



# Proteus Industries Inc.

340 Pioneer Way Mountain View CA 94041-1577

Phone: (650) 964-4163 Fax: (650) 965-0304

email: [Sales@proteusind.com](mailto:Sales@proteusind.com) [www.proteusind.com](http://www.proteusind.com)

## 6000 Series Pulse Flow Meters Installation and Operating Instructions

This document provides basic information describing the plumbing and electrical connections to install and make operational your 6000 Series Pulse Flow Meter.

A comprehensive Technical Reference Manual for these devices can be downloaded or printed from [www.proteusind.com/6000/6000TRM.pdf](http://www.proteusind.com/6000/6000TRM.pdf).

This manual includes technical descriptions, performance specifications, dimensions, mounting instructions, detailed dimensional drawings, pressure drop curves, maintenance instructions, product warranty information and part numbers for replacement parts.

If you are unable to access the Internet to obtain this manual, a printed copy can be mailed to you. Please write, call or fax us with your request.



### Flow Ranges

Flow Ranges		Connection	Part Numbers		
GPM	LPM		Polypropylene	Brass	316 Stainless Steel
0.06 – 0.6	0.2 – 2.2	1/4" FNPT		06004BN06	06004SN06
0.08 – 0.8	0.3 - 3.0	1/4" FNPT	06004PN08		
0.1 – 1.0	0.4 – 3.8	1/4" FNPT	06004PN1	06004BN1	06004SN1
0.2 – 2.5	0.75 – 9.5	1/4" FNPT	06004PN2	06004BN2	06004SN2
0.2 – 2.5	0.75 – 9.5	9/16-18 SAE			06006SA2
0.3 – 4.5	1.1 – 17	1/4" FNPT	06004PN4	06004BN4	06004SN4
0.3 – 4.5	1.1 – 17	9/16-18 SAE			06006SA4
0.6 – 9.0	2.2 – 34	3/8" FNPT		06006BN9	06006SN9
0.6 – 10.0	2.2 – 38	3/8" FNPT	06006PN10		
0.8 – 10	3 – 38	3/4-16 SAE			06008SA10
1.0 – 14	3.8 – 53	1/2" FNPT		06008BN14	06008SN14
1.0 – 15	3.8 – 57	1/2" FNPT	06008PN15		
1.2 – 16	4.5 – 60	3/4" FNPT		06012BN16	06012SN16
1.2 – 16	4.5 – 60	1 1/16-12 SAE			06012SA16
1.5 – 19	6 – 72	3/4" FNPT	06012PN19		
3 – 40	11 – 150	3/4" FNPT		06012BN40	06012SN40
4 – 40	15 – 150	1" FNPT		06016BN40	06012SN40
4 – 40	15 – 150	1 5/16-12 SAE			06016SA40
4 – 50	15 – 190	1" FNPT	06016PN50		
5 – 60	18 – 225	1" FNPT		06016BN60	06016SN60

## Temperature & Pressure Operating Limits

Flow Sensor Material	Faceplate Material	Temperature Range *		Pressure Range	
		°C	°F	PSI	kPA
Brass	Clear polysulfone	100	212	100	690
Polypropylene	Clear polysulfone	70	167	75	515
Stainless Steel	Clear polysulfone	100	212	100	690
Brass	Brass	110	230	250	1720
Stainless Steel	Stainless Steel	110	230	250	1720

\* **This is the fluid temperature that can be sustained with the flow meter cooled by ambient air at 20°C.**

**Need to operate above 110°C?** Customized versions of the 6000 Series Flow Meters have been proven in operation with fluid temperatures from -40°C to 170°C. For information on low and high temperature capability contact [Tech@proteusind.com](mailto:Tech@proteusind.com) or call Technical Support at (650) 964-4163.

## 1. Connect plumbing



- Do NOT exceed the pressure limit of the faceplate.
- Do NOT use SWAK®, Loctite® or other anaerobic pipe sealants with devices with a clear plastic faceplate.  
**Vapor from these materials cause the faceplate to crack!**
- Do NOT install metal fittings into polypropylene units. Excessive torque can cause the sensor to crack.

1. Identify the type and size of connections from the Model Number Table above.

**Do NOT exceed the flow limit of your flow sensor!**

2. **For 06004BN06, 06004SN06 and 06004PN08, the liquid flow MUST enter the flow sensor at the port with the SMALLER orifice.**

For all other types orifices are identical at both ports and the liquid flow can enter at either of the available ports.

- Use PTFE tape or paste to lubricate and seal NPT threads or
  - Use PTFE paste to lubricate SAE straight threads.
4. Turn on your liquid flow slowly and check for leaks at the connections. Tighten connections as required to eliminate leaks.

## 2. Make electrical connections

Color	Function
Red	Supply Voltage +5 to 24 VDC
Black	Supply Common 0 VDC
Green	Current sinking output (NPN)
White	Current sourcing output (PNP)

1. Locate the source of 5 – 24 VDC power source and turn it OFF.
2. Connect the BLACK wire to the ground or -VDC power connection.
3. If connecting to an input such as an optoisolator or current loop that requires a current source connect the input to the WHITE wire.  
For other applications connect the input to the GREEN wire.
4. Connect the RED wire to the + output of the DC power source.
5. Turn the DC power source ON.
6. If necessary adjust the DC voltage to between 5 and 24 VDC.