

Technical Data for PCS and PCRS Single Valve Pressure Controllers



Compatible with some aggressive gases, Alicat PCS and PCRS-Series pressure controllers allow the precise control of absolute or gauge pressure.

Tel: 888-290-6060

www.alicat.com/pressure

These units can be configured for vacuum pressure or backpressure control.

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

Standard Specifications (Contact Alicat for available options.)

Performance	PCS Controllers	PCRS 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	PCS Controllers	PCRS 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	
Valve Type	Normally Closed	
Ingress Protection	IP40	
Wetted Materials	303SS, 430FRSS, 316LSS, 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, PC & PCR 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.
PCS and PCRS devices may be used with chemically compatible liquids. Please contact Alicat for technical assistance if your application involves fluids

Communication / Power	PCS Controllers	PCRS 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

Pressure Product	Mechanical Dimensions	Process Connections ¹
PCS Controllers	4.1"H x 3.6"W x 1.1"D	1/8" NPT Female
PCRS Controllers	5.7"H x 2.9"W x 5.5"D	3/4" NPT Female

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

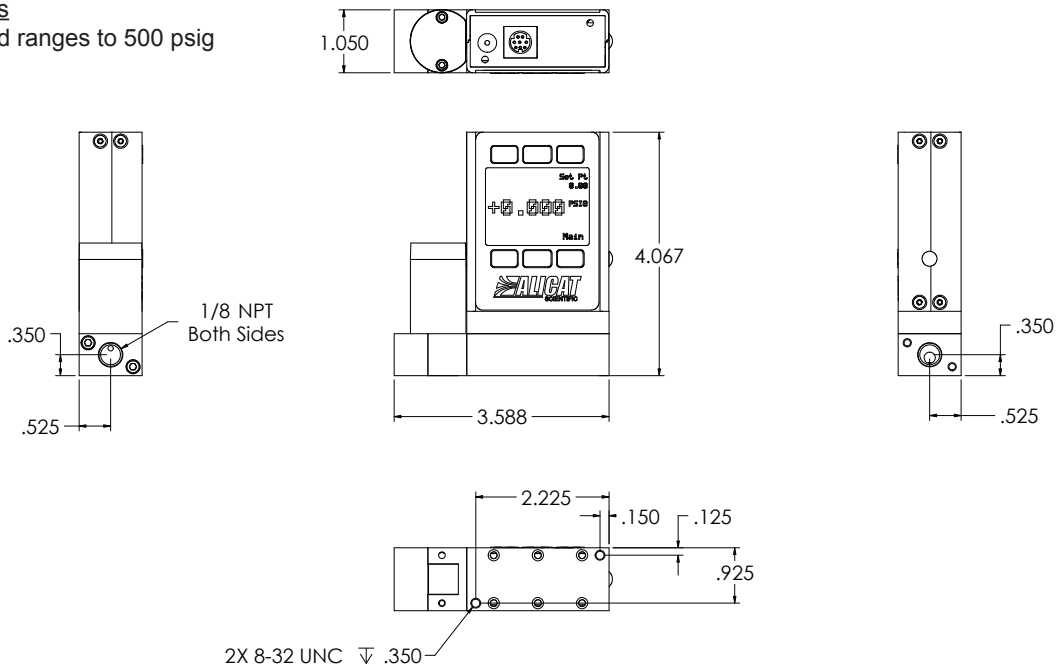
Standard Available Ranges

PCS & PCRS 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

PCS-Series

All standard ranges to 500 psig



PCRS-Series

Most standard ranges

