

Smart Valve Positioner

SS Linear / Rotary



Specifications

Input Signal	4 - 20 mA @ 24 VDC
Voltage Drop	8.5 VDC @ 20 mA (425 Ω)
Min. / Max. Current	3.6 mA / 50 mA
Required Load Voltage (≅ Ω @ 20mA)	Without HART : 8.5V (≅425 Ω) With HART : 9.2V (≅460 Ω)
Air Supply Pressure	1.4 - 7.0 bar (20 - 100 psi) Filtered compressed dry and non-oiled air
Output Pressure	0 - 100% supply air pressure / single or double action
Shut-off Value	Range 0 - 5% of position signal
Air Capacity	80 l/min = 4.8 N m ³ /h = 2.8 scfm (Sup = 1.4 bar)
Air Consumption	1.3 l/min = 0.08 N m ³ /h = 0.05 scfm (Sup = 1.4 ~ 6 bar)
Humidity Limits	< 90% RH, non-condensing
Stroke / Angle	5 ~ 80mm (max. up to 150mm) 0 ~ 90° (max. up to 100°)
Adjustable Speed	1 - 1000 (lowest 1, highest 1000)
LCD Indication	4-digit LCD indicator
Scan Time	2 ms
Valve Action	Position 0 - 100% / direct action (DA) / reverse action (RA)
Characteristic Curve	Linear, E.Q.% (1:25 or 1:50), Quick open Linearity <= 0.3% / sensitivity <= 0.2% / hysteresis <= 0.2%
Operating Temperature	- 30 ~ +70 °C
Protection Class	IP66, flameproof (KC Ex d IIB+H ₂ T6 IP66)
Body Material	Aluminum die-cast
Pneumatic Connections	PT(Rc) 1/4 or NPT 1/4
Electrical Connections	2 x PF(G) 1/2 or NPT 1/2
Weight	2.5 kg

Note : Equal percentage or Quick-open option is available. Please contact for more details

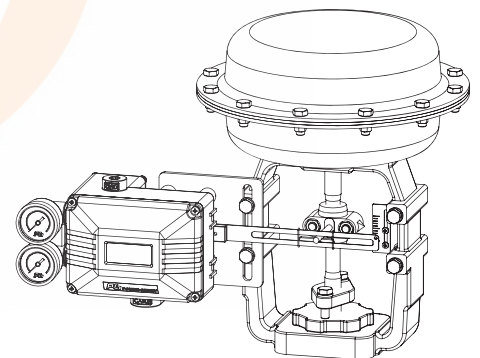
Smartest valve control device meeting a dynamic performance and a precise setting with a piezoelectric technology and an optimized auto-calibration program

Features

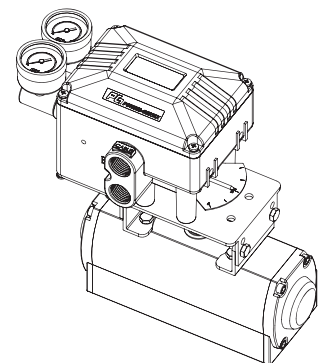
- ▶ Auto-Calibration for optimum conditions
- ▶ Precise control performance and high dynamic response
- ▶ Easy operation with four-key pads and full text graphical LCD
- ▶ Single and double acting
- ▶ Low air consumption due to piezo electric microvalve
- ▶ Pressure regulator built-in to eliminate variations in supply air pressure
- ▶ Problem-free characteristics on a small actuator
- ▶ High resistance against shock and vibration
- ▶ Mounting on linear actuators according to IEC 534

Options

- ▶ Position transmitter (4...20mA output signal)
- ▶ 2 × alarm limit (Min., Max.)
- ▶ Explosion proof type (KC Ex d IIB+H₂ T6 IP66)
- ▶ HART communication (FSK)

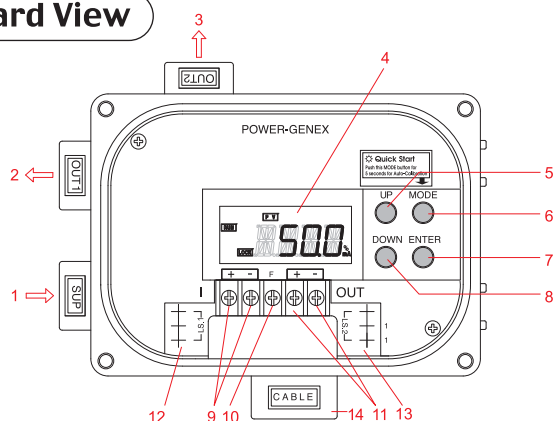


- SSL (Linear Type)



- SSR (Rotary Type)

Board View



- | | |
|-----------------|-----------------------------|
| 1 : Air supply | 9 : Input signal (+, -) |
| 2 : Output 1 | 10 : Frame ground |
| 3 : Output 2 | 11 : Output signal (+, -) |
| 4 : Display LCD | 12 : Alarm limit 1 |
| 5 : Up key | 13 : Alarm limit 2 |
| 6 : Mode key | 14 : Electrical connections |
| 7 : Enter key | |
| 8 : Down key | |

Air Connections

- SSL (Linear Type)

Direct Acting (DA)		Reverse Acting (RA)	
As the input signal increases, Valve stem moves downwards Actuator : DA Switch position : DA	 OUT2 must be plugged	As the input signal increases, Valve stem moves upwards Actuator : RA Switch position : RA	 OUT2 must be plugged
As the input signal increases, Valve stem moves downwards Actuator : DA Switch position : DA	 OUT1 must be plugged	As the input signal increases, Valve stem moves upwards Actuator : RA Switch position : RA	 OUT1 must be plugged
As the input signal increases, Valve stem moves downwards Switch position : DA	 OUT1 must be plugged	As the input signal increases, Valve stem moves upwards Switch position : RA	 OUT1 must be plugged

- SSR (Rotary Type)

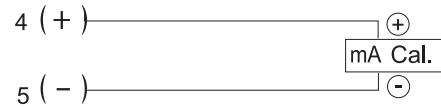
Spring Return	Double Acting	Double Acting
 Actuator : RA Indicator position	 Actuator : RA Indicator position	 Actuator : DA Indicator position
As the input signal increases, Actuator shaft rotates counter-clockwise	As the input signal increases, Actuator shaft rotates counter-clockwise	As the input signal increases, Actuator shaft rotates clockwise
Spring Return	Double Acting	
Reverse Acting Out 1 : piped, Out2 : plugged	Out 1 : piped to Actuator port A, Out2 : piped to Actuator port B	
Direct Acting Out 1 : plugged, Out2 : piped	Out 1 : piped to Actuator port B, Out2 : piped to Actuator port A	

Measuring 4–20mA Output Signal

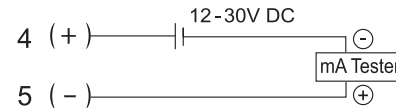
1) Specifications

Output Signal	4 - 20 mA, 2 - wire
Power Supply Rating	15 - 30V DC
Recommended Power Supply	24V DC
Operating Temperature	-20 - +70°C
Input Impedance	0 - 430 Ω
Characteristic	Linear
Linearity	1.0 % F.S.
Hysteresis	0.5 % F.S.
Repeatability	$\pm$ 0.5 % F.S.
Adjustment	Zero and span
Rotary Angle	50...90° (max. 100°)

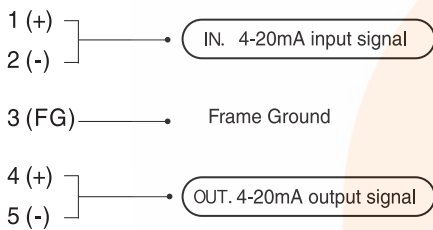
2) With mA Loop Calibrator



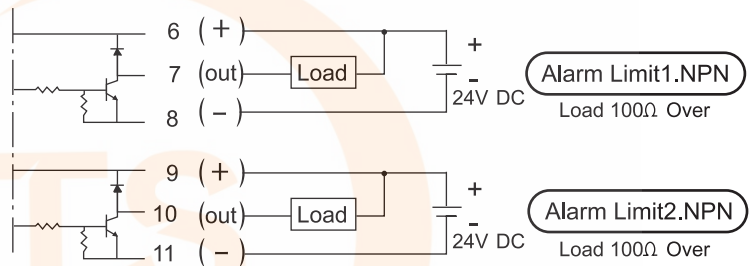
3) With Multi-Meter



Electrical Connections



Setting Alarm Limits



How to Order

SS

Actuator
Operation

Protection
Class

Feedback
Lever

Pressure
Gauge
(SUP. OUT)

Position
Feedback

HART
Communica-
tion

Connection
Threads

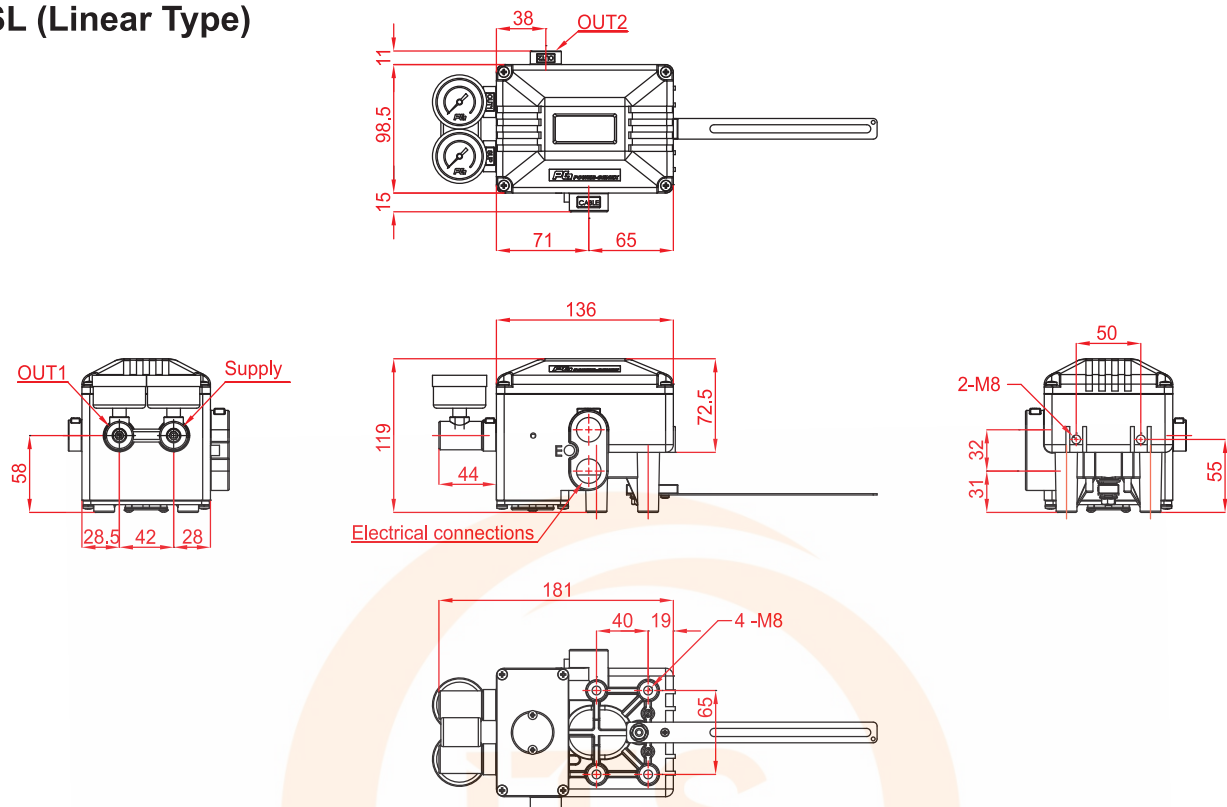
Mounting
Bracket

Description	Code
Actuator Operation :	L : Linear type R : Rotary type
Protection Class :	F : Flameproof (KC Ex d IIB+H ₂ T6 IP66) W : Weatherproof to IP66
Feedback Lever :	A : Stroke (5~40mm) B : Stroke (5~80mm) C : Stroke (up to 150mm) F : Fork lever N : NAMUR shaft(direct mounting)
Pressure Gauge :	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)

Description	Code
Position Feedback :	N : None O : Position transmitter (4~20mA output signal) L : 2 x alarm limit M : O + L
HART Communication :	N : None H : HART Communication
Connection Threads : (pneumatic - electrical)	3 : PT(Rc) 1/4 - PF(G) 1/2 4 : NPT 1/4 - NPT 1/2 5 : PT(Rc) 1/4 - M20 x 1.5
Mounting Bracket :	N : None L : DIN / IEC 534 R : Multi-size bracket for DIN VDI/VDE 3845 (130x30x50 bracket on request)

Dimensions

- SSL (Linear Type)



- SSR (Rotary Type)

