

LOW-COST, ELECTRONICALLY CONTROLLED PROPORTIONAL VALVES USING SOLENOID TECHNOLOGY

PV100 Series



- ✓ Low Power Consumption
- ✓ 100 ms Response Time at Maximum Pressure
- ✓ Stainless Steel Wetted Parts with FKM Seals
- ✓ 12 to 24 Vdc Power
- ✓ For Clean, Dry, Non-Corrosive Gases Only

The OMEGA® PV100 Series comprises economical proportional valves for use with gases. They combine a solenoid valve with an electronics package that digitally modulates the control signal to provide analog proportional control without the expense or complexity of stepper motors, servo valves, or other proportioning devices. The PV100 Series can be used in open- or closed-loop systems to control flow, pressure, temperature, speed, or position parameters of gases.



PV101-MA with CNI16D53 controller (sold separately), shown actual size. Visit omega.com

Repeatability: $\pm 5\%$ when in operating linear control range

Electrical Connection: 0.4 m (18") color-coded lead wires

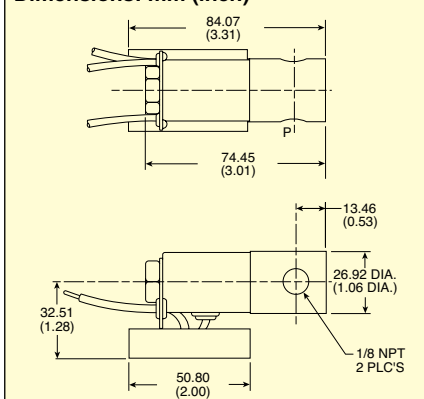
Wiring:

Red: DC power supply
Gray: Control signal (+)
Black: Common (to power and control)

Pressure Connections: $\frac{1}{8}$ FNPT

Enclosure: General purpose, NEMA 11

Dimensions: mm (inch)



SPECIFICATIONS

Valve Type: 2-way normally closed

Wetted Parts: Stainless steel with FKM seals

Power: 12 to 24 Vdc

Power Consumption: 7 W maximum

Control Signals: 0 to 5 Vdc, 0 to 10 Vdc or 4 to 20 mA DC (specify when ordering)

Ambient Temperature Range:

-10 to 50°C (14 to 122°F) media temperature

Range: -18 to 82°C (0 to 180°F)

Linear Control Range: 15 to 85% of full flow

Response Time for Complete Cycle (Off—Fully Open—Off): 40 ms

@ 0 pressure; 100 ms @ max pressure

To Order

MODEL NO.	ORIFICE	C_v	MAXIMUM PRESS.	FLOW RANGES, SCCM	
				AT MAXIMUM PRESS.	AT 0.7 bar (10 psi)
PV101-(*)	$\frac{1}{32}$ "	0.02	13.8 bar (200 psi)	0 to 50,000	0 to 8000
PV102-(*)	$\frac{3}{64}$ "	0.045	7 bar (100 psi)	0 to 65,000	0 to 17,000
PV103-(*)	$\frac{1}{16}$ "	0.08	4 bar (60 psi)	0 to 75,000	0 to 30,000
PV104-(*)	$\frac{5}{64}$ "	0.12	2.7 bar (40 psi)	0 to 80,000	0 to 45,000

(*) Specify input control signal: **"-MA"** for 4 to 20 mA DC, **"-5V"** for 0 to 5 Vdc and **"-10V"** for 0 to 10 Vdc.

Comes complete with operator's manual.

Ordering Example: PV103-MA, proportional valve with $\frac{1}{16}$ " orifice, 4 bar (60 psi) maximum pressure and 4 to 20 mA DC input control signal.