

# VSO-EP Miniature Pressure Controller

## Pressure Controllers



The VSO-EP™ Electronic Pressure Control Unit converts a variable electrical control signal into a variable pneumatic output. Used to control critical pressure, the VSO-EP replaces manual regulators, needle valves, flow controllers, and bleed orifices, providing integral closed loop proportional control. This product uses Parker Hannifin's patented VSO® proportional valve and offers significant improvements over dual valve controllers. VSO-EP is used for carrier gas flow control, microfluidic flow control, vacuum pump control, and for aspirate/dispense applications.

### Features

- Offers silent operation
- Ensures high accuracy and unparalleled resolution
- Tested for long life
- Offers internal closed loop control and external pressure sensor capability\*
- OEM application-specific configurations available
- Analog control

\*Accessories Required

### Physical Properties

<b>Valve Technology:</b>
Thermally compensated proportional valve
<b>Media:</b>
Non-corrosive gases
<b>Operating Environment:</b>
0 to 55°C (32 to 131°F)
<b>Storage Temperature:</b>
-40 to 65°C (-40 to 131°F)
<b>Length:</b>
2.25 in (57.15 mm)
<b>Width:</b>
2.25 in (57.15 mm)
<b>Height:</b>
1.25 in (31.75 mm)
<b>Porting:</b>
10-32 female ports

### Electrical

<b>Power:</b>
24 VDC + 10% 12, 15 available
<b>Input Control Signal:</b>
0-5 VDC standard 4-20 mA available
<b>Monitor Output Voltage:</b>
0-5 volts
<b>Current Requirement:</b>
<400 mA
<b>Electrical Connector:</b>
RJ-45

\*Contact factory for details.

### Performance Characteristics

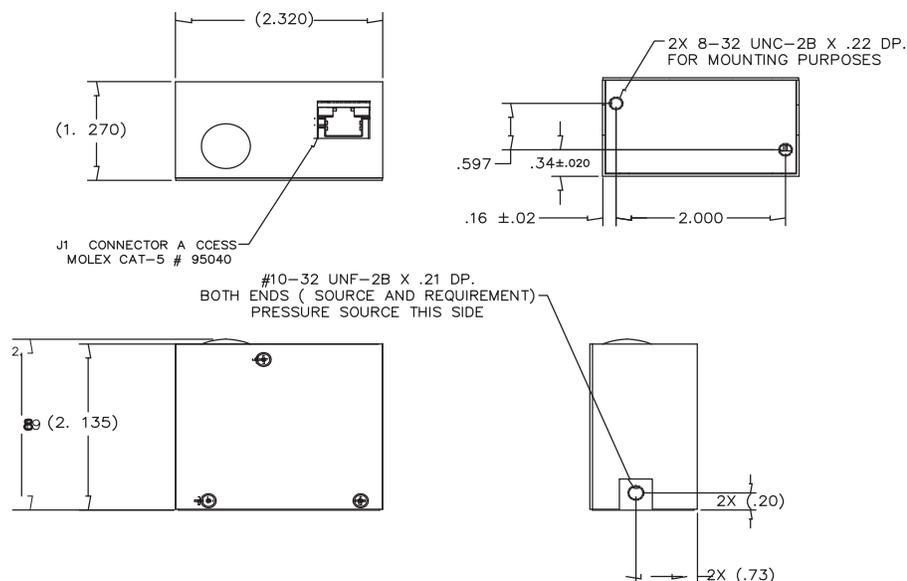
<b>Pressure Ranges:</b>
0-7 psig 0-15 psig 0-30 psig 0-50 psig 0-100 psig
<b>Pressure Accuracy:</b>
± 0.2% FS typical* ± 1.5% FS max
<b>Response:</b>
<15 msec <i>(Response time to target pressure is output volume dependent)</i>
<b>Linearity:</b>
≤ +1.5% FS

VSO is a registered trademark of Parker Hannifin Corporation.



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### Dimensions



#### CAT 5e Plug-in (RJ-45) Connector (included)

Signal	RJ-45 Pin # Color
Main Power, 24 VDC	1 White w/ Orange
Input Control Signal, 0-5 VDC	2 Solid Orange
Monitor Signal Output, 0-5 VDC	3 White w/ Green
System Ground	4 Solid Blue

### Ordering Information

Part Number	part number				
	990-005001-015	990-005001-050	990-005001-100	990-005003-015	990-005010-100
Family	VSO-EP	VSO-EP	VSO-EP	VSO-EP	VSO-EP
Configuration <sup>1</sup>	Standard	Standard	Standard	Standard	Alternate
Effective Orifice	0.01	0.01	0.01	0.03	0.003
Power	24 VDC				
Control Voltage <sup>2</sup>	0-5 VDC				
Pressure Range	0-15 psig	0-50 psig	0-100 psig	0-15 psig	0-100 psig
Buy Online	Y	Y	Y	Y	Y

Part Number	part number					
	990-005003-050	990-005003-100	990-005011-015	990-005011-050	990-005011-100	990-005013-030
Family	VSO-EP	VSO-EP	VSO-EP	VSO-EP	VSO-EP	VSO-EP
Configuration <sup>1</sup>	Standard	Standard	Alternate	Alternate	Alternate	Alternate
Effective Orifice	0.03	0.03	0.01	0.01	0.01	0.03
Power	24 VDC					
Control Voltage <sup>2</sup>	0-5 VDC					
Pressure Range	0-50 psig	0-100 psig	0-15 psig	0-50 psig	0-100 psig	0-30 psig
Buy Online	Y	Y	Y	Y	Y	Y

<sup>1</sup> Standard Configurations have a slight constant bleed to atmosphere to accurately control pressure and are typically used to pressurize closed volumes of inert gasses. Alternate Configuration are typically selected for gas flow applications and do not have an internal bleed.

<sup>2</sup> Control starts at approximately 10% of full scale control voltage and pressure rating allowing for positive shutoff. Pressure control may not be possible below 10% of full scale rating.



NOTE: Please consult Parker Precision Fluidics for other considerations. For more detailed information, visit us on the Web, or call and refer to Performance Spec. #790-002202-001 and Drawing #890-003146-001.

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For more information call 1.800.525.2857 or email [ppfinfo@parker.com](mailto:ppfinfo@parker.com)  
Visit [www.parker.com/precisionfluidics](http://www.parker.com/precisionfluidics)

