



LPF PSignature Series Ultrasonic Flowmeter

PSignature Series

LPF Low Pressure Flare
Ultrasonic Flowmeter

Applications

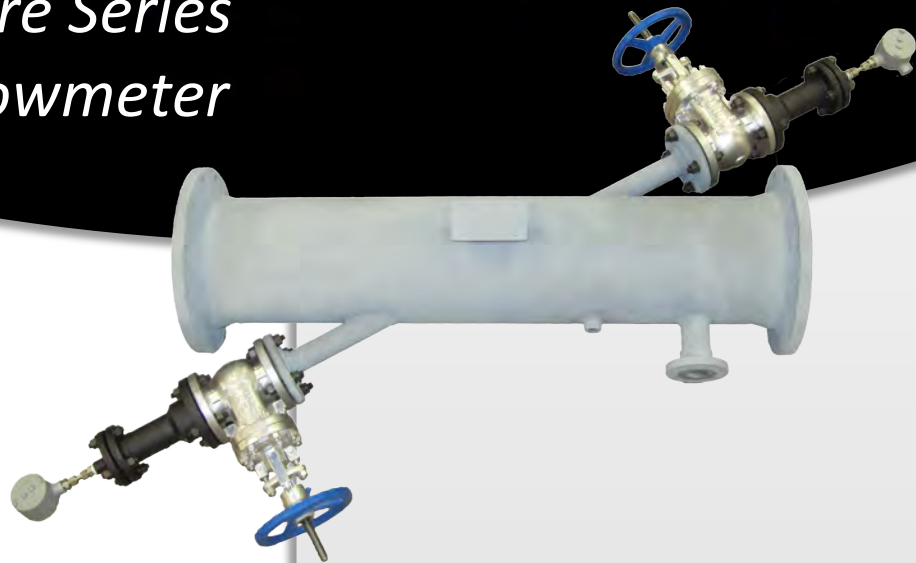
- Flare Gas
- Vent Gas
- Bio Gas
- Fuel Gas
- Process Gases

Features

- Measures velocity, volumetric and mass flow
- Molecular weight calculations
- Suitable for varying gas composition
- High turndown ratio
- Low cost and custom design options

Why purchase flowmeters from Procon?

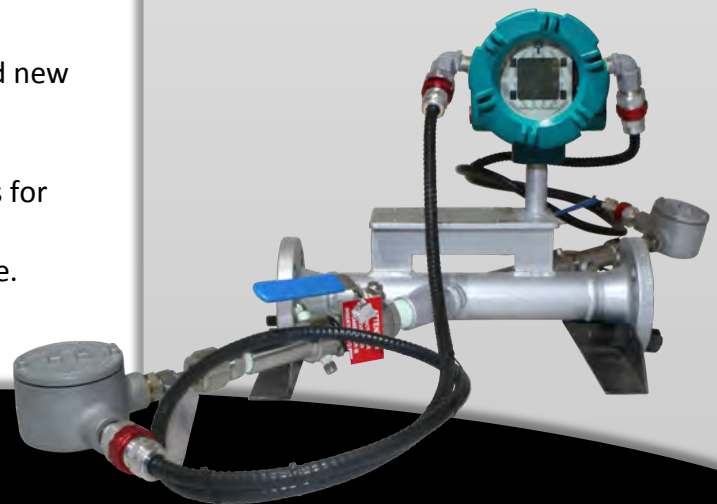
- Flowmeters completely assembled, tested, inspected and shipped ready for installation.
- Optional “on-line” transducer insertion and removal
- All quotes include calculations with accuracy and specific drawings.
- Meets all applicable North American codes and standards (Details specified on quotes and drawings)
- In-house low pressure flow calibration loop, used for verification, improved accuracy, reduced straight run and new design testing.
- Combines tested, proven and new technologies with engineering and experience to provide the best solutions for our valued customers.
- More than 25 Years of flare meter application and service. Factory trained service technicians and stocked parts to minimize downtime.



PROCON
SYSTEMS

Procon has designed, assembled and tested ultrasonic flowmeters for over 20 years with thousands of installations. All our flowmeters are engineered to meet specific application and customer

www.proconsystems.com



CANADA

Toll Free 1-866-255-2921

USA

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Specifications and features subject to change
Version no.: 1.0 Nov.2017

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General Specifications:

For additional technical details see ordering information.

Flowcell

| | |
|-----------------------------|--|
| Flow/Accuracy: | Typical $\pm 2.0\%$ of velocity reading 0.3m/s to 50 m/s Typical $\pm 5.0\%$ of velocity reading 0.3m/s to 120 m/s Flow calculations with Accuracy Statements provided for each application Typical Accuracies based on 6" or larger lines with adequate Straight Run, typically 20D Upstream / 10D Downstream for gas applications |
| Repeatability: | $\pm 0.5\%$ of Reading |
| Size: | 1 – 96 inches |
| Rating: | ASME CLASS 150 – 600 |
| CSA: | Class 1, Div.1, Groups C & D, (Group B option available) |
| Design Temperature: | -364°F to 482°F (-220°C to 250°C) 800°F option available, see options for details |
| Ambient Temperature: | -50°F to 140°F (-45°C to 60°C) |

Electronics

| | |
|---------------------------------|--|
| Enclosure: | CSA and FM approved for Class 1, Div. 2, Group A, B, C & D areas – Enclosure epoxy coated aluminum, NEMA 4X |
| Display: | Two independent software configurable (64 x 128 pixel) backlit LCD graphic displays |
| Ambient Temperature: | -4°F to 131°F (-20°C to 55°C), LCD display will blank out at -10°C |
| Storage Temperature: | -67°F to 167°F (-55°C to 75°C) |
| Weight & Dimensions: | 14.24 in x 11.4 in x 5.12 in (362 mm x 290 mm x 130 mm) 11 lbs (5 kg) |
| Power Supply: | 20W maximum, 100-240 VAC (Standard), 12-28 VDC (Optional) |
| Inputs/Outputs: | Standard six 4-20mA Isolated Outputs, two with 500 Ω maximum load, four with 1000 Ω max load, two 0/4-20mA Inputs. Additional I/O available |

Documentation (Standard with all Flowmeters):

Drawings, Flow Calculations, Manuals, Certificate of Compliance, Welding Procedures and Qualifications, Hydrotest, NDE Reports, Material Test Reports, CSA, Programming Sheet, ITP, PWF, Optional flow calibration

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Ordering Information

LPF - A - B - C - D - E - F - G - H - I - J - K - L - M - N

Example: LPF-06-150-RF-LC-1-I-2-100-N-1-0-4-CRN-NAC-F001000

| Option Code | Description |
|-------------|---|
| A | Nominal Size |
| 01..96 | Nominal Size in Inches |
| B | Rating |
| --- | No Rating (Typical for Weld Prep Flowmeters) |
| 150 | |
| 300 | |
| 600 | |
| C | End Connections |
| RF | Raised Face Flange |
| FF | Flat Face Flange |
| WP | Weld Prep |
| D | Material of Construction |
| CS | Carbon Steel |
| LC | Low Temp Carbon Steel |
| 34 | 304 Stainless Steel |
| 36 | 316 Stainless Steel |
| E | # Of Paths |
| 1 | Single Path |
| 2 | Dual Path |
| F | Transducer Ports |
| T | Threaded |
| W | Socket Weld |
| F | Flanged |
| C | Threaded Insertion Mechanism |
| I | Flanged Insertion Mechanism |
| G | Extra Ports on Flowcell body |
| 0..9 | Number of additional ports (Port Details to be shown on Drawing) |
| H | Max Flow |
| XXX | XX m/s Custom Max Flow Velocity in m/s (Gas Composition required to confirm Max. Range) |
| 010 | Max Flow Velocity in m/s (Gas Composition required to confirm Max. Range) |
| 050 | Max Flow Velocity in m/s (Gas Composition required to confirm Max. Range) |
| 100 | Max Flow Velocity in m/s (Gas Composition required to confirm Max. Range) |
| 120 | Max Flow Velocity in m/s (Gas Composition required to confirm Max. Range) |
| I | Operating Temperature Range |
| N | -67°F to 302°F (-55°C to +150°C) |
| L | -364°F to +212°F (-220°C to +100°C) |
| H | -58°F to +482°F (-50°C to +250°C) |
| E | -58°F to +850°F (-50°C to +426.7°C) Transducers will be damaged over +250°C but there is no risk of leakage |

| | |
|----------|--|
| J | Power |
| 1 | 100 to 120 VAC operating voltage |
| 2 | 220 to 240 VAC operating voltage |
| 3 | 12 to 28 VAC operating voltage |
| K | Alarms |
| 0 | None |
| 1 | Three hermetically sealed alarm relays scalable for high flow, low flow and fault conditions |
| 2 | Six hermetically sealed alarm relays scalable for high flow, low flow and fault conditions |
| L | Logging / Digital Communications |
| 0 | None |
| 1 | Four software configurable pulse total or frequency outputs |
| 4 | ModBus digital output only |
| 5 | ModBus digital output and four software configurable pulse total or frequency outputs |
| A | HART communication only |
| B | HART communication and four software configurable pulse total or frequency outputs |
| 8 | MODBUS TCP for communication over Ethernet |
| 9 | Ethernet card. Allows PanaView or OPC Server to communication with meter over the Ethernet |
| F | Foundation Fieldbus |
| M | Optional Extras and Specials (Can be more than one) |
| CRN | Canadian Registration Number (Specify Province or Provinces) |
| NAC | NACE Certificate of Compliance |
| CSB | CSA Group B (H2) Approval for Flowcell Transducers |
| PMI | Positive Material Identification |
| HAR | Hardness Testing of Production Welds |
| PWH | Post Weld Heat Treatment |
| YEL | Yellow Flow Arrows Painted on each side of the Flowcell |
| JET | Jet Lube Petro Tape only |
| ICO | Internal Coating (Specify Details) |
| SSS | Special (Specify) |
| N | Drawing # |
| F00XXXX | Flowmeter Drawing # |



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