EPC

EQUILIBAR®
PRECISION FLUID CONTROL

Electronic Pressure Controller

FOR CONTROLLING GAS PRESSURE FROM VACUUM UP TO 150 PSI

Precise, linear pressure control within a closed-loop system

GENERAL SPECIFICATIONS	
Medium	Clean, dry, non-corrosive gases
Wetted Material	**Elastomers:** Nitrile **Manifold:** Anodized aluminum; **Valves:** Nickel plated brass; **Sensor:** High temperature polyamide, alumina ceramic, silicone epoxy, glass
IP65 Housing	Polycarbonate/ABS blend
Valve Type	Normally-Closed
Operating Pressure Range	full vaccum to 150 psig
Typical Flow	2.7 to 65 lpm (±10%@100psig)
Typical Response Time	<20 ms (application dependent)
Accuracy	±0.25% of full scale
Resolution	≤ 5 mV
Max. Hysteresis	± 0.05% of full scale
Linearity	± 0.05% of full scale
Port Size	1/8" NPT
Temperature Range	32 to 120 °F (0 to 49°C)
Mounting Orientation	Any
Recommended Filtration	40 micron

Equipment used for test and calibration is NIST traceable

***Not intended for hazardous/explosive environments. For use with air or inert gases only**

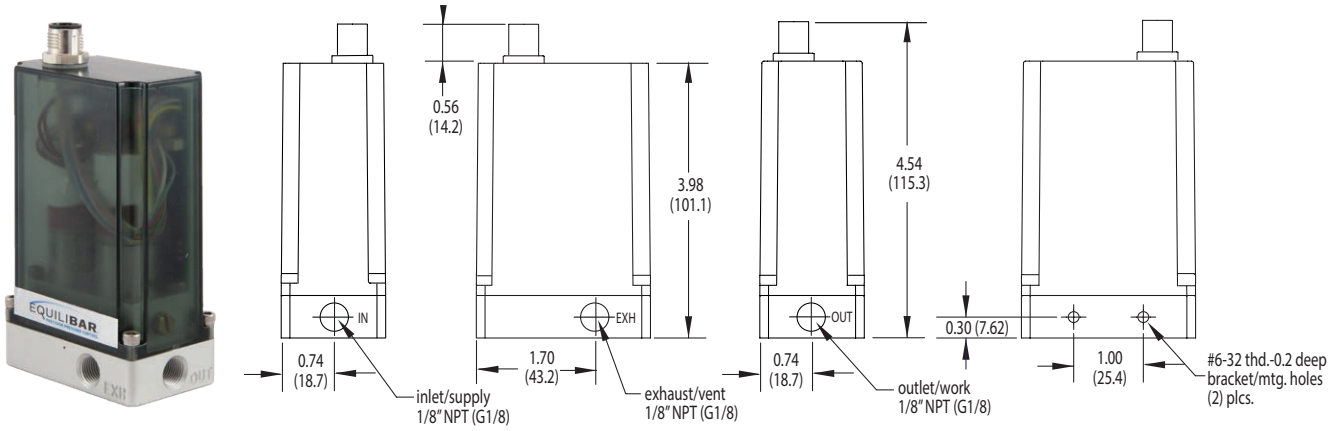
The EPC is an electronic pressure controller that provides a regulated output pressure proportional to an electrical command signal input. The EPC is available in a range of calibrated pressures from full vacuum up to 150 psig (10 bar(g)). The EPC can be configured for 0-10 VDC or 4-20 mA analog signal types or 3.3V serial digital.

The EPC is a complete closed loop control valve consisting of two internal solenoid valves, a manifold, an electronic control circuit board, and a pressure transducer all contained in a protective IP65 rated housing. One solenoid valve functions as inlet control allowing supply media into the system to increase the controlled pressure. The second solenoid valve acts as the exhaust and will decrease the controlled pressure by venting to atmosphere. The inlet solenoid valve operates in a proportional manner to the current supplied by the EPC's electronic control circuit. The ability to vary the inlet solenoid valve orifice opening in an analog fashion allows the EPC to control pressure with excellent precision. The proportional action of the inlet solenoid valve allows the EPC to accurately maintain pressure even when there is a low flow rate due to leaks in the system or other gas consumption. The exhaust solenoid valve also opens proportional to the control circuit current output. This infinitely variable response allows the pressure to be decreased seemessly in your system.

ELECTRICAL SPECIFICATIONS[1]	
Voltage	15 to 24 VDC
Current Draw	< 350 mA max
Protection Rating	IP65
Signal/Command Options	0 to 10 VDC 4 to 20 mA (differential) 3.3 V Serial Digital

[1]The EPC uses two normally-closed solenoid valves. Upon loss of DC supply power, the solenoid valves move to a closed position, trapping any compressed gas in the outlet port. Absent any leaks in the plumbing, the pressure in the system at loss of power will be held. Leaks in the system plumbing will slowly vent the trapped pressure to the atmosphere over a period of time that depends on the piping volume and the initial pressure.

- Smooth linear control
- Integrated internal or external sensor feedback
- Multiple flow configurations
- Proportional fill and bleed control
- Customizable pressure ranges and mounting options
- No integral bleed required



EPC Part Number Key

(Items listed in blue are often in stock for faster delivery)

Application engineers will use your process parameters to specify the model number for your application

	1	2	3	4	5	6
EXAMPLE PART NUMBER	**EPC**	**H**	**F**	**E**	**G**	**A**
Your Part Number:	EPC	H				

1 MODEL

EPC Electronic Pressure Controller

2 TYPE

H IP65 Housing

3 PORT THREAD TYPE

F 1/8" NPT

G G1/8 (option available)

4 INPUT SIGNAL COMMAND

E 0 to 10 VDC

I 4 to 20 mA (differential)

R 3.3V Serial Digital

5 PRESSURE RANGE

A 0 to 1 psig

B 0 to 5 psig

C 0 to 15 psig

D 0 to 30 psig

E 0 to 60 psig

F 0 to 100 psig

G 0 to 150 psig

H 0-30 in Hg (vacuum)

I 0-760 Torr (absolute)

6 MIN VOLUME / MAX FLOW RATE

X Factory selected based on customer application

About Equilibar

Equilibar provides innovative and robust pressure and flow control technology for researchers and engineers worldwide. We are proud to design, manufacture, and test our patented back pressure regulators in our factory overlooking the Blue Ridge Mountains near Asheville, NC, and we are equally proud to work with clients around the world each and every day.

APPLICATION ENGINEERING–WHAT SETS US APART

Unlike mass-market regulator distributors, we focus on working with you, the scientist or engineer with a complex pressure control scenario.

Our application engineers work collaboratively with clients to identify the optimal model, trim, and diaphragm for each application's unique challenges. No matter where you are on the globe, you can stay in close contact with your engineer by email, telephone, videoconferencing, or fax.

Made in the
USA

Equilibar's quality system is
ISO 9001:2015 certified.

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