VP*FlowMate* in-line

Description

The VP*FlowMate*® combines state of the art silicon sensor technology with ease of use.

Because of the high turndown ratio and low pressure drop, the VP*FlowMate*® is suitable for many applications.

With a RS232 and 4..20 mA output, the VP*FlowMate*® can be connected directly to a PC and most industrial equipment.

The VP*FlowMate*® in-line has removable in- and outlet piping for convenient installation and service.

Applications

Compressed air metering, energy monitoring, testing of pneumatic systems, quality inspection and testing, purge metering.

Benefits

- Versatile: Large measurement range, low pressure drop
- Universal: Flow data in any application via RS232, 4..20 mA and pulse
- Easy: straightforward installation and use
- Integrated, detachable up and downstream piping minimizes installation errors without significant increase of pressure drop.

Features

- Solid state flow sensor
- Flow and totalizer read out via RS232
- Built-on 8 x 2 LCD display
- 12..24 Volt wide range power input
- Removable in- and outlet piping

Your sales representative:

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Features and benefits

Built-on display
Features flow and totalizer read out

- Direct read out of flow
- Direct read out of total consumption
- Clear back-lit display

Versatile outputs
RS232, 4..20 mA (linear), pulse

Rugged, modular design
IP55 housing design
Fixed cable or connector output
Optional LCD display module

Low maintenance
No moving parts
Long re-calibration interval

Optimal flow path
Straight tube design
Up and downstream piping
integrated and detachable

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Technical Specifications

Measurement specifications

Accuracy	:	< 2% of full scale. A calibration report is issued with each flow meter
Ranges	:	See range table below. Ranges specified at 20 deg C
Zero cutoff point	:	Depends on model; typically 2% of full scale (1:50 range)
Temperature range**	:	0..50 °C
Pressure limit	:	Designed to 16 bar maximum pressure***
Humidity range	:	Up to 95% Relative Humidity. Non condensing
Gases	:	Compressed air, non corrosive gases

Mechanical specifications

Connections	:	See table below
Dimensions	:	See the technical drawings; The up- and downstream pipes are integrated. Dimensions are at least 15*D upstream and 5*D downstream. The maximum total length is limited to 1 meter for convenient transport and handling.
Protection type	:	Designed to meet IP55. Not for outdoor use.
Wetted materials	:	Epoxy, glass, stainless steel 316, anodised aluminium
Corrosion resistance	:	Avoid highly corrosive or acid environments

Electrical specifications

Outputs	:	RS232, 4..20 mA, pulse ; multi connector
Power supply	:	12..24 Volt DC

Approvals/ conformity

CE	:	EN 61326-1
CE	:	EN 50082-1

NOTE:
Specifications are subject to change without prior notice.

**** NOTE:**
The temperature error is typically less than 0.2% of reading per degree Celsius. Optional temperature calibration can be specified.

***** NOTE:**
The pressure error is typically 0.3% of full scale per bar deviation of the calibration pressure. The pressure error of the VPF*lowMate*® is specified for a range of +/- 3 bar around the calibration pressure. Ask for custom calibration when using the VP*FlowMate*® at atmospheric or low line pressure.

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KEMA CERTIFICATE ISO 9001:2000 DUTCH COUNCIL FOR ACCREDITATION C 013

Range table		For larger diameters, we recommend to use the VP*FlowMate*® insertion probe.			
MODEL	**Range (m^3_n/hr)***	**Range (l_n/min)***	**G (inch)**	**DN (mm) indicative**	**Process Connection**
VPF-R0030-M050	**30**	**500**	0.5 "	15	0.5 " BSP
VPF-R0120-M100	**120**	**2000**	1 "	25	1 " BSP
VPF-R0700-M200	**750**	**12500**	2 "	50	2 " BSP

*m_n and l_n are referenced to 0° Celsius, 1013.25 mbar

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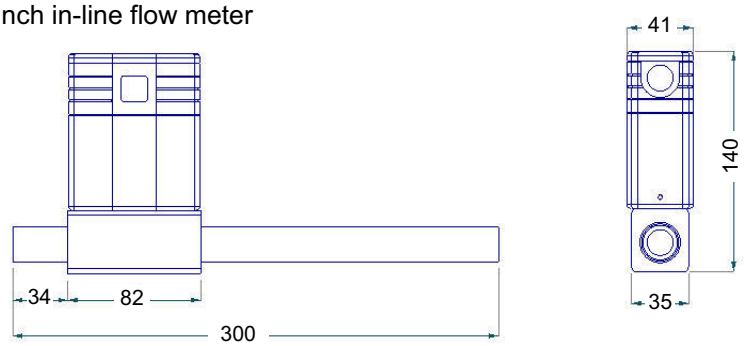
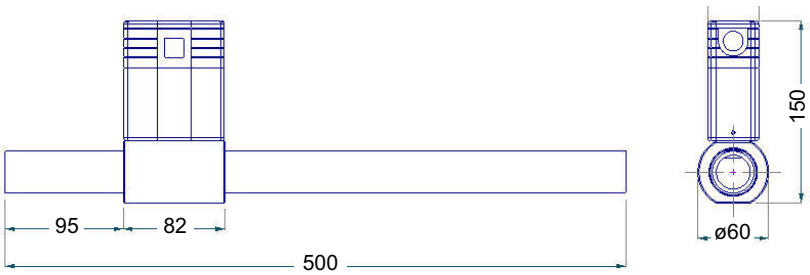
Technical drawings: Installation

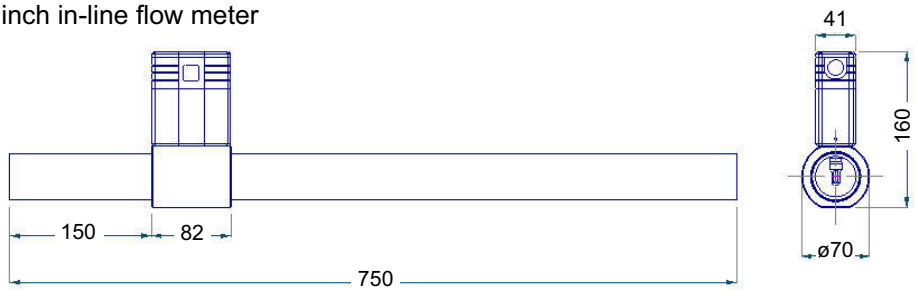
0,5 inch in-line flow meter



1 inch in-line flow meter



2 inch in-line flow meter



Notes:
Dimensions are indicative. The overall length may vary +/- 5 mm
Meter run upstream length of 15*Diameter is integrated.
Please see the installation guidelines as outlined in ISO 14511(2001) for additional upstream length requirements in case of elbows, diameter changes and other upstream objects.

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Order configuration table

1. Group	2. Range	3. Diame-ter
VPF	R120	M100

A. LCD	B. Outputs	C. Connector
D1	S110	E200

No.	Item	Code	Description
Measurement:			
1.	Product group	VPF	VP*FlowMate*® in-line mass flow meter
2.	Range	R030-M050	0...30 m^3_n/hr [500 l_n/min]*
		R120-M100	0...120 m^3_n/hr [2000 l_n/min]
		R750-M200	0...750 m^3_n/hr [12500 l_n/min]
3.	Tube diameter	M***	Is shown in combination with range code M050 = 0.5”, M100 = 1”, M200= 2”
Outputs:			
A.	Display option	D1	LCD display, flow and totalizer (standard)
B.	Outputs	S110	4..20 mA linear output + pulse output (standard)
C.	Connector option	E200	Multipole connector on housing (standard)

* some of the ln/min values may be rounded

VP*FlowMate*® is a registered trademark of Van Putten Instruments B.V. Patents have been applied for and are pending.