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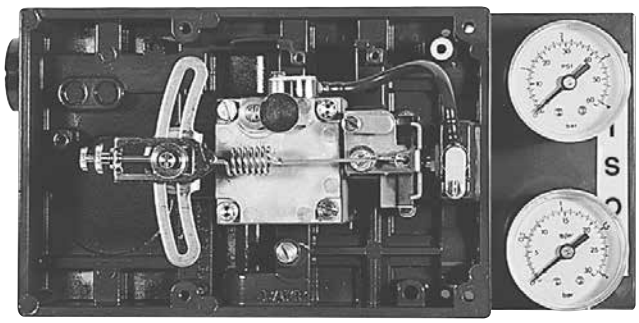
CE Ex II 2 G D

Series PP 5
ATEX Pneumatic Positioner

Description

The PP 5 positioner for linear movements operates on the force balance principle and consequently with the lowest possible hysteresis and friction.
Fitted on pneumatic diaphragm valves it accurately positions the valve stem exactly in proportion and in a determined ratio to the change of signal from a control instrument.
Simple design construction and high reliability add up to extreme accuracy and very easy maintenance.
The instrument, housed in a weather proof die-cast aluminium case designed also for outdoor installations, is suitable for any valve strokes between 10 and 100 mm.
The instrument can be provided with an indicating set with two pressure gauges to respectively indicate input control signal and output loading pressure to the valve actuator.
The air flow of the output signal can be adjusted by means of an "antidamping" screw to match the speed of actuation to both the operating system.
Type PP 5 positioners can be supplied for standard 3 to 15 psi (0.2 to 1 bar) input control signals and for ranges of output loading signal adjustable up to 6 bar maximum.
A very easy adjustment enables the positioners to operate two or more pneumatic valves in sequence so that the max. travel of each valve is obtained by using a split-range input control signal system, namely: 3 to 9 and 9 to 15 psi in the case of two valves, 3 to 7, 7 to 11 and 11 to 15 psi in the case of three valves, etc.
PP 5 positioners can be adjusted to reverse the control signal; in this case a 3 to 15 psi inlet signal corresponds to a 15 to 3 or 30 to 6 psi output signal.



Field of application

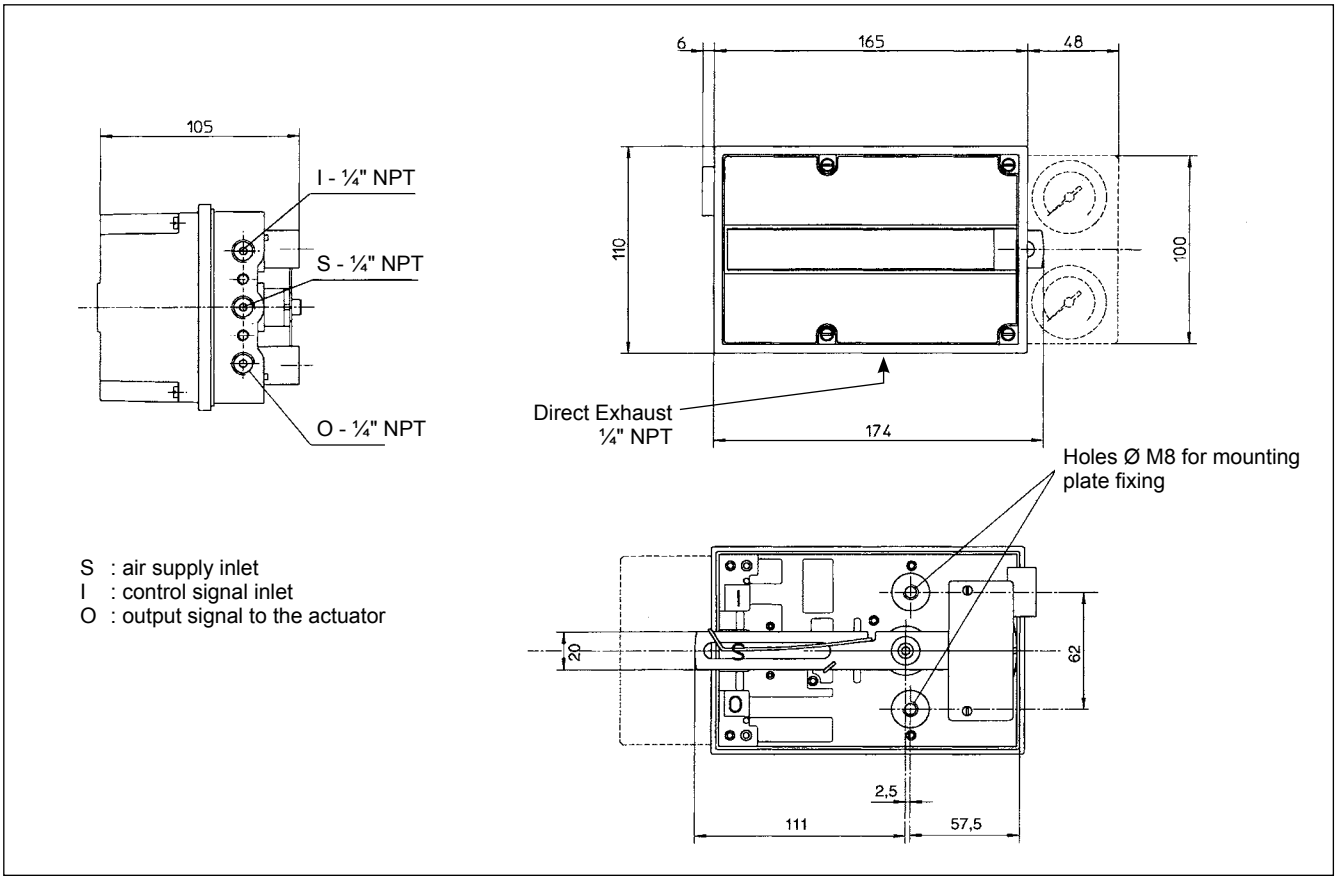
The fitting of a positioner on a pneumatic control valve is advisable or sometimes necessary due to particular requirements of the control loop or to withstand negative working conditions in the valve.

- Large unbalanced forced due to the pressure exerted by the fluid on the plug of single seated valves.
- Unbalanced static and dynamic forces exerted by the differential pressure and by the fluid velocity on the plug of large size double-seated valves.
- Friction on the stuffing box especially at high temperature and operating pressure which require tight valve packing.
- Large size, three-way valves or when the fluids have different or very variable pressures.
- When it is necessary to eliminate any time delay when the valve is installed at some distance from the controller or when residual hysteresis is to be eliminated from the valve especially in the case of controllers with integral action.
- Viscous liquids or liquids with suspended solid particles or else volatile liquids (flashing).
- Split-range application for the sequential control of two or more valves operated by a single instrument.
- Adjustable amplification of the controller standard output signal from 0.2 to 1 bar (3 to 5 psi) to 0.4 to 2 bar (6 to 30 psi) or up to the maximum pressure of 6 bar.
- Reversing of the control signal and of the valve action without modification of the valve specification compared to the failure condition (normally open or normally closed valve).
- Valves with Saunders type body or butterfly valves and flexible hose valves when used as throttling valves in a control loop.

Caratteristiche tecniche

Destinazione d'uso	**The positioner, in accordance with 2014/34/EU Directive (ATEX), is designed for use in potentially explosive atmospheres II 2 GD**
Type of instrument	pneumatic positioner for linear movements
Air supply	• compressed air at 1.4 to 6 bar (20 to 90 psi) - Standard Version • natural gas at 1.4 to 6 bar (20 to 90 psi) - Special Version
Inlet control signal	0,2 to 1 bar or 3 to 15 psi
Outlet loading signal	0.2 to 1 bar (3 to 15 psi), or 0.4 to 2 bar (6 to 30 psi) or other ranges adjustables up to 100% of the supply pressure
Air consumption	0.2 Nm^3/h (supply at 1.4 bar) - 0.7 Nm^3/h (supply at 6 bar)
Maximum air flow	3.5 Nm^3/h (supply at 1.4 bar) - 9 Nm^3/h (supply at 6 bar)
Stroke range	10 to 100 mm
Sensitivity	≤ 0.2%
Hysterisis	≤ 0.4%
Linearity	≤ 1%
Supply air dependency	≤ 0.3% / 0.1 bar
Control action	• direct action, loading signal increase on increasing of controller signal • reverse action, loading signal decreases on increasing of controller signal action can be easily selected in the field
Air connections	¼" NPT female
Environment temperature limits	maximum +80°C minimum -20°C
Case	die-cast aluminium anti corrosive coated, dust and spray-proof with standard protection degree IP 65
Weight	2.2 kg without pressure gauges 2.7 kg with pressure gauges

Dimensions (mm)



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