

Technical Data for Alicat **PCDS** and **PCDRS** Dual Valve Pressure Controllers



Compatible with some aggressive gases, Alicat **PCDS** and **PCDRS** Dual Valve Pressure Controllers accurately and efficiently control pressure within a closed system with a minimum loss of expensive gases through the exhaust process.

Tel: 888-290-6060
www.alicat.com/pressure

PCDRS-Series pressure controllers are best for flows greater than 20 lpm.

Standard Specifications (Contact Alicat for available options.)

Performance	PCDS Controllers	PCDRS Controllers
Full scale pressure Standard Accuracy	± 0.25%	
Full scale pressure High Accuracy Option	± 0.125%	
Repeatability	± 0.08% Full Scale	
Zero Shift and Span Shift	0.02% Full Scale / °Celsius	
Operating Range / Turndown Ratio	0.5% to 100% Full Scale / 200:1 Turndown	
Excess Pressure	102.4% FS Controllable	
Burst Pressure	3 X Full Scale	
Typical Response Time ¹	100 ms (Adjustable)	
Warm-up Time	< 1 Second	

1. Volumes, feed pressures, exhaust pressures and line sizing will determine the limits of response times.

Operating Conditions	PCDS Controllers	PCDRS Controllers
Gas Compatibility	Compatible with all non-corrosive gases and select aggressive gases ¹	
Operating Temperature	-10 to +60 °Celsius	
Common Mode Pressure (Differential Pressure Units Only)	150 psig	
Mounting Attitude Sensitivity	None	Mount with valve cylinders vertical & upright
Valve Type	Normally Closed	
Ingress Protection	IP40	
Wetted Materials	316LSS, 303SS, 430FRSS, FFKM (Kalrez) standard; Viton, EPDM, Buna, Neoprene as needed for some gases. If your application demands a different material, please contact Alicat.	

1. In addition to all non-corrosive gases, PCD & PCRD controllers are configured to operate with the following aggressive gases: Ammonia, Hydrogen Sulfide, Nitric Oxide, Nitrogen Dioxide, Nitrogen Trifluoride, Propylene
 The following gases are available upon request: Refrigerant gases to 100% (Refrigerant gases may require custom seals, consult Alicat.)
 Other gases to 1000 ppm in an inert carrier. If your application requires another gas or gas mixture, please contact Alicat.

Communication / Power	PCDS Controllers	PCDRS Controllers
Monochrome LCD or Color TFT Display with integrated touchpad	Displays Pressure	
Digital Input / Output Signal ¹ Options	RS-232 Serial / RS-485 Serial / Modbus / PROFIBUS ³	
Analog Input / Output Signal ² Options	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA	
Optional Secondary Analog Input/Output Signal ²	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA	
Electrical Connection Options	8 Pin Mini-DIN / 9-pin D-sub (DB9) / 15-pin D-sub (DB15) / 6 pin locking	
Supply Voltage	12-30 Vdc (15-30 Vdc for 4-20 mA outputs)	24-30 Vdc
Supply Current	0.250 Amp	0.750 Amp

1. The **Digital Output Signal** communicates Pressure
 2. The **Analog Output Signal** and **Optional Secondary Analog Output Signal** communicate Pressure
 3. If selecting **PROFIBUS**, no analog signal is available. PROFIBUS units do not have the display. See PROFIBUS specifications for PROFIBUS supply voltages and currents. (www.alicat.com/profibus)

Mechanical Specifications

Dual Valve Controllers	Mechanical Dimensions	Process Connections ¹
PCDS All Standard Ranges	4.1"H x 4.8"W x 1.1"D	1/8" NPT Female
PCDRS All Standard Ranges	5.5"H x 10.6"W x 2.3"D	3/4" NPT Female

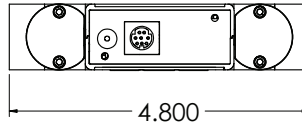
1. Compatible with Swagelok® tube, Parker®, face seal, push connect and compression adapter fittings. VCR and SAE connections upon request.

Standard Available Ranges

PCDS and PCDRS Pressure Controllers		
-15 psig to 0 psig		
1 psid	1 psig	
5 psid	5 psig	
15 psid	15 psig	15 psia
30 psid	30 psig	30 psia
100 psid	100 psig	100 psia
	300 psig	300 psia
	500 psig	500 psia
Other ranges available. Please contact Alicat		

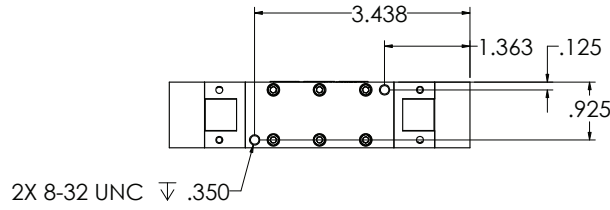
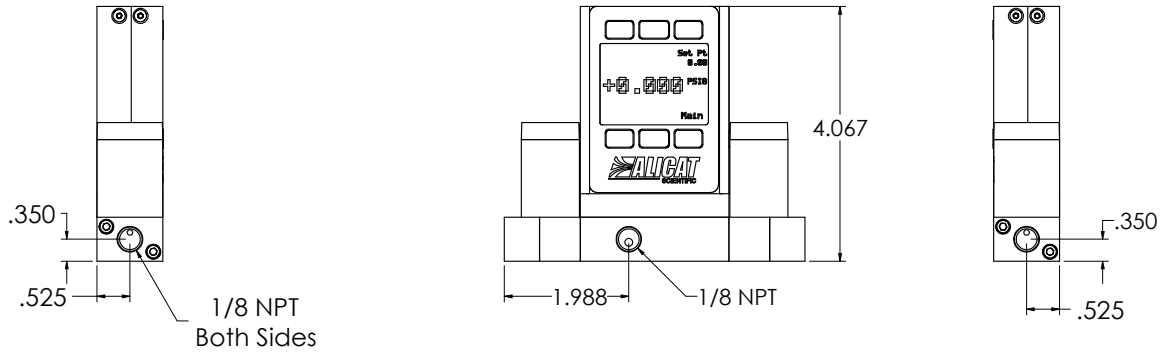
Select One Unit of Measure when Ordering		
PSIA	inHG	Atm
PSIG	inH ₂ O	Torr
mmHG	mBar	kPa

PCDS-Series
Most standard ranges

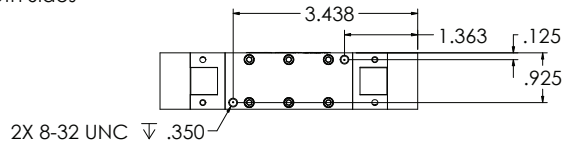
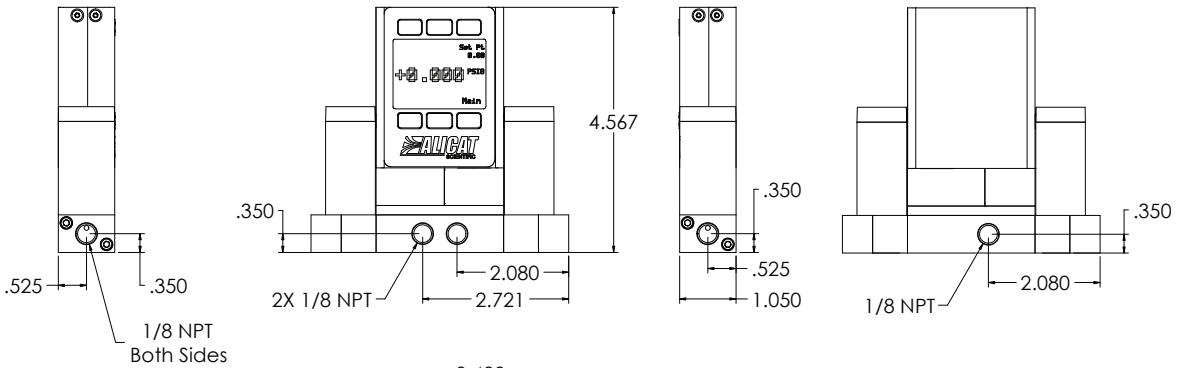
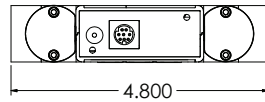


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PCDS-Series
Differential Pressure
Most standard ranges



PCRDS-Series
Most standard ranges

