# 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<br>2.25 W at 68 °F (20 °C) |
| Voltage[1] | max. 5, 12, or 24 $V_{DC}$ |

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

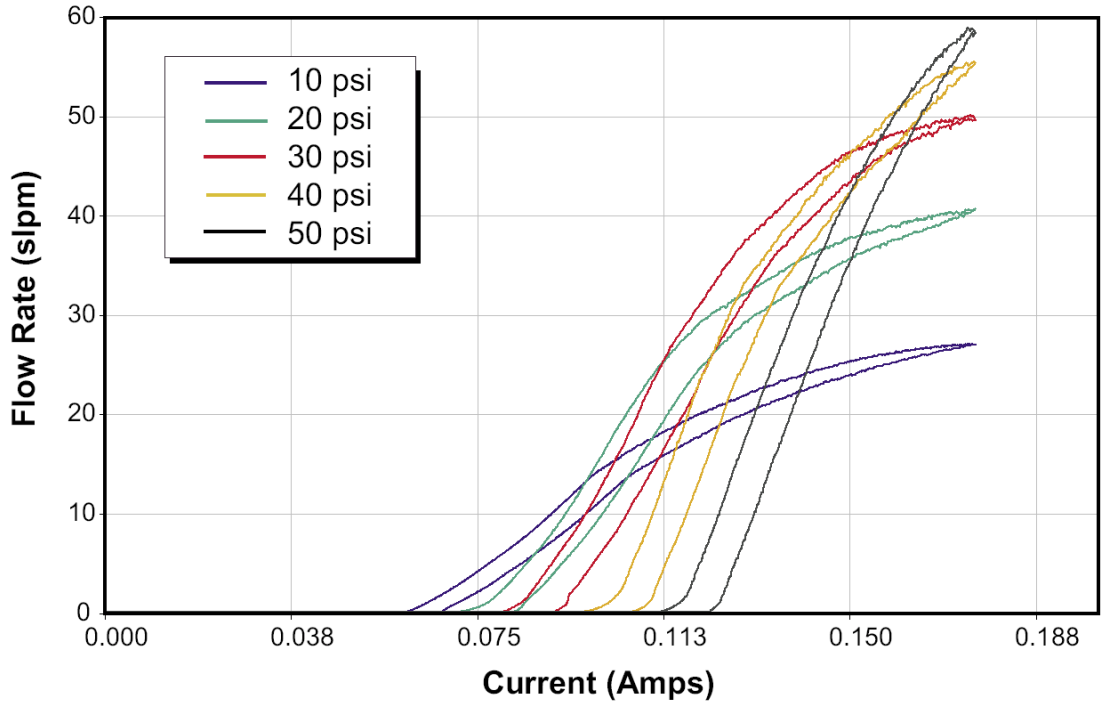
### PHYSICAL PROPERTIES

| | |
|---|---|
| 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;<br>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 | |

## 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 CURVES[4]




**Notes:**

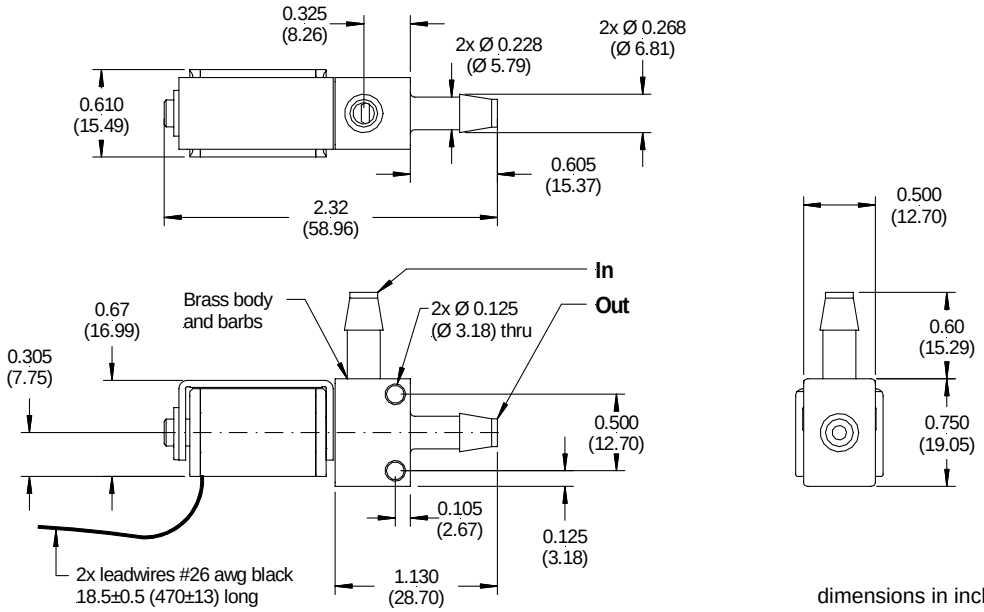
**2.** Low differential pressure represents the worst case condition due to the reverse flow (pressure-assist) nature of the valve.

**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.

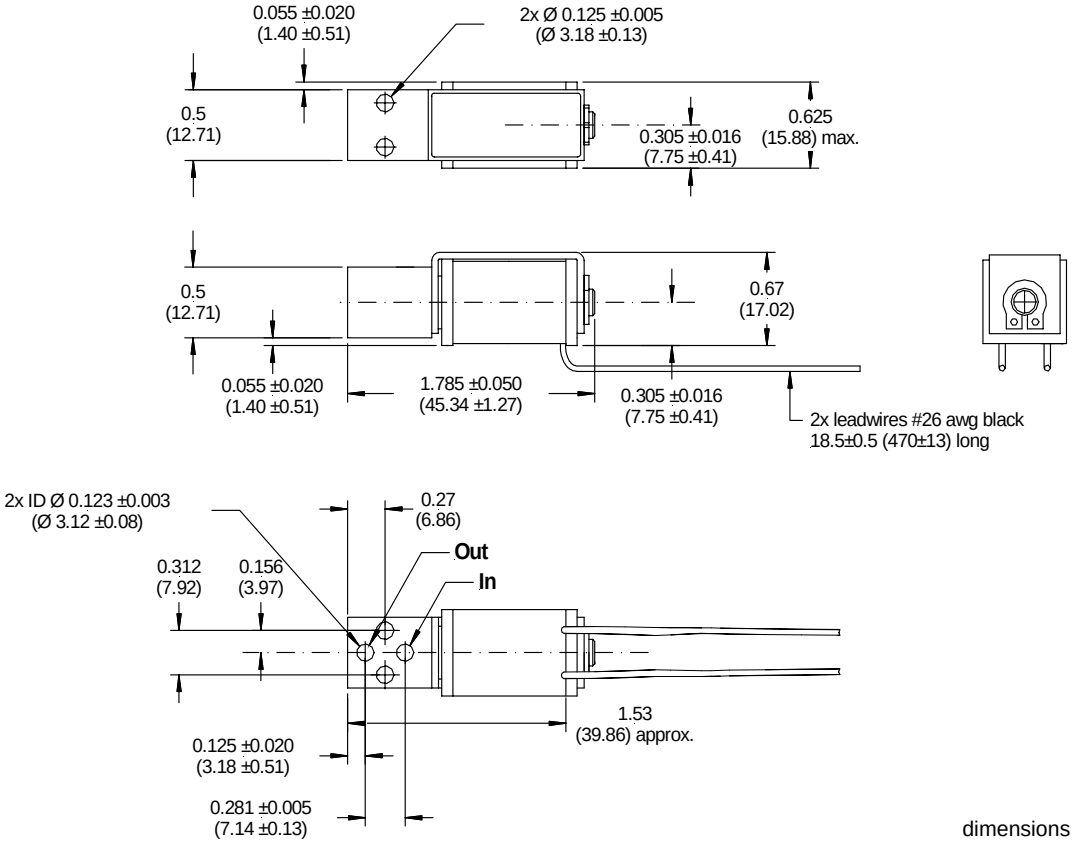
## OUTLINE DRAWING

### Barbed body




dimensions in inches (mm)

### Manifold mount




dimensions in inches (mm)

## ORDERING INFORMATION

| | Series | Model no. | | | Elastomer | | Coil selection | | | Electrical interface | | Pneumatic interface | | Cleaning | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Max. pressure | Orifice size | | | | Max. voltage* | Resis-tance | | | | | | |
| **Options** | **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 your nearest Sensortechnics sales representative for further information.**


Sensortechnics reserves the right to make changes to any products herein. Sensortechnics does not assume any liability arising out of the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.