



Veriflo QFS

Quantum Flow System



VERIFLO
ISO 9001 Certified

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Parker Hannifin Corporation's Veriflo Division presents the QFS, Quantum Flow System. The QFS is a pressure based system that will maintain a constant pressure to an orifice with a pressure regulator. The system also incorporates a pressure rate-of-decay system within the controller, (flow verification) which eliminates sensor drift.



Features

- ▶ Multi-Functioned Flow Control System
 - Digital Mass Flow Controller
 - Pressure Regulator
 - Pressure Transducer
 - Temperature Sensor
 - Particle Filter
 - Positive Valve Shutoff
- ▶ Total Inlet Pressure Immunity
 - Delivers continuous, precise flow
 - Upstream pressure regulator eliminated
- ▶ Flow Verification
 - On-board system
 - Replaces ROR chamber
- ▶ True Gas Independence
 - Self-Calibrating
 - Configure custom gas mix from any SEMI Gas
 - No need for factory re-calibration
- ▶ Auto Correction
 - Ensures long term, precise flow delivery
 - Service required notification
- ▶ High Speed Startup
 - Typically less than 0.3 seconds to stable flow

Specifications

Operating Conditions

Maximum Inlet Pressure.....	70 psig
Minimum Inlet Pressure (for full range).....	45 psia
Maximum Outlet Pressure (for full range).....	50 Torr
Control Range*	10 - 100% of full scale
Ambient Temperature Range.....	32°F - 122°F (0°C - 50°C)
Proof Pressure.....	105 psig

Functional Performance

Accuracy.....	1% Set Point @ 10 - 100% Flow
Repeatability.....	±0.1% of Full Scale
Pressure Coefficient	0%
Temperature Coefficient	0%
Attitude Sensitivity	0%
Flow Startup Timing.....	Full Flow in <500 msec
Leakage	
External	<2 ⁻¹⁰ sccm He
Internal	<1x10 ⁻⁶ sccm He

Electrical Interface

Command Signal.....	Analog (0-5vdc), Digital (RS485)
Output Signal.....	Analog (0-5vdc), Digital (RS485)
Input Power.....	+/- 15 Vdc
Power Consumption	12 Watt max
Electrical Connections	
Digital.....	DB9 (UDU9), Card Edge
Analog	DB9 (UDU9), Card Edge

Mechanical Connections

- .29 IGS 'C' Seal; Face Seal
- Other Connections Available Upon Request

Wetted Surface

"VeriClean" 316L Stainless Steel

Standards Compliance

SEMI, CE

Approximate Weight

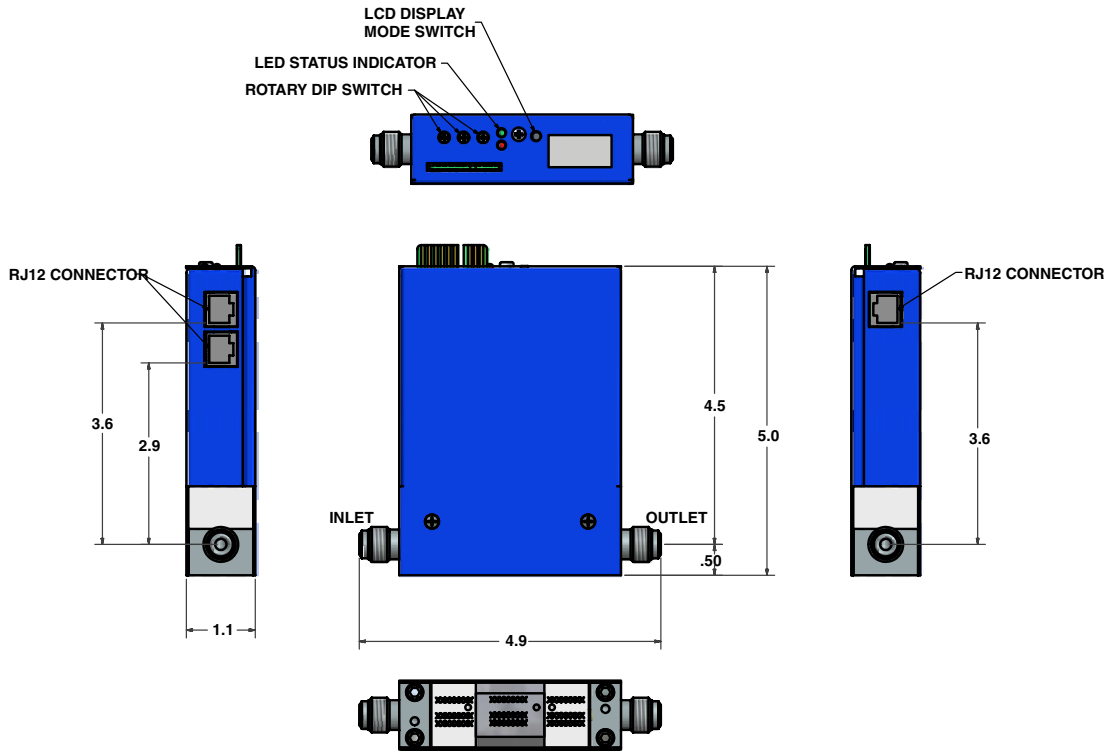
2.4 lbs (1.1 kgm)

* Extended Flow Available

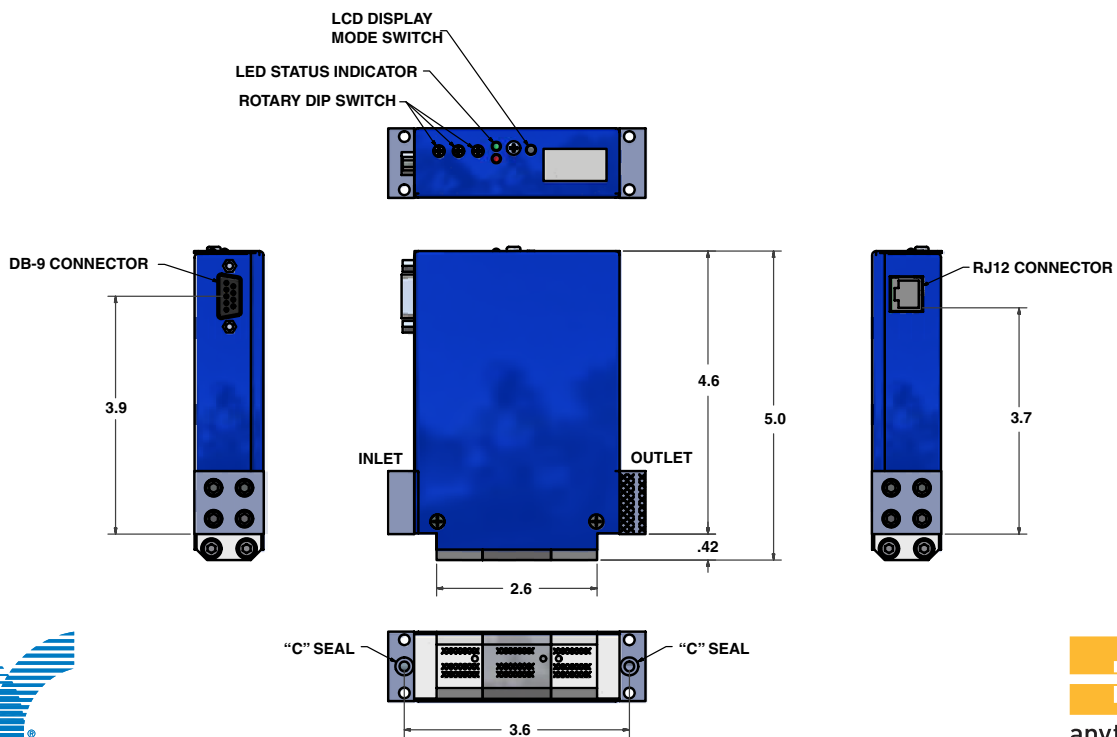


Dimensional Data

QFS Face Seal w/Card Edge Communication



QFS Surface Mount 'C' Seal w/DB9 Communication

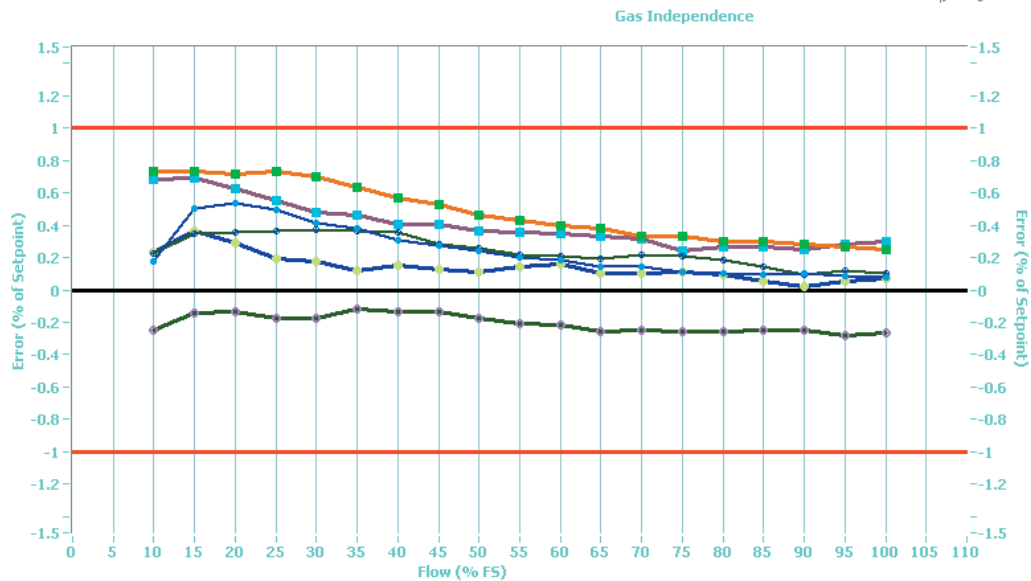
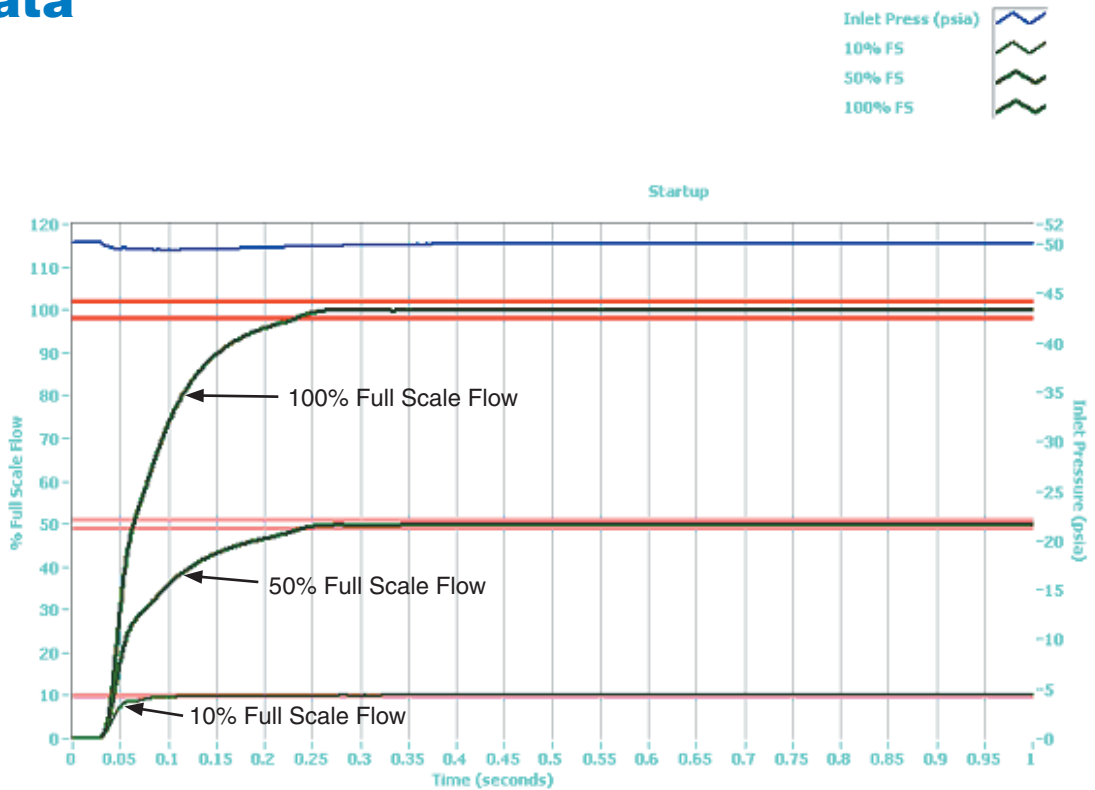


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Sample Data

As shown here, the QFS has a consistent, high speed startup response for all gases at all flow rates.

Typically, gas flow reaches set point within 300 msec from command signal.



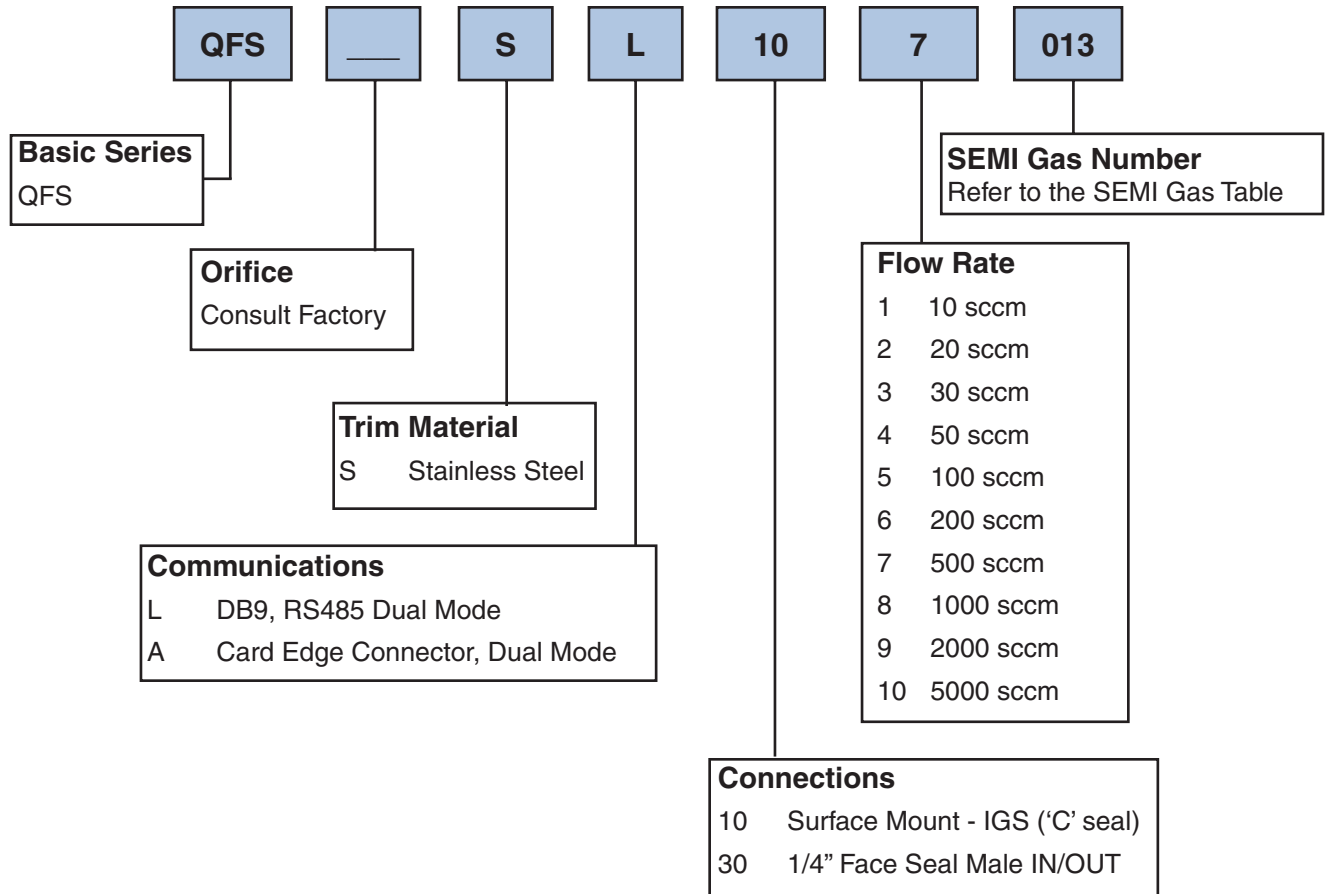
Shown here is QFS flow accuracy for various gases.

This represents better than 1% set point accuracy for a flow range from 10% to 100% or 10:1 turn ratio.



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Product Configuration





Parker Hannifin Corporation

Veriflo Division
250 Canal Blvd.
Richmond, CA 94804
Tel: (510) 235-9590
Fax: (510) 232-7396
<http://www.veriflo.com>
<http://www.parker.com/qfs>

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