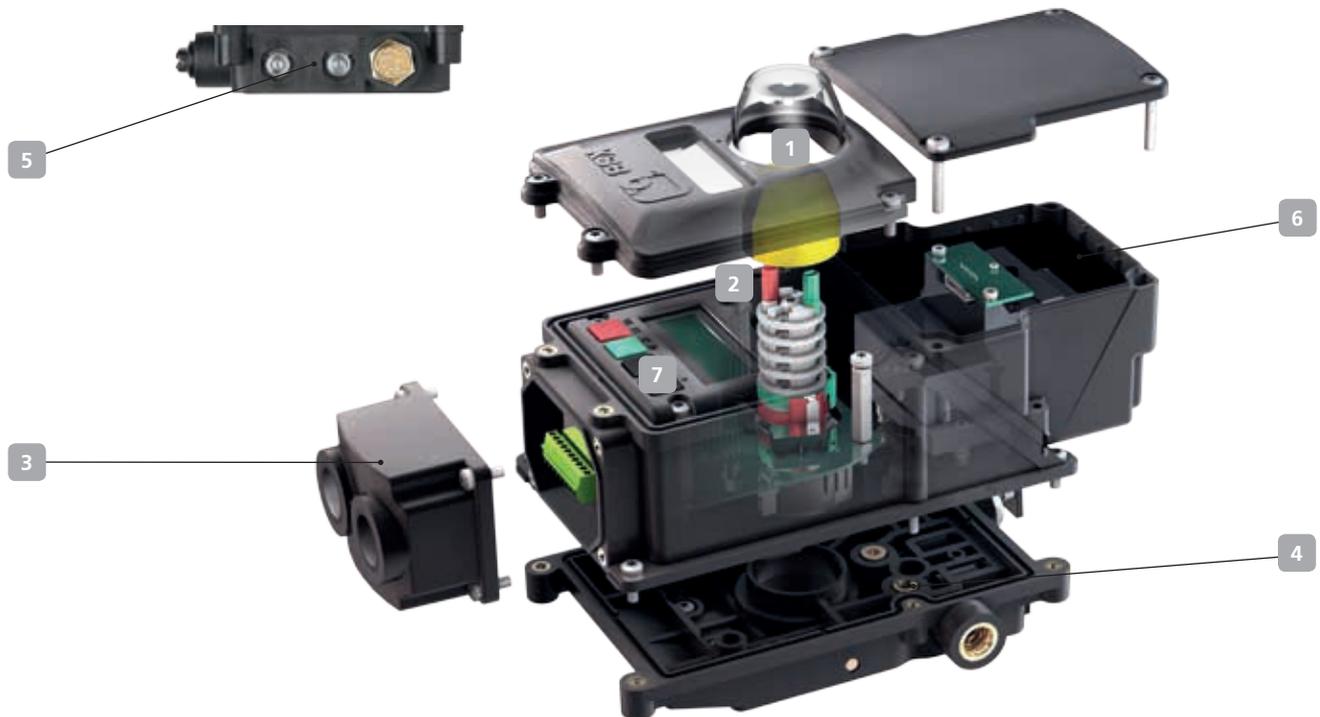
Key features

- This version allows the installation of the Amtronic control unit on a valve with actuator in zones 0, 1 or 2

Technical data	AMTRONIC	AMTRONIC Ex ia
Input	Directional control valve 24V DC - 24V AC - 48V AC - 110V AC - 230V AC	Pilotventile 24V DC
Open/closed position signalling	All types of limit switches and proximity sensors in accordance with the customer's specification	2 limit switches, Crouzet OR 2 proximity sensors, P&F or IFM
Analog actual-position feedback	4-20 mA analog (optional)	4-20 mA analog (optional)
Operating pressure	3 to 8 bar	3 to 8 bar
Air filtration	ISO 8573-1 Class 5	ISO 8573-1 Class 5
Intrinsic safety	-	ATEX II 1G Ex ia II C T4-T6
Temperature	-20 °C to +80 °C	-20 °C to +80 °C
Flow rate (compressed air)	400 NI/min (at 25 °C)	400 NI/min (at 25 °C)
Max. position-independent compressed air consumption	0 m ³ /h	0 m ³ /h
Valve travel/stroke	90 +/- 5° 180 mm	90 +/- 5° 180 mm
Enclosure	IP 67 to EN 60529	IP 67 to EN 60529
Actuator mounting options	<ul style="list-style-type: none"> - Direct mounting to ACTAIR/DYNACTAIR (KSB) - For quarter-turn actuators with VDI/VDE 3845 interface - For linear actuators 	

SMARTRONIC: Intelligent positioner for pneumatic actuators

SMARTRONIC increases the safety and precision of your valves by controlling valves with pneumatic quarter-turn or linear actuators.



1 Visual position indicator

Straightforward, clear information, also visible from a distance

2 Setting of limit switches and proximity sensors along the entire valve travel

Easy to set

3 Electrical connection via screw-type terminal strip

Easy to connect

4 Base for mounting to actuators with VDI/VDE interface and direct compressed air supply to ACTAIR/DYNACTAIR

Quick installation and removal without installation components or external piping

5 Flow reducers accessible from outside

Straightforward setting of actuating times

6 Separate section for the compressed air supply

Easy to access

Special feature:

7 LCD display with navigation keys (except for SMARTRONIC PC)

Intuitive and user-friendly

SMARTRONIC MA



Digital electro-pneumatic positioner with power supply via 4-20 mA signal

Key features

- Commissioning and operation via local user interface
- HART® protocol
- Reduced compressed air supply and power consumption thanks to the directional control valve with piezoelectric pilot valve
- Quick and precise positioning

SMARTRONIC MA Ex ia



Digital, intrinsically safe positioner to ATEX II 1 G

Hart®

FDT/DTM®



Key features

- This positioner can be mounted to valve/actuator sets used in zones 0, 1 and 2.

Technical data

Technical data	SMARTRONIC MA	SMARTRONIC MA Ex ia
Input	4-20 mA analog HART®	4-20 mA analog HART®
Open/closed position signalling	2 limit switches OR 2 proximity sensors	2 limit switches OR 2 proximity sensors
Analog actual-position feedback	4-20 mA analog (optional)	4-20 mA analog (optional)
Operating pressure	2 to 7 bar	2 to 7 bar
Air filtration	ISO 8573-1 Class 4	ISO 8573-1 Class 4
Intrinsic safety	-	ATEX II 1G Ex ia II C T4-T6
Temperature	-20 °C to +80 °C	-20 °C to +80 °C
Flow rate (compressed air)	260 NI/min (at 25 °C)	260 NI/min (at 25 °C)
Max. position-independent compressed air consumption	< 0.024 m³/h	< 0.024 m³/h
Valve travel/stroke	90° +/- 5° - 180 mm	90° +/- 5° - 180 mm
Fail-safe position	Fail Open/Fail Close	Fail Open/Fail Close
Enclosure	IP 67 to EN 60529	IP 67 to EN 60529
Actuator mounting options	<ul style="list-style-type: none"> - Direct mounting to ACTAIR/DYNACTAIR (KSB) - For quarter-turn actuators with VDI/VDE 3845 interface - For linear actuators 	

SMARTRONIC AS-i



SMARTRONIC AS-i is a positioner for connection to an AS-i field bus – the first positioner certified by AS International.



Key features

- Up to 62 field devices can be connected to an AS-i master: The positioner requires only one address for all data exchanges.
- Power is directly supplied by the AS-i field bus.
- With SMARTRONIC AS-I, an AS-i compatible version with position signalling and open/close control is added to the KSB range of automation products.

SMARTRONIC PC

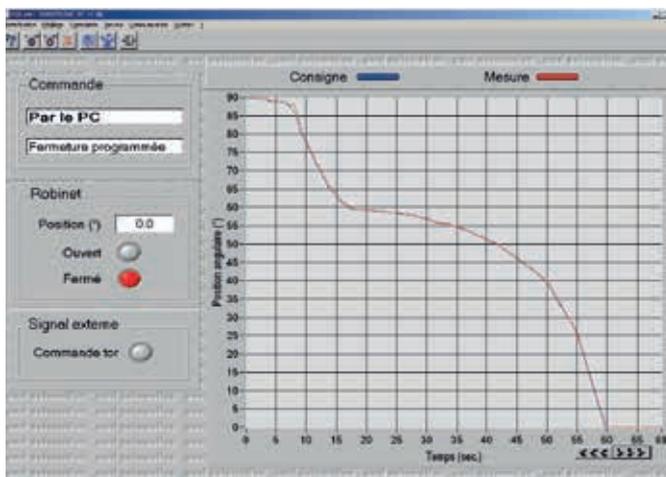


An innovative, intelligent and compact positioner: The integrated control offered by this multi-functional unit represents the latest in open and closed-loop control technology for valves.



Key features

- 4 programmable functions for specific applications:
 1. Programmable curves for valve opening and closing: Open/close control according to programmed curve
 2. Intelligent positioning: 4-20 mA positioner with programmable curve
 3. Process monitoring: Open/close control according to programmed curve and additional ESD signal
 4. Control: combination of a classic positioner with a PID controller
- Communication via RS232, Ethernet or Wi-Fi
- Compatible with a Profibus DP field bus system



Parameterisation of SMARTRONIC PC
The user can program a time-dependent actuation curve.

Technical data	SMARTRONIC AS-i
AS-i profile	S-7A.*.5 (compatible with AS-i master M4 and higher)
Input	Position setpoint (0 to 100%)
AS-i-Output	- Position signalling (0 to 100%). Signal for Open. Signal for Closed. - Status (manual/ auto, automated calibrating).

Technical data	SMARTRONIC PC
Inputs	Power supply: 24V DC 2 analog inputs: 4-20 mA 3 digital inputs for volt-free contacts
Open/closed position signalling	1 signal for Closed 1 signal for Open
Analog actual-position feedback	4-20 mA analog (optional)
Operating pressure	3 to 8 bar
Air filtration	ISO 8573-1 Class 5
Temperature	-20 °C to +80 °C
Flow rate (compressed air)	400 NI/min
Max. position-independent compressed air consumption	0 m ³ /h
Valve travel/stroke	90° +/- 5° 180 mm
Fail-safe position	Fail Open/Fail Close/Fail-in-last
Enclosure	IP 67 to EN 60529
Actuator mounting options	- Direct mounting to ACTAIR/DYNACTAIR - For quarter-turn actuators with VDI/VDE 3845 interface - For linear actuators



Technology that **makes its mark**

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