

KOSO**KGP5000**

KOSO SMART VALVE POSITIONER

Newly launched smart valve positioner
based on proven technology to develop control valves



Cost effective positioner for supporting IoT solutions

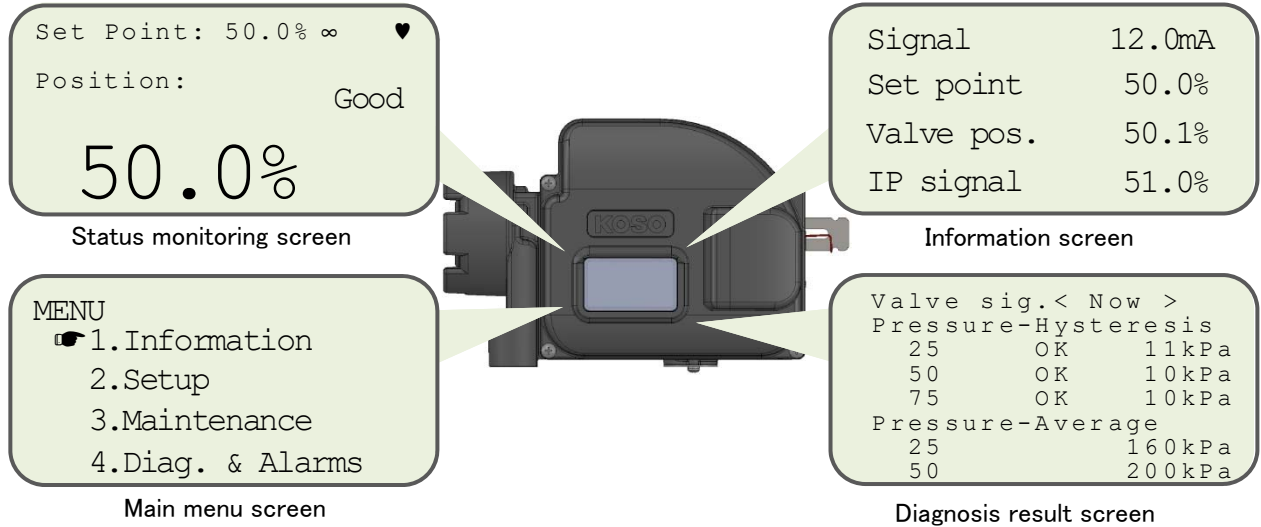
- ★ User friendly operating system
- ★ Stable control on positioning valve
- ★ Advanced valve diagnostics

***The Most Cost Effective,
Creative Valve Solutions***

FEATURES

Large-screen LCD & easy configuration by 'Full autotune'

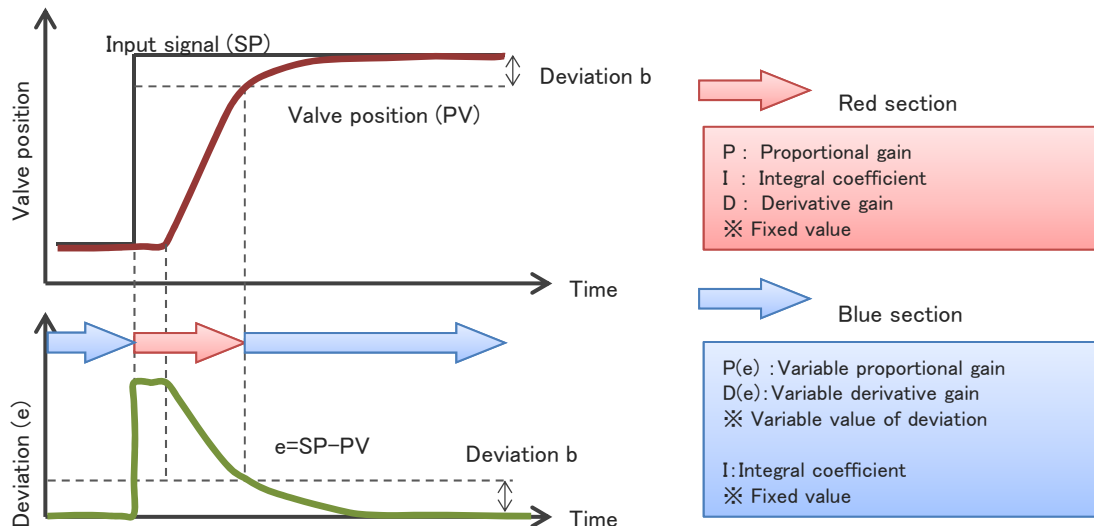
- ★ Local user interface with large graphic LCD by itself enables performing all the operations such as setup, adjustment, status monitoring, execution of diagnostics, etc.



- ★ The function of 'full autotune' can set automatically zero & span point, and select optimal PID control parameters by automatic tuning.

Stable valve control using advanced control algorithm

- ★ Advanced PID control selects suitable parameters according to deviation size, direction.



- ★ Preset values of PID parameters are provided suitable for linear or rotary actuators.

The Most Cost Effective, Creative Valve Solutions



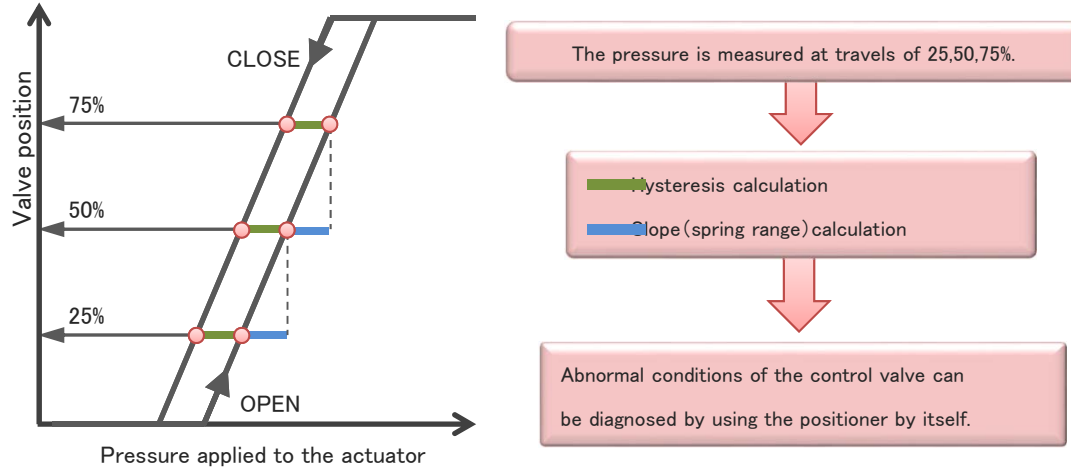
Diagnostics and alarm functions for maintenance cost reduction

- ★ Online valve diagnostics enables the exchange from breakdown maintenance to preventive maintenance through status monitoring.

Total stroke	Exposure time to high temperature	Control time of low travel
Number of times a direction is reversed	Exposure time to low temperature	Partial stroke test

- ★ Offline diagnostics checks control valve condition through pressure sensors.

The concept of valve diagnostics using simplified valve signatures



All-in-one design for inventory-related troublesome reduction

- ★ Latest digital communication “HART7” compliant
- ★ Built-in position transmitter function
- ★ Applicable to both single and double acting actuator only through the switching between single and double mode on pilot relay

Attachment to several kinds and types of actuators



Linear actuator



Rotary actuator



KOSO 5300LA series

SPECIFICATIONS

Input signal	4~20mADC Split range available	Model KGP5000: Compliance voltage 8.6VDC@20mA (Input impedance 430 Ω) (Electronics Version : 1.0.0 and more)
		Model KGP5003: Compliance voltage 9.6VDC@20mA (Input impedance 480 Ω) (Electronics Version : 1.0.0 and more)
Transfer characteristics	Linear / EQ / QO / User custom setup (19 points)	
Position transmitter output	4~20mADC	Power supply 17~31VDC Alarm output ※ according to NAMUR043
Attachment	Linear / Rotary / actuators according to IEC60534-6·VDI/VDE3845	
Travel range	Linear	12~250mm ※ Strokes above 100mm with special kits
	Rotary	40~100°
Action	Single / Double ※ Pilot relay are available on direct acting only	
Supply pressure	140~800kPa	
Enclosure	Housing	Aluminum die-casting with baked acrylic painting
	Protection code	IP66 (Common structure)
	Pneumatic connection	Rc1/4 or 1/4NPT
	Electrical connection	G1/2 , 1/2NPT or M20x1.5
	Mounting threads	4xM8, Φ50-4xM6
	Explosion protection	Exd IIC T6
Weight	3.0kg (without pressure gauge block) , 3.3kg (with pressure gauge block)	
Operating temperature range	Non-explosion type	-40~+80°C
	TIIS explosion proof type	-20~+60°C
	CCC (NEPSI) explosion proof type	-40~+70°C
	KOSHA explosion proof type	-20~+60°C
	IECEX explosion proof type	-40~+70°C
	ATEX explosion proof type	-40~+70°C
	LCD	-20~+70°C
Operating humidity range	5~95%R.H. (non-condensed)	

SPECIFICATIONS

Air consumption	Single acting type	6Nℓ/min or less@140kPa, 9Nℓ/min or less@300kPa ※at 50% position of full travel	
	Double acting type	16Nℓ/min or less@400kPa, 20Nℓ/min or less@550kPa ※ at balance pressure (70% of supply pressure)	
Accuracy		Position control	Position transmitter output
	Linearity	±1.2%F.S.	±1.0%F.S.
	Hysteresis	0.7%F.S.	0.5%F.S.
Approvals	Dust•water proof		
	- Protection code	IP66	
	Explosion proof		
	- TIIS approval	Ex d IIC T6 Gb (No. TC22443X)	
	-CCC(NEPSI)approval	Ex d IIC T6 Gb (No. GYJ17.1027X)	
	- KOSHA approval	Ex d IIC T6 (No. 17-AV4BO-0350X)	
	- IECEX approval	Ex db IIC T6 Gb (No. IECEX DEK 17.0037X)	
- ATEX approval	II 2 G Ex db IIC T6 Gb (No. DEKRA 17ATEX0076 X)		
	HART communication	HART7	

CONTACT INFORMATION

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This product is an electrical equipment manufactured under the Ex type approval and the Ex quality management system.
To ensure safe operation, any part of the product is not intended to be repaired and replaced by user.

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