

Pulsed Flow Sensor PFS-V3

TECHNICAL DATA SHEET

Version: 1.3 – 7.1.2019

Flow sensor for discontinuous flow

Type: differential pressure

Product Summary

The Pulsed Flow Sensor is an extremely fast, chemical resistant volume flow sensor. It was developed for the monitoring of pulsed flow, such as pulsating pumps and fast switching valves as well as continuous measurement. This reliable fast sensor monitors your dosing process and is able to build sharp volume integrals of your processed fluid dosis.

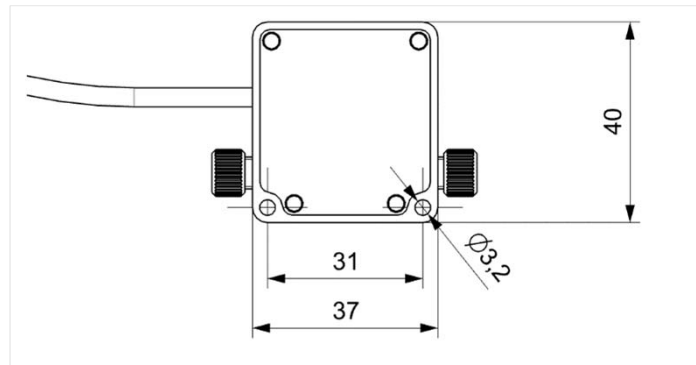


Features

- Volume flow measurements up to 100 ml/min
- Volume integrals from 50 nl
- For water, oil, fuels and other low viscous media
- Insusceptible to bubbles
- Fast response time < 2 ms
- Pressure range from -1 to 3 bars
- Bidirectional flow measurement
- OEM-options

Dimensions

Size	40 x 37 x 12 mm
Cable length	1 m
Mounting holes:	M3 (3.2 mm)
Weight	65 g
Connector	10-pole
Tube diameters	1/8" and 1/16"



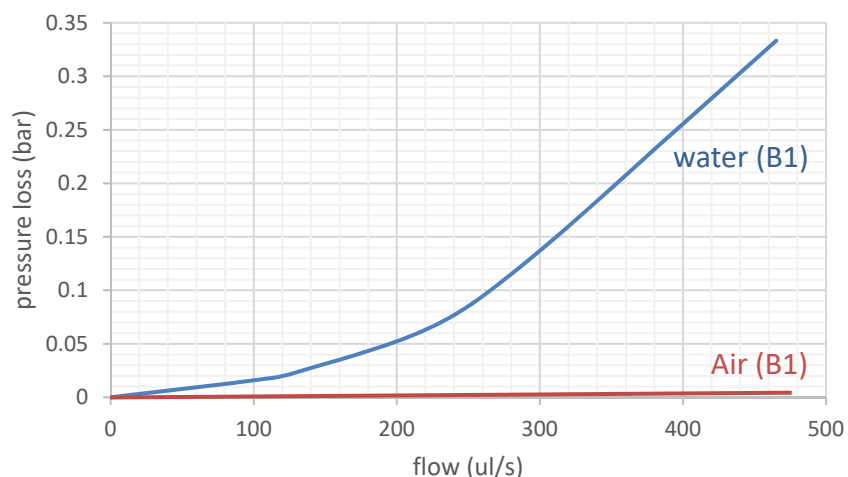
Technical Data

Mounting connectors	¼ -28 UNF flat bottom for 1/8" and 1/16" tubing
Materials in contact with media	PEEK, Fluorosilicone, NBR(/FPM)
Accuracy	2 % of measured Value (calibrated flow rate)
Repeatability	< 1 %
Output signal (with PFS-Controller)	0-5 V, Pulse, Serial
Protection	IP 65
Calibration media	water

Version Nr.		PFS-V3-B1	PFS-V3-B2	
Parameters	Symbol			Unit
Flow rate	V'	0-30	0-100	ml/min
Calibrated flow rate	V'	3-30	10-100	ml/min
Operating pressure	p _w	0-4	0-4	bar (absolute)
Burst pressure	p _b	10	10	bar
Working temperature	T _w	10-40	10-40	°C
Flow detection response time	T ₆₃	1-2	1-2	ms
Smallest orifice diameter	D _{min}	250	500	µm

Pressure loss

Due to its differential pressure measurement principle, the PFS-V3 has a flow dependent pressure loss. The chart shows a typical differential pressure for water. Air shows no significant pressure loss in the specified flow rates. The influence of air bubbles on the flow is little and dependent on the process setup.



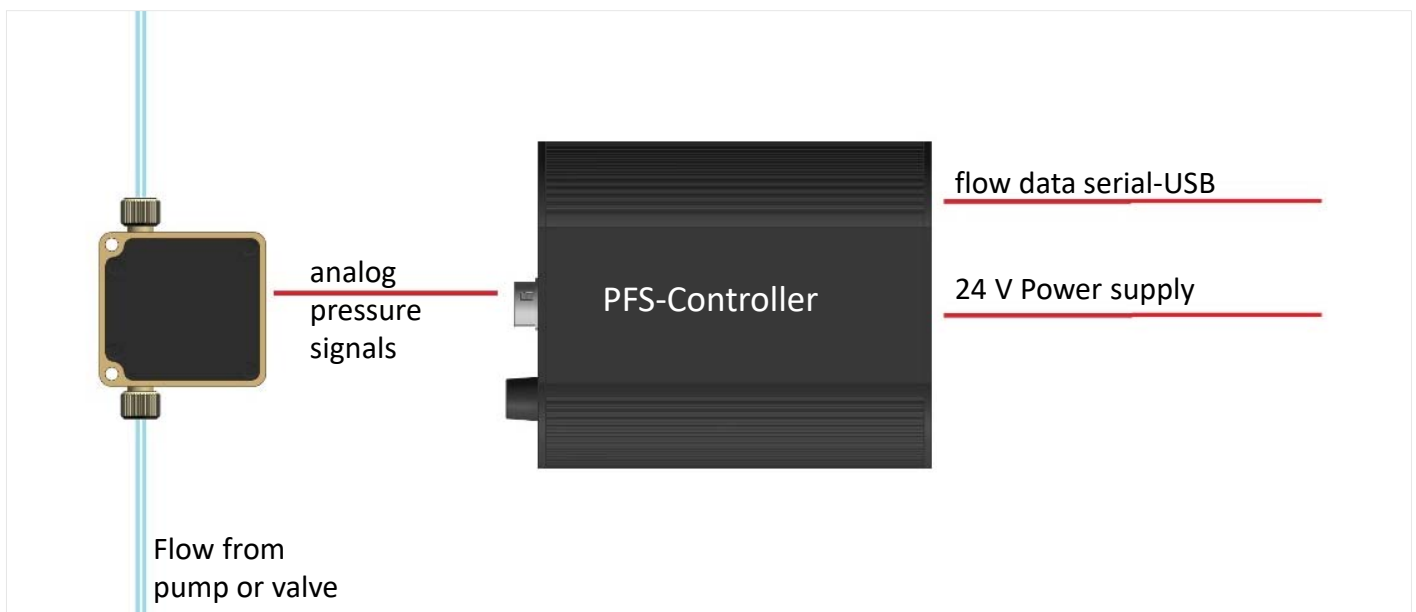
Setup with PFS-Controller

The PFS-V3 is interpreted by the ReseaTech PFS-Controller where the pressure signals are sampled at up to 20 kHz and a volume flow is calculated.

The PFS-Controller can be configured to produce customized output data, such as volume integrals. If the PFS is used together with an electromagnetic valve, the valve can also be controlled with the PFS-Controller.

Sampling options

The PFS-V3 sensor signal is interpreted by the ReseaTech PFS-Controller. In this Setup it is possible to measure triggered events (e.g. droplets) with a sample rate of up to 20 kHz. Volume Integrals of defined measurement intervals are calculated automatically. For longer measurements a continuous measurement mode is provided.



Connectors

The PFS-V3-B1 has flat-bottom $\frac{1}{4}$ -28 UNF threads for HPLC flangeless fittings. We recommend the idex XP-335 (for 1/8" PEEK tubing).



www.idex-hs.com

The PFS-V3 does not match your requirements?

ReseaTech customizes the PFS-V3 for OEM integrations! Contact us for your specific size, flow rate, viscosity or output signal requirements.