

PNEUMATIC POSITIONERS PP981

DESCRIPTION

The ADCATrol PP981 is a pneumatic positioner used for direct operation of pneumatic linear or rotary actuators by means of pneumatic controllers with a 0,2 to 1 bar proportional control signal. The positioner compares the output signal from a controller with the position feedback, and varies a pneumatic output signal to the actuator accordingly. The actuator position is therefore guaranteed for any controller output signal and the effects of varying differential pressure.

The positioner features a compact design and a modular construction which allows easy attachment of options such as limit switches, analog feedback modules, manifolds, volume boosters, amongst others.

MAIN FEATURES

- Compact and flexible design.
- Mounting onto any linear or rotary actuator.
- Single or double acting.
- Supply pressure up to 6 bar.
- Adjustable amplification and damping.
- Independent adjustment of stroke range and zero position.
- Resistant to vibration effect in all directions.
- ATEX approvals.

OPTIONS AND ACCESSORIES

- Module for analog position feedback.
- Digital position feedback with inductive switches (two or three-wire system).
- Digital position feedback with microswitches.
- Attachment kit for linear actuators acc. to IEC 534/NAMUR.
- Attachment kit with rotary adaptor for rotary actuators acc. to VID/VDE 3845.
- Connection manifold with gauges.
- Volume boosters.



TECHNICAL DATA

GENERAL	
Material	Housing: Aluminium finished with DD-varnish grey blue; Cover: impact resistant polyester grey blue; Moving parts of feedback system: AISI 303 / 1.4305 or AISI 316Ti / 1.4571 Mounting bracket: AISI 304 / 1.4301
IP rating	Protection class IP 54 (IP 65 on request)
Pneumatic connections	Female threaded ISO 228 G 1/8"
Weight	Single acting without gauges: approx. 0,7 kg Single acting with gauges: approx. 0,8 kg Double acting: approx. 0,9 kg Attachment kit: For linear actuators: approx. 0,3 kg For rotary actuators: approx. 0,5 kg

AMBIENT CONDITIONS	
Ambient temperature	-40 °C to 80 °C
Relative humidity	Up to 100%
Operating conditions	According to IEC 654-1; The device can be operated at a class D2 location
Transport and storage temperature	-50 °C to 80 °C

RESPONSE CHARACTERISTIC *	
Amplification	Adjustable
Sensitivity	< 0,1% F.S.
Non-linearity (terminal based adjustment)	< 1,0 % F.S.
Hysteresis	< 0,3 % F.S.
Supply air dependency	< 0,2 % / 0,1 bar
Temperature effect	< 0,3 % / 10 K

* Data based on the following parameters: stroke 30 mm, feedback lever 117,5 mm, max. amplification, air supply pressure 3 bar.

GAUGES	
Indication range	
Input	0 to 1,6 bar
Output	0 to 10 bar
Error limit	Class 1.6

INPUT SIGNAL	
Signal range	0,2 to 1 bar or split range down to Δw 0,2 bar
Stroke range	8 to 100 mm
Angular range	Linear: 30 ° to 120 ° Equal percentage: 90 °; from 70 ° linear

OUTPUT SIGNAL	
Output to actuator	0 to 100 % supply air pressure

AIR SUPPLY	
Air supply pressure	1,4 to 6 bar
Supply air	Free of oil, dust or water, according to IEC 654-2

AIR CONSUMPTION	
Single acting	With 1,4 bar air supply: 200 NI/h
	With 3 bar air supply: 400 NI/h
	With 6 bar air supply: 600 NI/h
Double acting	With 1,4 bar air supply: 350 NI/h
	With 3 bar air supply: 550 NI/h
	With 6 bar air supply: 750 NI/h

AIR OUTPUT	
Load effect *	
-3 % for delivery flow 2350 NI/h	
+3 % for exhausted flow 1900 NI/h	

* Measured with air supply 1,4 bar and 50% of the signal range.

CAPACITY AT MAXIMUM DEVIATION (NI/h)				
AIR SUPPLY PRESSURE	1,4 bar	2 bar	4 bar	6 bar
Without booster	2700	3500	5500	7500
With booster LEXG-FN/GN	18000	24000	40000	55000
With booster LEXG-HN	38000	48000	80000	110000