

Focus[®] 2.0 Optical Gas Flow Meter

Advanced, cost effective system for gas velocity and volumetric flow rate measurements independent of pressure, temperature and gas composition.

Overview

The system's principal technology, Laser-2-Focus Velocimetry, uses laser beams to measure the gas flow by sensing the velocity of microscopic particulates naturally occurring in gas. The Focus[®] 2.0 system consists of a flow sensor, an optical flow processor and a heater power supply. The system includes the new user-friendly software with a Wizard mode that enables an easy step-by-step configuration of parameters.

Easily installed and maintained in the field, the system requires only one installation point in the gas line and takes less than 3 hours to install under normal conditions without interrupting site operations or entire systems shutdown. The Focus[®] 2.0 is used to accurately measure a wide range of flow rates in a variety of pipe diameters (4" - 30" inches).

Applications:

- Gas flow measurement for flare and vent gas applications
- Flare monitoring for reducing waste and increasing process efficiency
- Emissions measurement for compliance with environmental regulations
- Bio-gas measurement applications

Contact us

Ace Instruments is a leader in precision measuring sensors and flow meters, specializing in customization and OEM manufacturing. Visit www.ace95.com for more information, or contact us at gerryr@ace95.com with your requirements for engineering guidance and a quote.




Features

- Easy to install
- Cost effective
- High turndown ratio of 1500:1
- Compliant with ASME Code Section VIII, Division I for pressure safety
- Certified intrinsically safe by CSA
- Windows 7, 64-bit compatible software features easy configuration download- all settings saved appended to data log

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Technical Specifications

Specifications	
Velocity Measurement Range	0.1 m/s to 150 m/s (0.33 ft/s to 500 ft/s)
Repeatability	0.1 m/s to 150 m/s (0.33 ft/s to 500 ft/s) ± 1 %
Measurement Accuracy (% of reading)	0.1 m/s to 1 m/s (0.33 ft/s to 3.30 ft/s) ± 5 % 1 m/s to 100 m/s (3.30 ft/s to 330 ft/s) ± 2.5 % 100 m/s to 150 m/s (330 ft/s to 500 ft/s) ± 5 %
Safety Approvals	Certified, ATEX/ IECEx d [ia] IIB Approval Pending
	
Probe Specifications	
Ambient Temperature	Powerup: -20 to +50 °C (-4 to +122 °F) Operating: -40 to +50 °C (-40 to +122 °F)
Maximum Process Pressure	300 psig (20 barg)
Pipe Diameter	4 in to 30 in
Probe Diameter	19.1 mm (0.75 in)
Wetted Materials	Meter Body: 316L stainless steel Optical Windows: borosilicate glass
Optical Flow Processor Specifications	
Power Requirements	+24 VDC/ 150mA
Analog Input Interface	Pressure and temperature transmitter (4 - 20 mA)
Analog Output Signal	Frequency/pulse Current loop (4 - 20 mA)
Digital Output Signal	RS-232 programming port RS-485 (Modbus RTU)
Output Variables	Velocity (m/s, fps) Flow rate (m3/h, e3 m3/d, CFH, MCFD, MMCFD)
Fiber Optic Extension Cable	Silicone jacketed flexible armoured cable (with 10, 25, and 50m length)



CABLES*



ELECTRONICS



PROBE

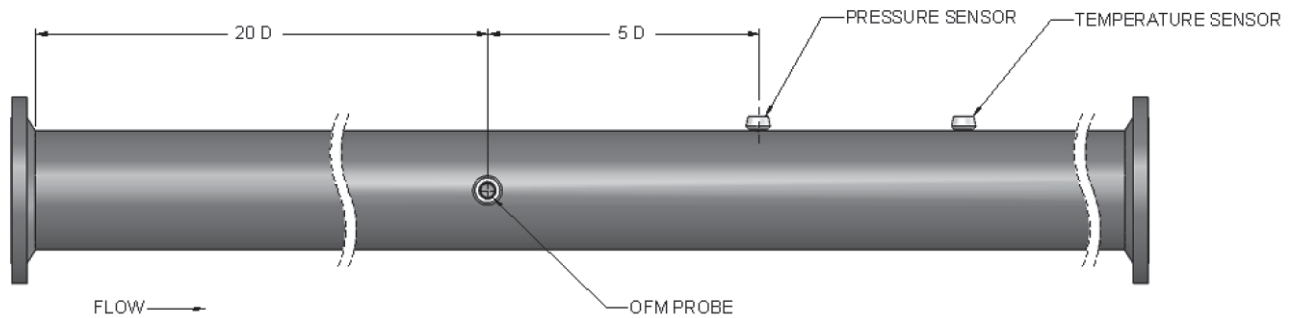
Product Options and Accessories

Electronics Enclosures OFF-XP-OC-HYB	Explosion-proof enclosure
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Ordering Information

Optical Flow Processor Options:	Included Accessories:
<ul style="list-style-type: none"> Option 1: Enclosure Type: XP-OC-HYB 	<ul style="list-style-type: none"> Ball valve assembly (ball valve with packing gland assembly, 1 in. MNPT) RS-232 configuration cable (DB9 to 4-pin plug) Explosion-proof enclosure mounting kit (u-bolts for 2 in. pipe)
*Option 2:	Additional Non-Included Accessories:
Optical Extension Cable Length:	<ul style="list-style-type: none"> OFA-KIT-1in HOT TAP - hot tap installation kit OFA-VAS-1-VIT - 1 in. valve assembly OFA-ADPTR-1"-FLG-2" - flange kit adapter DISPLAY-LCD-MODBUS-SCANNER - MODBUS local display
<ul style="list-style-type: none"> 10 meters 25 meters 50 meters 	

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