

# 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](http://omega.com)

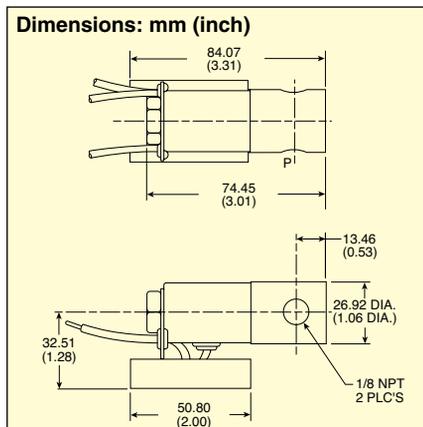
**Repeatability:** ±5% when in operating linear control range

**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:** 1/8 FNPT

**Enclosure:** General purpose, NEMA 11



## 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 <sub>v</sub>	MAXIMUM PRESS.	FLOW RANGES, SCCM	
				AT MAXIMUM PRESS.	AT 0.7 bar (10 psi)
PV101-(*)	1/32"	0.02	13.8 bar (200 psi)	0 to 50,000	0 to 8000
PV102-(*)	3/64"	0.045	7 bar (100 psi)	0 to 65,000	0 to 17,000
PV103-(*)	1/16"	0.08	4 bar (60 psi)	0 to 75,000	0 to 30,000
PV104-(*)	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 1/16" orifice, 4 bar (60 psi) maximum pressure and 4 to 20 mA DC input control signal.