

HF PRO

High flow proportional solenoid valve

FEATURES

- 2-way normally closed
- Capable of 60 lpm flow and pressures up to 50 psig
- Face seal manifold mount or barbed body options
- Proven performance to 35 million life cycles
- Driven with DC current or pulse width modulation (recommended >30 KHz)

MEDIA COMPATIBILITY

Air, argon, helium, hydrogen, methane, nitrogen, oxygen & others



ELECTRICAL

Power	max. 3 W 2.25 W at 68 °F (20 °C)
Voltage ¹	max. 5, 12, or 24 V _{DC}

PHYSICAL PROPERTIES

Operating environment	0 to 50 °C
Storage temperature	-40 to 70 °C
Length	45.3 mm (1.785 in)
Width	16.5 mm (0.625 in)
Height	17 mm (0.67 in)
Porting	Manifold mount; barbed body (5 mm (0.195") ID Tube)
Weight	63 g (2.2 oz)
Internal volume	0.508 cm ³ (0.031 in ³)
Filtration (recommended)	43 µm
Lubrication	None required
Oxygen clean	

Notes:

1. Max. voltage for continuous full flow, ambient temp. 55°C.

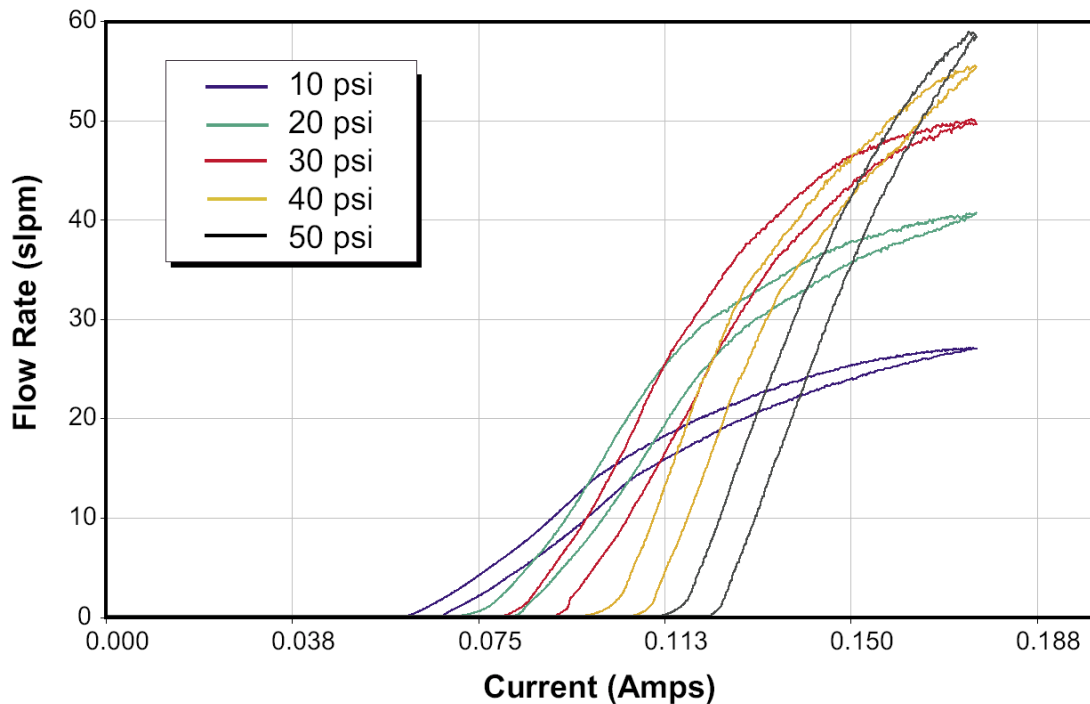
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PERFORMANCE CHARACTERISTICS

Part no.	Pressure	Vacuum	Orifice sizes	Leak rate ^{2,3}	Response
HFPRO7...	0...50 psid	0...27 "Hg (0...915 mbar)	0.070" (1.8 mm)	≤0.5 sccm of nitrogen at 1 and 10 psi	<30 msec cycling

FLOW CURVES⁴

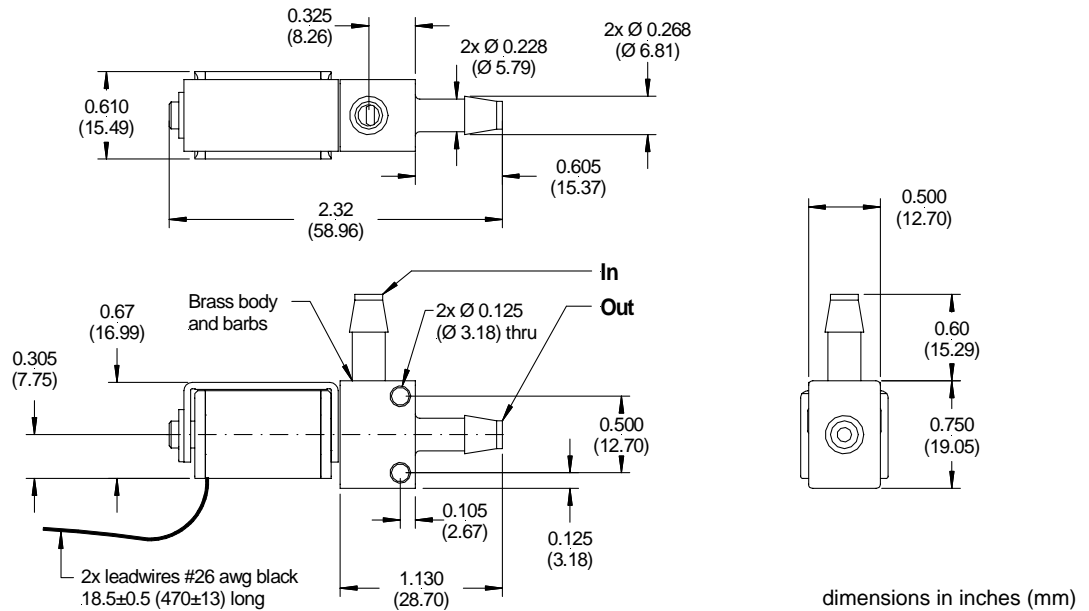


Notes:

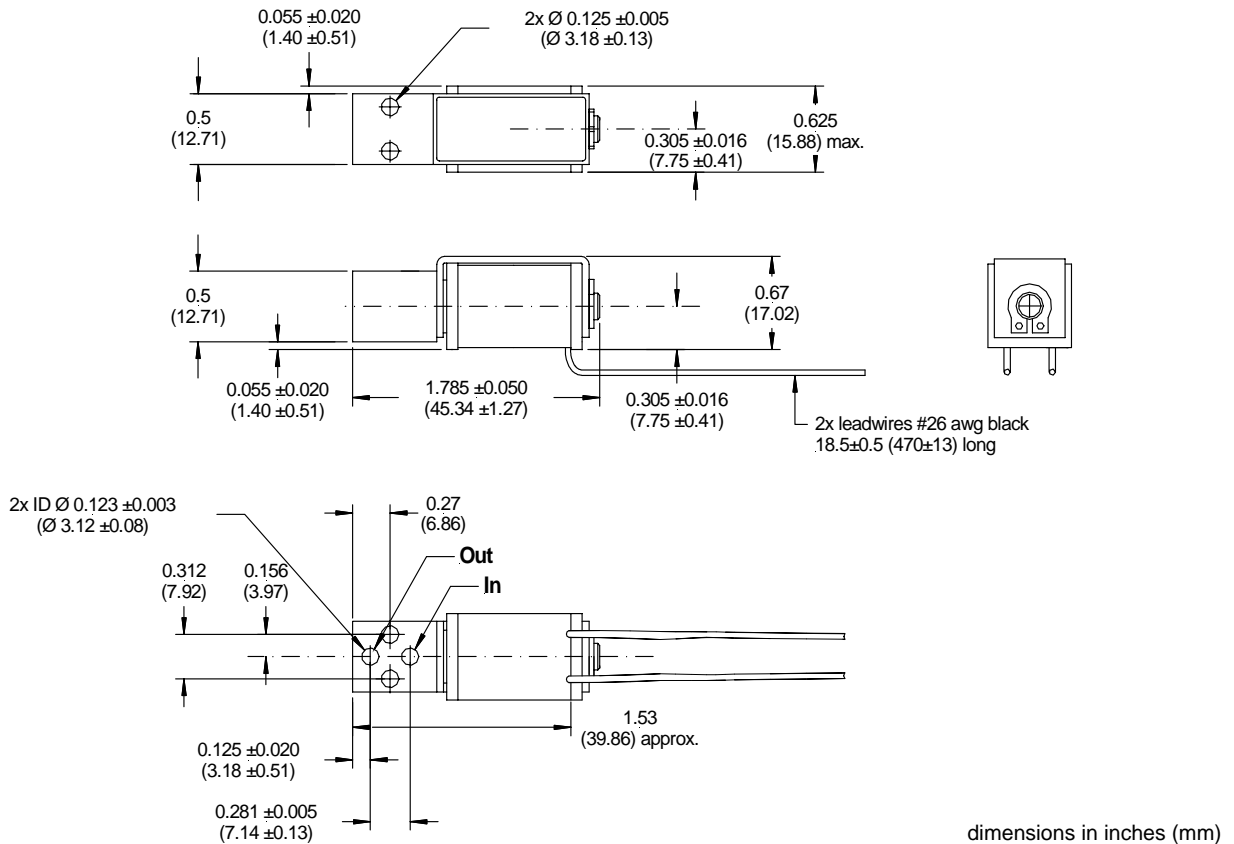
2. Low differential pressure represents the worst case condition due to the reverse flow (pressure-assist) nature of the valve.
3. sccm denotes Standard Cubic Centimeters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1000 sccm = 1 slpm.
4. slpm denotes Standard Liters per Minute. It is a unit for the flow rate at standard conditions of temperature and pressure. 1 slpm = 1000 sccm.

OUTLINE DRAWING

Barbed body



Manifold mount



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ORDERING INFORMATION

Options	Series	Model no.		Elastomer	Coil selection		Electrical interface	Pneumatic interface	Cleaning
		Max. pressure	Orifice size		Max. voltage*	Resistance			
	HFPRO	7:	50 psid	0.070" (1.8 mm)	V: FKM	A: 5 V _{DC} 11 Ω	F: wire leads, 18"	1: manifold mount	O: oxygen service
						D: 12 V _{DC} 68 Ω		8: barbed body	
						F: 24 V _{DC} 247 Ω			
						* max. voltage for continuous full flow, ambient temp. 55°C			
Sample order no:	HFPRO	7		V	A		F	8	O

Note: Not all combinations might be available. Please contact First Sensor for further information.

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