

P3 Modular Linear Positioner



Single or double-acting

Stroke 6-60 mm,
optionally to 3 mm

Modular – easily
converted to
pneumatic,
electropneumatic, IS
or EX positioner

Rugged and simple

Direct or reverse acting

Mounting
IEC 534-6



General

The PMV P3 is a modular positioner designed specifically for linear valves and actuators with strokes of 6-60 mm (0.25" to 2.3") with the option to control strokes as short as 3 mm (0.12").

The P3 is easily converted from a pneumatic to an electropneumatic and to single or double acting.

The electropneumatic unit has approvals for use in hazardous areas. This flexibility provides users in all industry the option of selecting the product to specifically fit their application.

The simple and rugged design makes the P3 another reliable product from PMV.

With the P3, PMV continues on a path of compact, durable products for maximum performance in all types of environments – qualities that have made PMV one of the world's leading suppliers of positioners today.



P3 & EP3
Standard or
Intrinsically
safe Version



EP3 Explosion
Proof Version

Direct or reverse acting

By turning the flapper nozzle's mounting console, the action is easily changed.

Span/Zero adjustment

The easy accessible, friction locked screws make the span and Zero adjustment very simple.

Sealed electrical connection compartment

Designed to help prevent water penetration to sensitive parts in the event of conduit leakage.

O-ring sealed

IP66/NEMA 4X

Corrosion resistant casing

Designed for harsh environments

Pneumatic block

Single or double-acting with built-in gain and air delivery adjustment.

P3 can be easily converted from single to double acting.

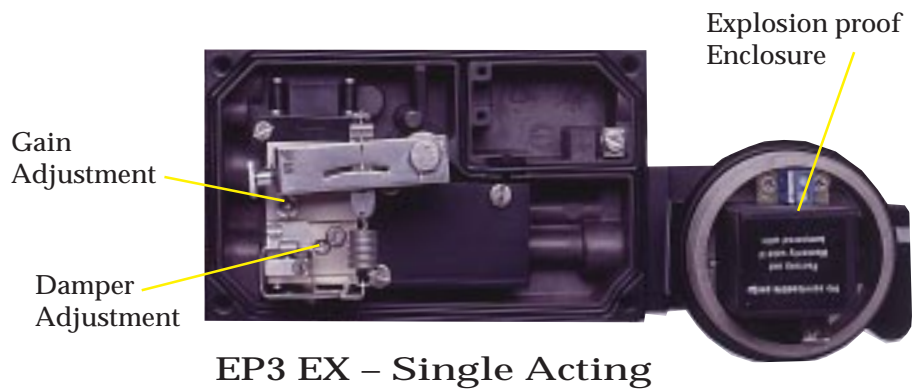
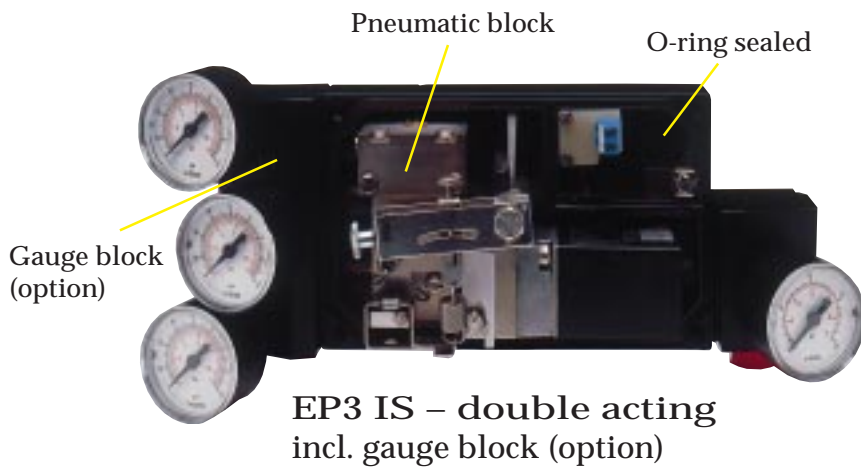
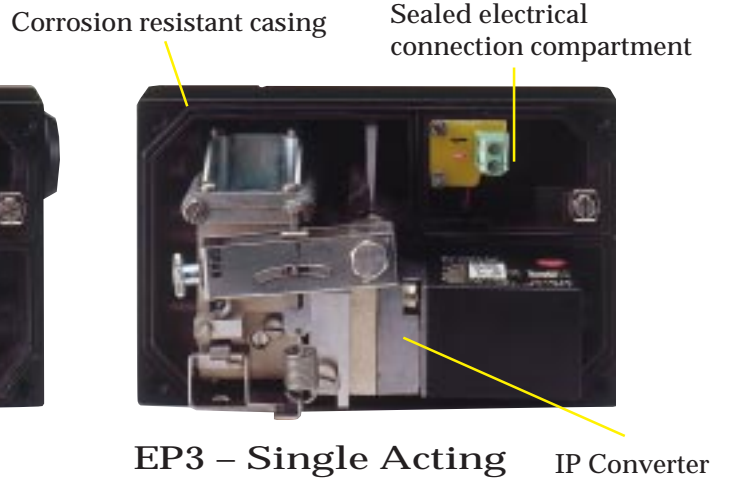
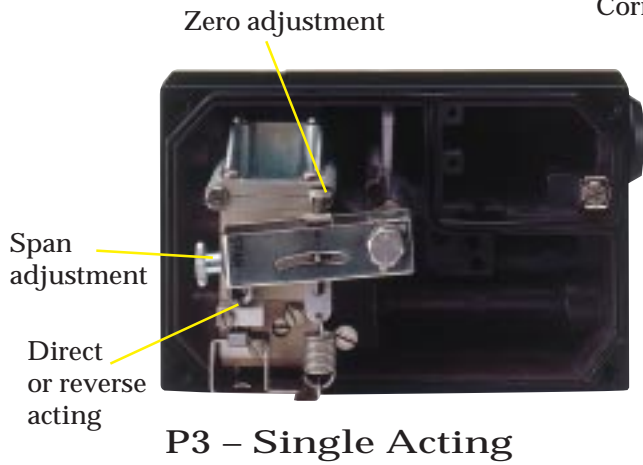
Gauge block (optional)

Simple mounting to positioner housing.

I/P converter

In standard, intrinsically safe or explosion proof design. Approved by Cenelec, CSA and FM.

P3 • EP3 • EP3-IS • EP3-EX Internal



Technical Specifications

GENERAL

Stroke	6-60 mm (0.25 to 2.3") Optional 3 mm (0.12")
Air delivery supply	125 nl/min (4.3 SCFM) at 6 bar (87 psi)
Air delivery exhaust	125 nl/min (4.3 SCFM) at 6 bar (87 psi)
Air supply pressure	1,4 to 6 bar (21 to 87 psi)
Gain factor	Adjustable 5 to 30 %/‰ ISAS75.13-1996
Repeatability	<0.3%
Position sensitivity	None
Temperature range	-40 to +85 °C (-40 to 185 °F)
Temperature sensitivity	<0.4% per 10 °C (18 deg °F)
Air connections	1/4" G or NPT
Electical connection	M20, 1/4" NPT
Ingress protection	IP66/NEMA 4X
Materials	Die cast aluminium, A2/A4 fasteners
Surface treatment	Powder epoxy
Weight	1.9kg/4.2lbs (EX version 2.5 kg/5.5 lbs)

P3SA

Input signal	20-100 kPa (3-15 psi)
Linearity	<±1%
Hysteresis+deadband	<0.5%
Deadband	<0.15%
Air consumption	2-8 nl/min (0.07-0.27 SCFM) gain dependent
Supply pressure effect	<0.2%

P3DA

Input signal	20-100 kPa (3-15 psi)
Linearity	<±1%
Hysteresis+deadband	<0.5%
Deadband	<0.15%
Air consumption	3-12 nl/min (0.1-0.41 SCFM) gain dependent
Supply pressure effect	<0.2%

EP3SA, EP3SAIS

Input signal	4-20mA
Linearity	<±1.5%
Hysteresis+deadband	<1%
Deadband	<0.2%
Air consumption	4-10 nl/min (0.14-0.34 SCFM) gain dependent
Supply pressure effect	<0.3%
Terminals	Screw terminals 2,5 mm ² , AWG14
Input impedance	260 ohm at 20 °C (71 °F)
Capacitance	Negligible
RFI influence	Not measurable

EP3DA, EP3DAIS

Input signal	4-20mA
Linearity	<±1.5%
Hysteresis+deadband	<1%
Deadband	<0.2%
Air consumption	6-15 nl/min (0.2-0.5 SCFM) gain dependent
Supply pressure effect	<0.3%
Input impedance	260 ohm at 20 °C (71 °F)
Capacitance	Negligible
RFI influence	Not measurable

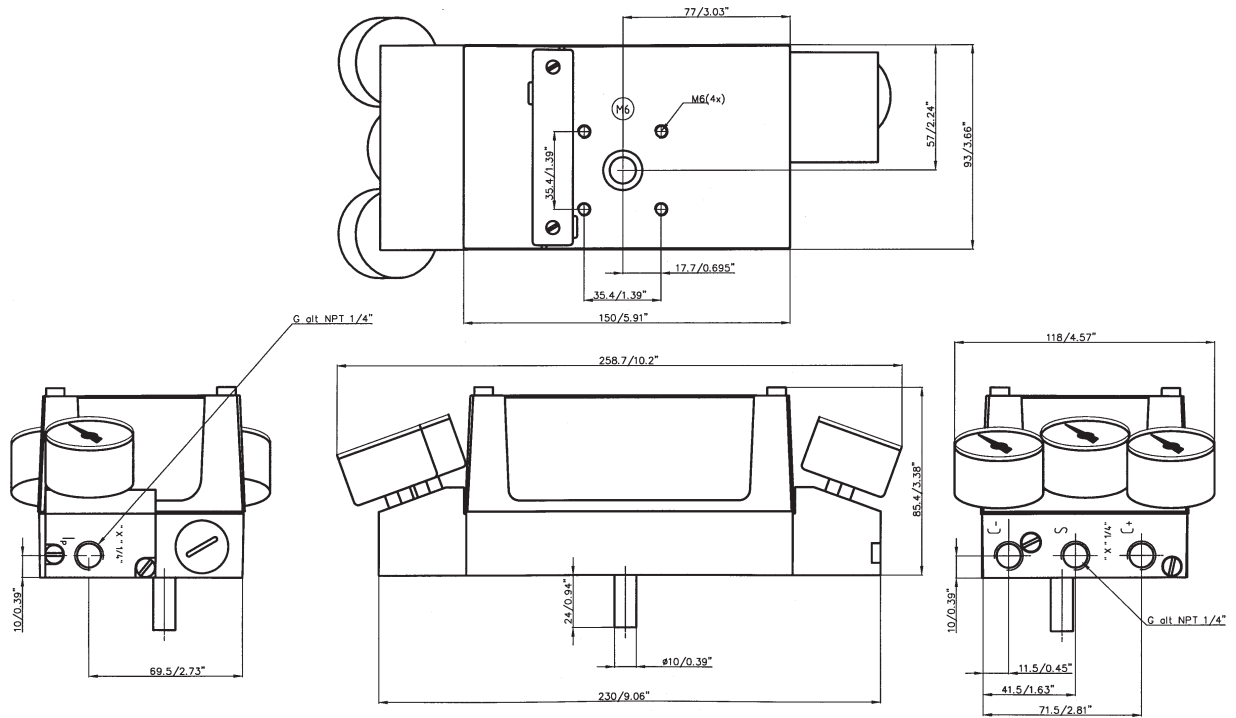
EP3SAEX

Input signal	4-20mA
Linearity	<±1.5%
Hysteresis+deadband	<1%
Deadband	<0.2%
Air consumption	4-10 nl/min (0.14-0.34 SCFM) gain dependent
Supply pressure effect	<0.3%
Input impedance	260 ohm at 20 °C (71 °F)
Capacitance	Negligible
RFI influence	Not measurable

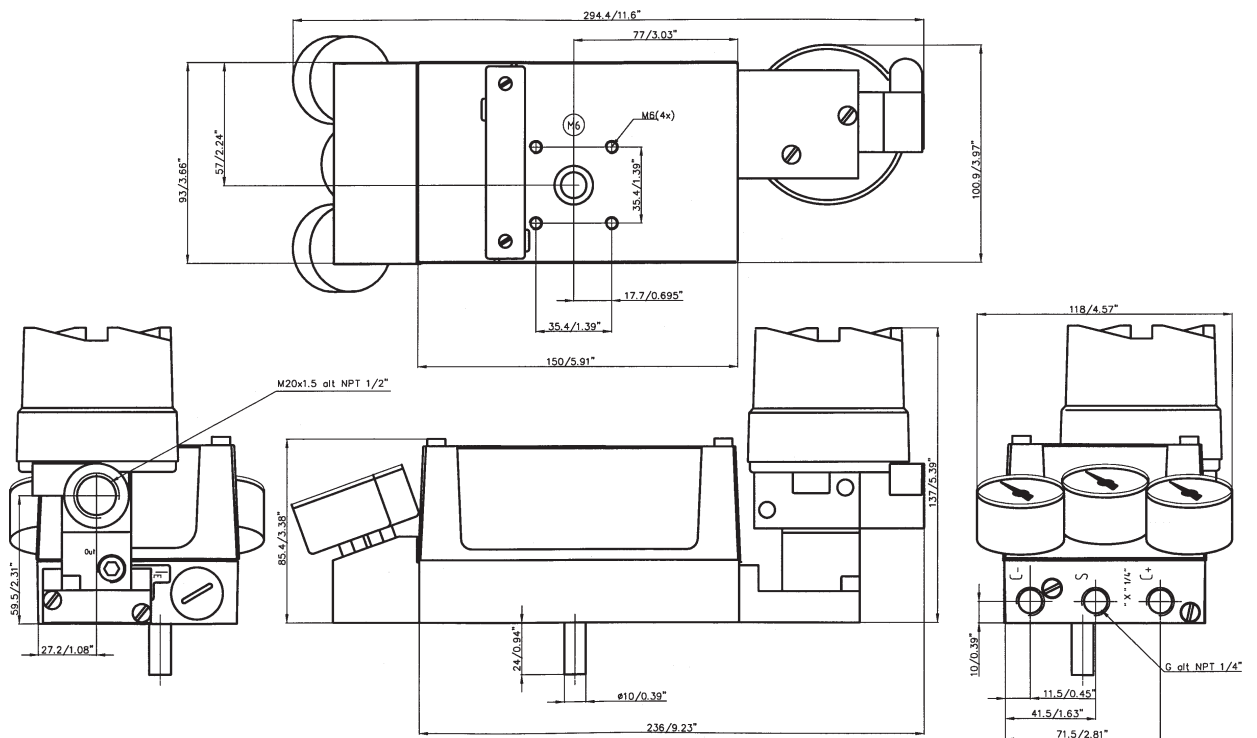
EP3DAEX

Input signal	4-20mA
Linearity	<±1.5%
Hysteresis+deadband	<1%
Deadband	<0.2%
Air consumption	6-15 nl/min (0.2-0.5 SCFM) gain dependent
Supply pressure effect	<0.3%
Input impedance	260 ohm at 20 °C (71 °F)
Capacitance	Negligible
RFI influence	Not measurable

Dimensional Drawing



P3/EP3 (Gauge block optional)



EP3-EX (Gauge block optional)

Approvals

Intrinsically safe

Cenelec EEx ia IIC T4-T6

CSA, FM Div.1, Class I, II, III Group ABCDEFG

Explosion proof

Cenelec EEx d IIC T4-T6

CSA, FM Div.1, Class I, II, III Group BCDEFG



How to order

1. Model	PP3XX	P3, Linear positioner, pneumatic
	EP3XX	EP3, Linear positioner, electropneumatic
	EP3IS	EP3, Linear positioner, intrinsically safe Cenelec, CSA, FM
	EP3EU	EP3, Linear positioner, explosion proof, CENELEC
	EP3US	EP3, Linear positioner, explosion proof CSA, FM
2. Function	S	Single acting
	D	Double acting
3. Connections	G	1/4" G
	N	1/4" NPT
4. Surface treatment	U	Powder epoxy
5. Spindle	05	Male Ø 10 mm
6. Cover	PV	PMV Cover
7. Input signal	3	3-15 psi,
	4	4-20 mA
8. Seals	Z	NBR (Nitrile) -40 to 85 °C (-40 to 185 °F)
9. Options	X	No gauge block
	M	Gauge block 1/8" G
	N	Gauge block 1/8" N

Example: EP3XX-SGU-05PV-4ZX
1 2 3 4 5 6 7 8 9



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