

# LOW-COST, ELECTRONICALLY CONTROLLED PROPORTIONAL VALVES USING SOLENOID TECHNOLOGY

## PV100 Series

All Models  
**\$445**



- ✓ 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.

### 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



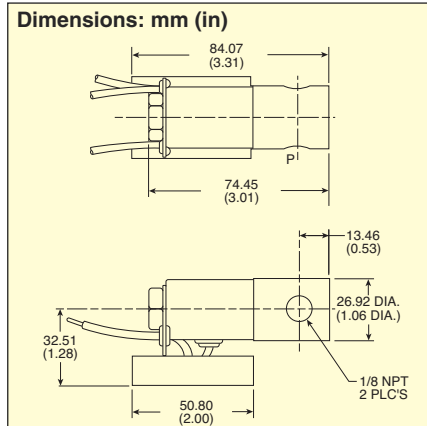
PV101-MA, \$445, with CNI16D53 controller, \$245 (sold separately), shown actual size. See page D-7.

**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



**MOST POPULAR MODELS HIGHLIGHTED!**

### To Order (Specify Model Number)

MODEL NO.	PRICE	ORIFICE	C <sub>v</sub>	MAX PRESS.	FLOW RANGES, SCCM	
					AT MAX PRESS.	AT 0.7 bar (10 psi)
PV101-*	\$445	1/32"	0.02	13.8 bar (200 psi)	0 to 50,000	0 to 8000
PV102-*	445	3/64"	0.045	7 bar (100 psi)	0 to 65,000	0 to 17,000
PV103-*	445	1/16"	0.08	4 bar (60 psi)	0 to 75,000	0 to 30,000
PV104-*	445	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) max pressure and 4 to 20 mA DC input control signal, \$445.



#### UNITED STATES

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)  
Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)  
Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)  
Manchester, England  
0800-488-488

#### FRANCE

[www.omega.fr](http://www.omega.fr)  
Guyancourt, France  
088-466-342

#### CZECH REPUBLIC

[www.omegaeng.cz](http://www.omegaeng.cz)  
Karviná, Czech Republic  
596-311-899

#### BENELUX

[www.omega.nl](http://www.omega.nl)  
Amstelveen, NL  
0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters