ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Proteus Industries 06006BN9* at our website: ***Click HERE***

Proteus Industries Inc.

PRODUCT DATA SHEET

6000 Series

Pulse Output Flow Meters

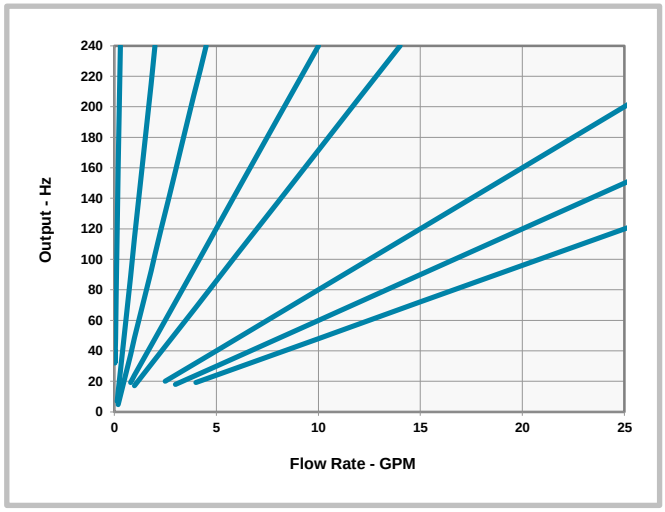


Proteus 6000 Series Flow Meters use a simple turbine principle to generate a pulse output that is directly proportional to the instantaneous flow rate. Magnets in the six-spoke rotor turn a Hall Effect transistor on and off as liquid flows through the sensor.

The sensor's pulse output signal is a square wave with an amplitude of 5–28 VDC depending on the input voltage.

The output frequency ranges to 240 Hz at the maximum flow rate for each meter. Both PNP and NPN outputs are provided.

- Flow ranges from 0.2 to 227 LPM / 0.06 to 60 GPM
- Pulsed PNP and NPN outputs for easy interfacing with your PLC
- Directly interface to batching, data-logging and multi-channel controller accessories
- Hall Effect sensor is protected from reverse polarity and over-voltage and provides reliable outputs in noisy electrical environments
- Liquid temperatures from -40 to 110°C / -40 to 230°F and above
- Pressure to 1724 kPa / 250 psi with metal faceplates
- Reliability underwritten by 5-year warranty



Typical Response Curves of Eight Flow Sensors

Linearity is typically better than ±1.5%
from 10% to 100% of full scale

CE

Enhance Process Control Capability

Link the output of one or more Proteus 6000 Series Flow Meters to a Florite® process monitor or controller and open a door to convenient control and reporting flexibility!

The smart multi-purpose devices can be user-programmed to monitor, control and communicate flow information in your selected measurement units.

- Multi-channel controls – up to 6 input/output channels can be accommodated
- Totalization
- Batch control for accurate dispensing
- Multiple trip points to trigger control interlocks
- Data logging
- Time-based reporting
- Local display of flow rate and totals



* Process monitors are not RoHS compliant at this time.

Flow Ranges, Connections, and Materials

FLOW RANGE*		CONNECTION	MODEL NUMBER		
LPM	GPM		BRASS	STAINLESS STEEL	POLYPROPYLENE
0.2 – 2.3	0.06 – 0.6	¼" FNPT	06004BN06	06004SN06	06004PN06
0.4 – 5.3	0.1 – 1.4	¼" FNPT	06004BN1	06004SN1	06004PN1
0.95 – 9.5	0.25 – 2.5	¼" FNPT	06004BN2	06004SN2	06004PN2
0.95 – 9.5	0.25 – 2.5	$^{9}/_{16}$ -18 SAE		06006SA2	
1.1 – 17	0.3 – 4.5	¼" FNPT	06004BN4	06004SN4	06004PN4
1.1 – 17	0.3 – 4.5	$^{9}/_{16}$ -18 SAE		06006SA4	
2.3 – 34	0.6 – 9.0	⅜" FNPT	06006BN9	06006SN9	
2.3 – 38	0.6 – 10	⅜" FNPT			06006PN10
3.0 – 38	0.8 – 10	¾ -16 SAE		06008SA10	
5.3 – 53	1.4 – 14	½" FNPT	06008BN14	06008SN14	06008PN14
4.5 – 61	1.2 – 16	¾" FNPT	06012BN16	06012SN16	
4.5 – 61	1.2 – 16	$1^{1}/_{16}$ -12 SAE		06012SA16	
5.7 – 72	1.5 – 19	¾" FNPT			06012PN19
11 – 151	3.0 – 40	¾" FNPT	06012BN40	06012SN40	
15 – 151	4.0 – 40	1" FNPT	06016BN40	06016SN40	
15 – 151	4.0 – 40	$1^{5}/_{16}$ -12 SAE		06016SA40	
15 – 189	4.0 – 50	1" FNPT			06016PN50
19 – 227	5.0 – 60	1" FNPT	06016BN60	06016SN60	

*Listed flow ranges are for water at 25 °C / 77 °F.

Matching a 6000 Series Flow Meter to Your Application

1. Select a flow body material that is chemically compatible with your liquid.
2. Check the operational temperature and pressure limits to identify suitable materials.
3. Select a flow meter with a range so that
   a. your nominal flow rate is around 50–60% of the upper flow limit of the instrument, and
   b. your maximum flow rate is less than the upper flow limit of the instrument.
4. For high-vapor pressure liquids such as Galden® or Fluorinert™, or if using positionable elbows, select SAE straight-thread connections.

For assistance in selecting the 6000 Series flow meter that is best suited to your flow control task, contact Proteus Technical Support at **tech@proteusind.com** or (650) 964-4163.

Temperature and Pressure Limits

FLOW BODY MATERIAL	FACEPLATE MATERIAL	TEMPERATURE LIMIT*		OPERATING PRESSURE LIMIT		BURST PRESSURE (5:1)	
		°C	°F	kPa	psi	kPa	psi
Polypropylene	Clear Polysulfone	70	158	517	75	2586	375
Brass	Clear Polysulfone	100	212	689	100	3447	500
	Brass	110	230	1724	250	8618	1250
Stainless Steel	Clear Polysulfone	100	212	689	100	3447	500
	Stainless Steel	110	230	1724	250	8618	1250

*This is the fluid temperature that can be sustained with the flow meter cooled by ambient air at 20 °C / 68 °F.

» Need to Operate Above 70 °C?

Customized versions of 6000 Series flow meters formed from brass and stainless steel have been proven in operation with liquid temperatures ranging from -40 to 170 °C / -40 to 338 °F. For more information on extreme temperature capabilities, please contact Proteus Technical Support at **tech@proteusind.com** or (650) 964-4163.

Other Wetted Materials

COMPONENT	AVAILABLE MATERIALS	
	STANDARD	OPTIONAL
Rotor	PPS	Kynar®
O-Ring	Viton®	Buna-N, Silicone Rubber
Rotor Shaft	316 Stainless Steel	Alumina

Operating Characteristics

OUTPUT FREQUENCY	~240 Hz at maximum flow rate
PRESSURE DROP	< 10 psi at maximum flow rate for all models except 06004PN06, 06004BN06 and 06004SN06 » Contact Proteus Technical Support for more information.
INPUT VOLTAGE	5–24 VDC ± 10% with over-voltage and reverse polarity protection
OUTPUT FREQUENCY	Square wave with the same amplitude as the input voltage
OUTPUT SOURCING	Current sinking (NPN) and current sourcing (PNP) outputs
LINEARITY	Typically better than ±1.5% from 10% to 100% of full scale
REPEATABILITY	Better than ±0.4% above 10% of full scale
CALIBRATION	Typical flow response curves developed for water at 22–25 °C / 72–77 °F are available for each model. Flow response curves vary from unit to unit. Unit-specific calibration conformance reports can be purchased by specifying part number 0980 when placing your order.
ELECTRICAL CONNECTIONS	4x22 AWG stranded, cabled conductors w/ FEP insulation and jacket
POWER REQUIREMENT	< 10 mA
STANDARDS & COMPLIANCE	CE conformity • RoHS and REACH compliance
KINEMATIC VISCOSITY	For use with liquids with kinematic viscosities to 120 centistokes at the operating temperature

Wiring

COLOR	FUNCTION	COLOR	FUNCTION
RED	Supply Voltage (+5 to 24 VDC)	GREEN	Current Sinking Output (NPN)
BLACK	Supply Common (0 VDC)	WHITE	Current Sourcing Output (PNP)

Proteus: Customization Experts

Bring us your specifications and let us create a flow management solution to meet your exact requirements. Materials can be modified or improved for compatibility with your fluid; flow ranges can be matched to large connections; adaptations can be implemented for high and low temperatures; and multiple devices can be integrated in cost-effective manifold assemblies for liquid distribution, measurement and control.

Fittings will be properly positioned, the entire unit will be certified to be leak-tight, and all electrical connections will have been tested end-to-end. Our lean manufacturing processes and ISO 9001 certified procedures ensure that your devices will arrive on time, every time, and ready for use.



Proteus Industries Inc.
340 Pioneer Way, Mountain View, CA 94041
Tel: (650) 964-4163 Fax: (650) 965-0304
www.proteusind.com sales@proteusind.com

Information in this document was correct at the time of printing; however, specifications are subject to change as Proteus Industries' continuous improvement processes establish new capabilities.

© Proteus Industries Inc.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP