



JLC International, Inc
958 Town Center
New Britain, PA 18901

Phone: (800)-599-4732
(215)-340-2650
Fax: (215)-340-3670

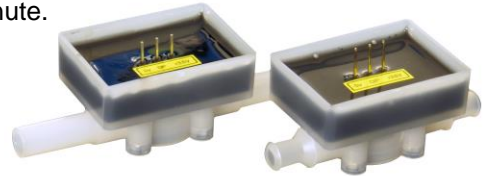
www.jlcinternational.com

jlcusa@jlcinternational.com

Low Power Turbine Flow Meter Series 800

Low flow, chemically resistant flowmeter

The **low power (4 μ A @ 3.3V) flowmeter** is designed to give high performance and competitive pricing with 6 flow ranges from 0.05 to 15 liters per minute. Its totally non-metallic wetted components makes this the ideal choice for the metering of aggressive chemicals including ultra-pure water. The standard inlet tubes are barbed to accept a hose size of 8mm 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 ceramic 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.



Features

- **Low power sensor**, only 3.3 V and 4 μ A.
- Standard PVDF with encapsulated ceramic magnets and sapphire bearings
- Measurement down to 50 ml/min (0.013 gpm)
- Pressure rating 10 bar (145 psi)
- Temperature rating up to 80 °C (176 °F)
- Barbed connections 8 mm (5/16 inch)
- High accuracy and repeatability
- Pulse output NPN

Flow Ranges and Pulses

Model	Range liter/min	Range gal/min	Accuracy \pm % 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	47	5650	21388
815	0.12.....1.50	0.032.....0.396	2.0	58	2300	8706
845	0.20.....4.50	0.053.....1.189	1.5	86	1150	4353
865	0.25.....6.50	0.066.....1.717	1.5	76	700	2650
810	0.30.....10.0	0.079.....2.642	1.0	78	470	1779
824	0.50.....15.0	0.132.....3.963	1.0	81	325	1230

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

Table 1



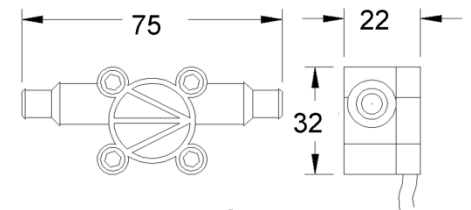
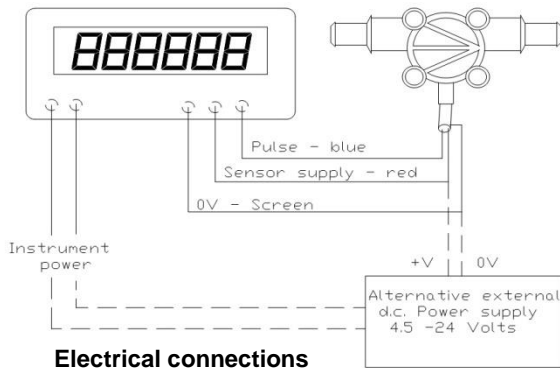
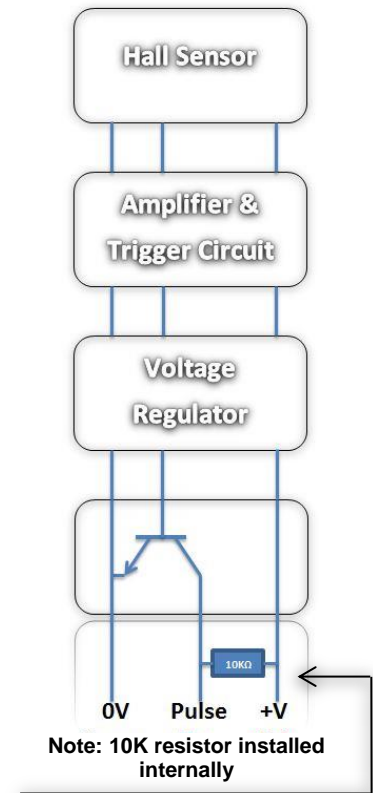
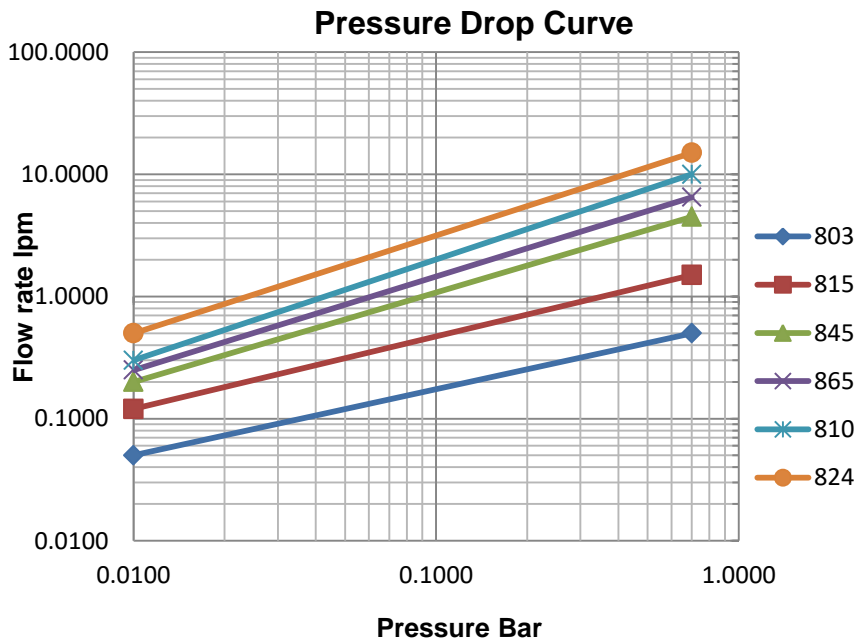
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Technical Specifications

- Linearity: see table 1
- Repeatability: $\pm 0.1\%$
- Pulse output: NPN, Hall Effect – switch current 4 μA max.
- Pressure rating: 10 bar (145 psi)
- Viscosity / particles: up to 10 cP / less than 90 micron
- Temperature rating: $-25\text{ }^\circ\text{C}$ ($-13\text{ }^\circ\text{F}$) up to $80\text{ }^\circ\text{C}$ ($176\text{ }^\circ\text{F}$)
- Calibration: fully calibrated for water @ $20\text{ }^\circ\text{C}$ ($68\text{ }^\circ\text{F}$), incl. calibration certificate with K-factors
- Body and internals: PVDF, Sapphire, encapsulated ceramic magnets
- Seals: Viton O ring – Nitrile, EPDM and Silicon optional
- Connections: Barbed 8 mm (5/16 inch)
- Power supply: 3.3 Vdc; 4 μA



Dimensions in mm



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Model Numbering System

803 - V - 3 - P - O

Range	Code
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

'O'-ring	Code
Viton	V
Nitrile	N
EPDM	E
Silicon	S

Connections	Code
Low power 3.3 Vdc	3

Body Material	Code
PVDF (standard)	P

Calibration	Code
Standard	O
Uncalibrated	U