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Low Cost Liquid Turbine Flow Meter Series 800

Low flow, chemically resistant flowmeter

The 800 series flowmeter is designed to give high performance and competitive pricing with 6 flow ranges from 0.05 to 15 lpm (0.013 to 3.96 gpm). The non-metallic wetted components make this the ideal choice for the metering of aggressive chemicals including ultra-pure water.

The standard inlet tubes are barbed to accept two hose sizes 8mm and 12mm, although for OEM use alternatives are available. The bearings are made of sapphire for long life and reliability, the body is molded PVDF as standard and the 'O' ring seal is typically Viton™.



At the heart of the meter is a precision turbine that rotates freely on robust sapphire bearings and contains encapsulated rare-earth magnets that are detected through the chamber wall by a Hall effect detector. The output is a stream of NPN pulses that are readily interfaced with most electronic display or recording devices. This combination of materials and technology ensures a long life product with reliable operation throughout. Complies with Special Purpose Food Equipment and Devices NSF / ANSI 169.



Features

- Standard PVDF with encapsulated rare-earth magnets and sapphire bearings
- Measurement down to 50 ml/min (0.013 gpm)
- Pressure rating 10 bar (145 psi)
- Temperature rating up to 125 °C (257 °F)
- Barbed connections 8 and 12 mm (5/16 and 1/2 inch) or 3/8" John Guest straight pipe
- High accuracy and repeatability
- Pulse output NPN
- Complies with NSF / ANSI 169



Flow Ranges and Pulses

Model	Range liter/min	Range gal/min	Accuracy ± % FS	Frequency Hz ¹⁾	K-factor 1/liter ¹⁾	K-factor 1/gallon ¹⁾
803	0.05.....0.50	0.013.....0.132	2.0	142	17000	64352
815	0.12.....1.50	0.032.....0.396	2.0	175	7000	26498
845	0.20.....4.50	0.053.....1.189	1.5	260	3500	13249
865	0.25.....6.50	0.066.....1.717	1.5	230	2100	7949
810	0.30.....10.0	0.079.....2.642	1.0	235	1420	5375
824	0.50.....15.0	0.132.....3.963	1.0	245	980	3710

1) an approximation; the actual values are provided with each individual flowmeter by means of a calibration certificate and graph.

Table 1



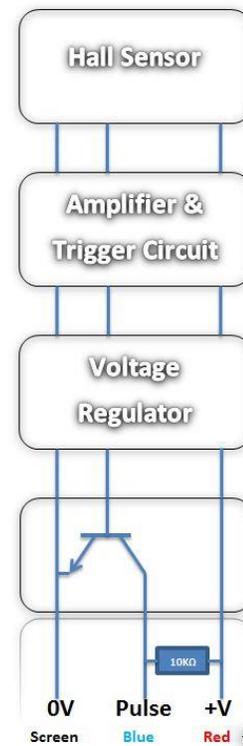
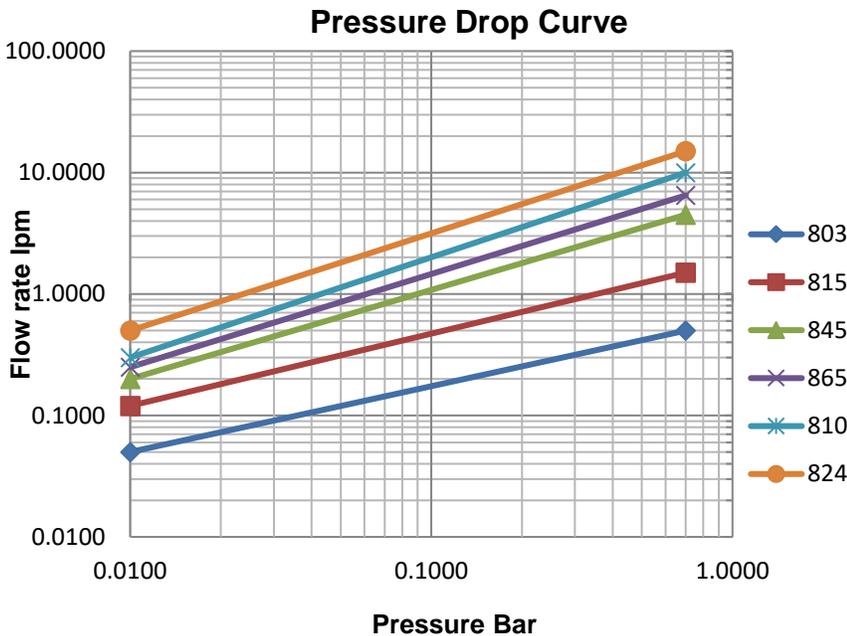
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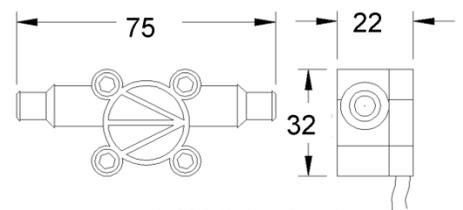
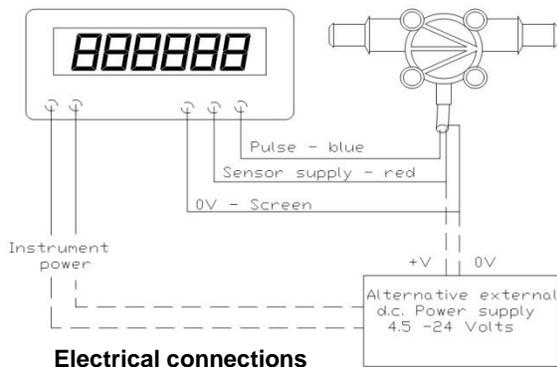
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Technical Specifications

- Linearity: see table 1
- Repeatability: $\pm 0.1\%$
- Pulse output: NPN, Hall Effect – switch current 10 mA max.
- Pressure rating: 10 bar (145 psi)
- Viscosity / particles: up to 10 cP / less than 90 micron
- Temperature rating: $-20\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$) up to $125\text{ }^{\circ}\text{C}$ ($257\text{ }^{\circ}\text{F}$)
- Calibration: fully calibrated for water @ $20\text{ }^{\circ}\text{C}$ ($68\text{ }^{\circ}\text{F}$), incl. calibration certificate with K-factors
Pre-scaled K-factor, see separate data sheet / consult JLC
- Body and internals: PVDF, Sapphire, encapsulated ceramic magnets, PP optional
- Seals: Viton O ring – Nitrile, EPDM and Silicone optional
- Protection class: IP65 (NEMA4X)
- Connections: Barbed 8 and 12 mm (5/16 and 1/2 inch) or 3/8" John Guest straight pipe
- Power supply: 4.5 – 24 Vdc; 7.5 mA typical
- Food grade: complies with NSF / ANSI 169



Note: 10K resistor installed internally



Dimensions in mm



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Model Ordering Guide

803 - V - O - P - O

<u>Range</u>	<u>Code</u>
0.05 to 0.5 l/min	803
0.12 to 1.5 l/min	815
0.2 to 4.5 l/min	845
0.25 to 6.5 l/min	865
0.3 to 10.0 l/min	810
0.5 to 15.0 l/min	824

<u>'O'-ring</u>	<u>Code</u>
Viton	V
Nitrile	N
EPDM	E
Silicone	S

<u>Connections</u>	<u>Code</u>
8 / 12 mm Hose Barb	O
3/8" Straight Pipe JG	J

<u>Body Material</u>	<u>Code</u>
PVDF (standard)	P
PP *)	2

*) only available with hose barbs

<u>Calibration</u>	<u>Code</u>
Standard	O
Uncalibrated	U