



KGP2000

KOSO Smart Positioner

New Positioner in the IoT Era to Drive Successful DX
Intrinsic safety



- User-Friendly Operation Interface
- Stable Valve Control
- Carefully Selected Valve Diagnostics
- HART Communication Functionality

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

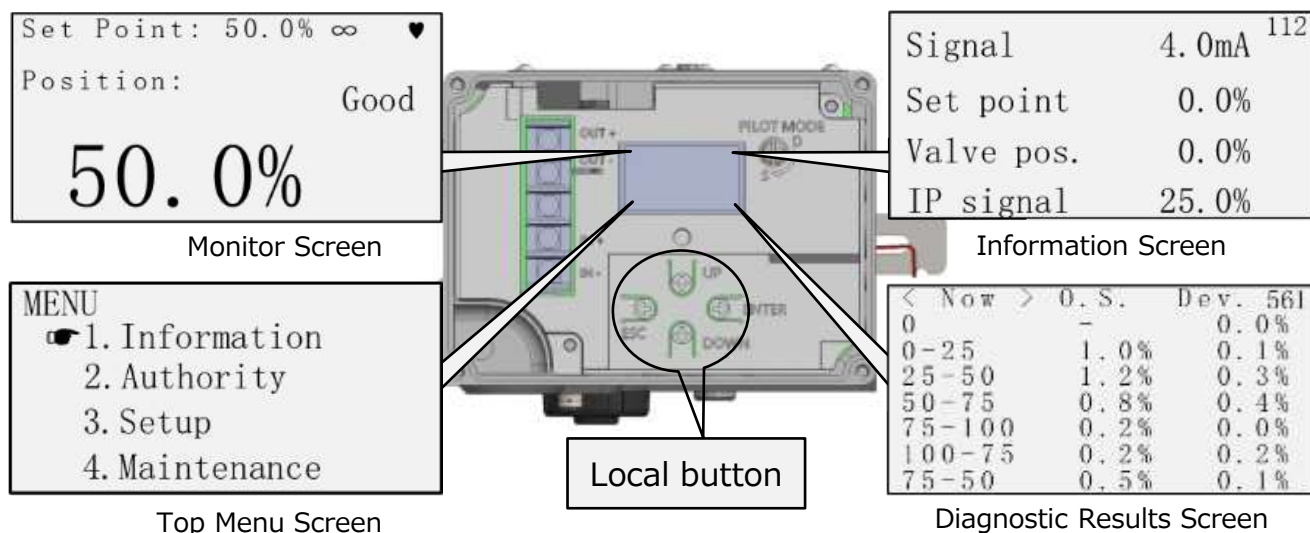


Key Features:

Point 1

Easy Setup with Large Screen LCD & Full Auto-Tune Function

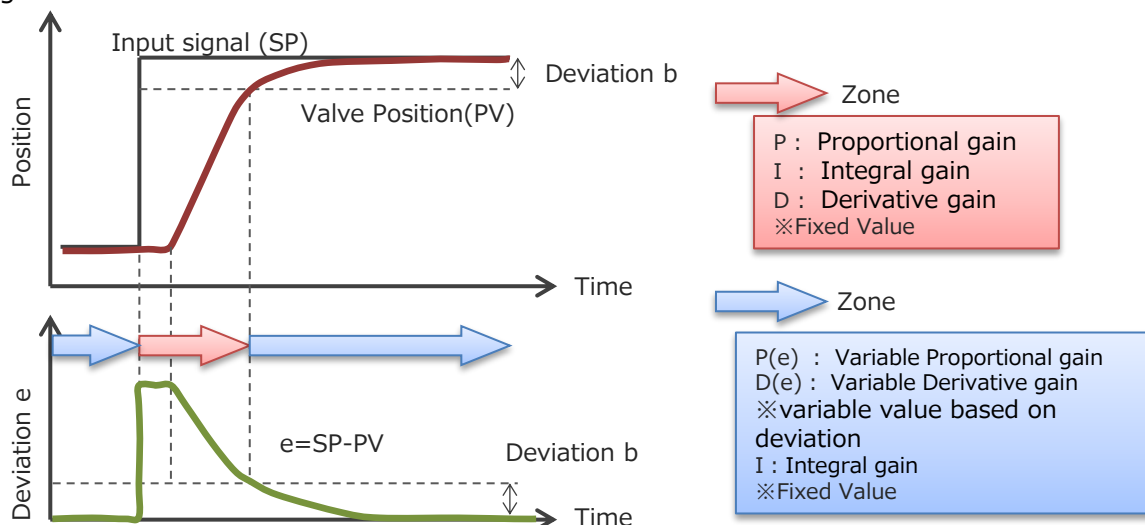
★The use of a large graphic LCD enables a local user interface, allowing for settings, adjustments, status checks, and diagnostic functions to be performed independently on the device



★With the Full Auto-Tuning function, it is possible to automatically configure the zero-span settings and optimize the PID control parameters.

Point 2 Stable Valve Control with Advanced Control Algorithms

★ Adopting an Advanced Control Method that Adjusts PID Control Parameters Based on the Magnitude and Direction of Deviation



★Preparing Preset PID Control Parameters Suitable for Linear Actuator and Rotary Actuator



Key Features:

Point 3

Equipped with Valve Diagnostics & Alarm Function to Achieve Cost Reduction in Maintenance

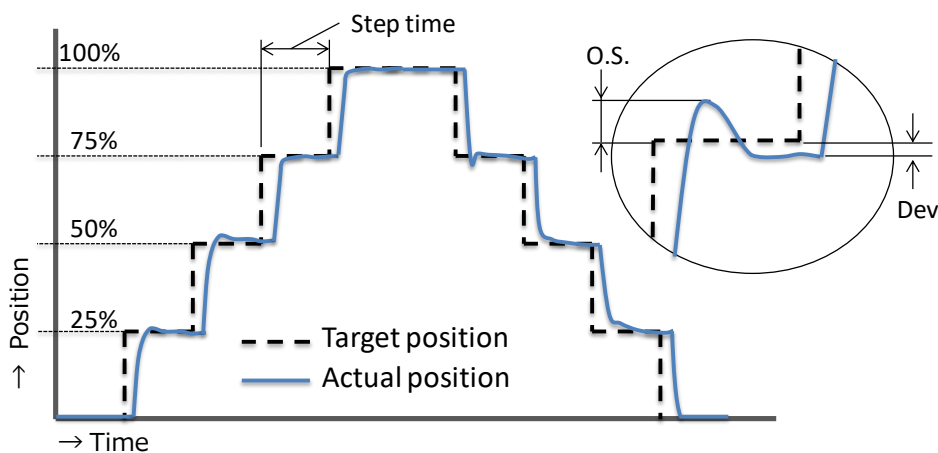
★Enabling Online Valve Diagnostics to Shift from Reactive Maintenance to Condition-based Maintenance

Total stroke	High temperature time	Low position time
Total direct change	temperature time	Partial stroke time

★Offline Diagnosis to Check the Integrity of Control Valves

Overview of Valve Diagnosis using a 25% Step Response

A 25% step response is conducted to record the maximum overshoot (O.S.) and final deviation (Dev). By comparing the initial value, previous value, and current value, it is possible to confirm the aging changes in the step response operation.



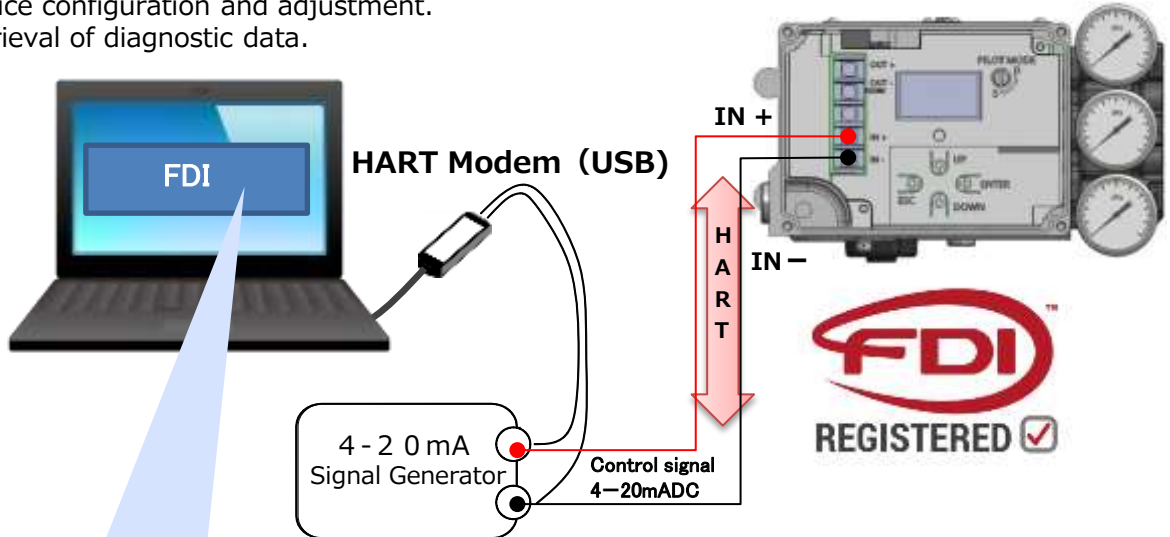


Key Features:

Point 4 HART Communication Functionality

With the HART Communication (HART 7) feature integrated into the KGP2003, it enables the following capabilities:

- ① Monitoring of device status.
- ② Device configuration and adjustment.
- ③ Retrieval of diagnostic data.



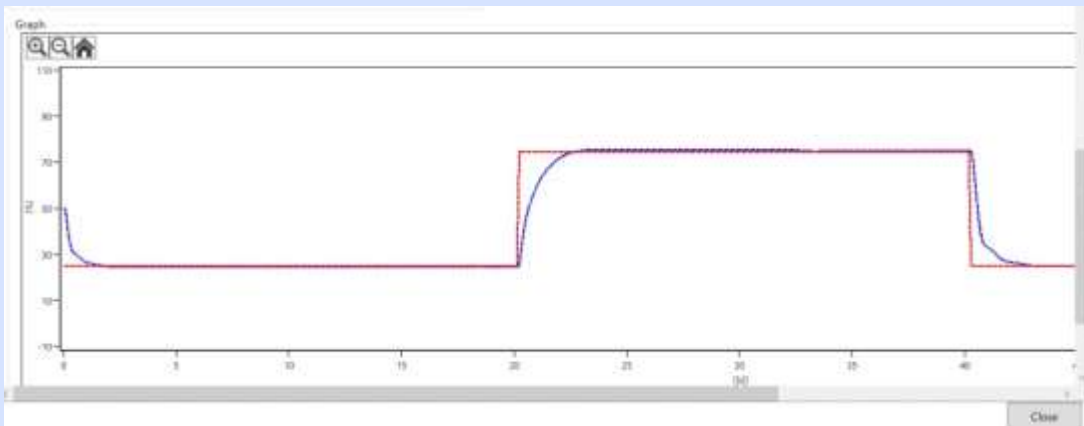
① Monitor



② Basic setup



③ One step response





Key Features:

Other points

All-in-One Design to Reduce Inventory Management Hassles

- ★ Standard Equipped with Position Transmitter Functionality
- ★ Applicable to Single-Acting and Double-Acting Actuator through Pilot Relay Switching
- ★ Structure is Intrinsic Safety Explosion-Proof Type (Non-Explosion-Proof Structure Type also available)

Applicable to a Wide Range of Actuator



Linear Actuator



Rotary Actuator



KOSO 5300LA

IP66 Dustproof/Waterproof Protection Class

CE Certification

- ★ RoHS Directive Compliance (2011/65/EU, (EU)2015/863)
- ★ EMC Directive Compliance (2014/30/EU)

General Specifications

Input Signal	4~20mADC Split Range Setting Capability	Model KGP2003 Compliance voltage $\leq 9.6\text{VDC}@20\text{mA}$ (Input impedance $\leq 480\Omega@20\text{mA}$)
Output Characteristics	Linear / EQ / QO / User setting (19 point)	
Position transmitter ※Model KGP2003 only	4~20mADC	Power supply range 17~31VDC Alarm output ※ According to NAMUR043
Available actuators	Linear type/ Rotary type / Type compliant with IEC60534-6 · VDI/VDE3845	
Travel range	Linear Rotary	12~250mm ※Strokes above 250mm are available with special kits. 40~100°
Action	Single/Double ※Pilot Relay is normal only	
Supply pressure	140~800kPa	
Structure	Housing materials Protection code Pneumatic connections Electric connections Mounting threads Intrinsic safety	Aluminum die-casting with baked acrylic painting IP66(by TÜV Rheinland) Rc1/4 or 1/4NPT G1/2 , 1/2NPT , M20x1.5 4xM8, $\Phi 50$ -4xM6 Ex ia IIC T5,T4
Weight	2.2kg (Without pressure gauge) , 2.5kg (With pressure gauge)	
Operating temperature range	Standard type CCC(NEPSI) Explosion-proof type IECEX Explosion-proof type ATEX Explosion-proof type EAC Explosion-proof type LCD display	: -40~+80℃ T4 : -40~+80℃ T5 : -40~+60℃ T4 : -40~+80℃ T5 : -40~+60℃ T4 : -40~+80℃ T5 : -40~+60℃ T4 : -40~+80℃ T5 : -40~+60℃ : -20~+70℃
Operating humidity range	5~95%R.H. (non-condensed)	

General Specifications

Air consumption	Single acting	6N ℓ /min以下@140kPa, 9N ℓ /min以下@300kPa ※at 50% position of full travel		
	Double acting	16N ℓ /min以下@400kPa, 20N ℓ /min以下@550kPa ※70% of supply pressure		
Maximum output capacity	155N ℓ /min@140kPa, 275N ℓ /min@300kPa, 350N ℓ /min@400kPa, 475N ℓ /min@550kPa			
Accuracy	<u>Position control</u>		<u>Position transmitter</u>	
	Linearity Hysteresis	±1.2%F.S. 0.7%F.S.	Linearity Hysteresis	±1.0%F.S. 0.5%F.S.
Certification	Dustproof/Waterproof Protection Class	IP66 (No. AK 50531708 0001)		
	Explosion-proof CCC (NEPSI) Certification	Ex ia IIC T4/T5 Ga (No. GYJ24.1139X)		
	IECEX Certification	Ex ia IIC T4/T5 Ga (No. IECEX NEP 23.0027X)		
	ATEX Certification	II 1 G Ex ia IIC T4/T5 Ga (No. CML 23ATEX2668X)		
	EAC Certification	0 Ex ia IIC T4/T5 Ga (No.) ※Applying		
	HART Communication	HART7		
	CE Marking	EMC directive(2014/30/EU) EU RoHS directive(2011/65/EU)+(EU)2015/863		

Contact Information

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This product is an electrical apparatus manufactured under explosion-proof type certification and an explosion-proof quality management system. In order to ensure safety, the replacement or repair of any parts by the user is strictly prohibited.

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