

DESCRIPTION

Sterilizable Interchangeable/ Disposable Flow Meter

The DigiFlow DFS-2W/3W flow meters have been specifically developed for use in pharmaceutical, medical, food processing and other end-use/OEM applications requiring either interchangeable or disposable components or other high volume/low unit cost applications.

The basic flow meter consists of two major assemblies:

- a sterilizable, interchangeable/disposable rotor assembly including all wetted surfaces.
- a permanent, fixed electronics/mounting assembly.

Flow meter design makes it an integral component of systems designed for accurate monitoring or flow control of liquids.

ADVANTAGES

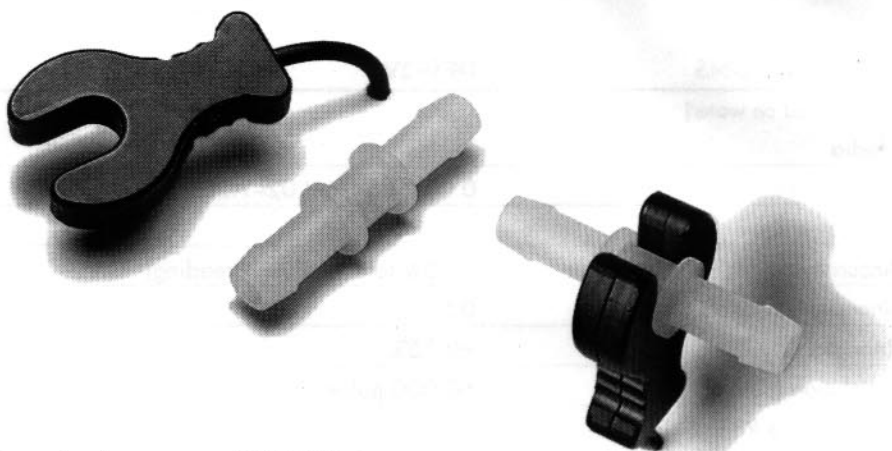
- interchangeable/disposable rotor assembly
- rotor assembly deliverable in sterile packaging
- rotor assembly easily and quickly installed
- permits continuous feedback during process of quantity dosed
- flow meter control system permits simple adjustment of different quantities
- accuracy, flow rate, and dosing rate are all independent of each other
- wetted surfaces of FDA approved materials

DESIGN FEATURES

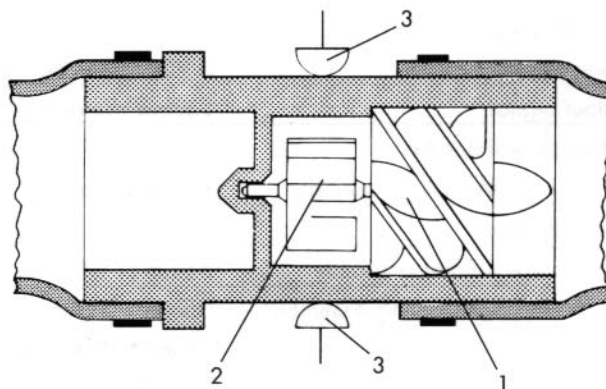
- 2 ranges from 0.07 – 25 litres/minute (.02 – 6.6 GPM)
- quantity measurements as small as 0.2 ml.
- accuracy within 0.5%
- wetted surfaces of high quality polymers
- housing of high quality polymers
- low pressure drops
- friction free fluid bearings yielding long life
- compatible with most acids and bases
- turn down ratios of up to 64 : 1
- mount in any position without flow straighteners
- infrared signal pick-up
- resolution of up to 60,000 pulses/litre (227,100/gallon)

SYSTEMS & APPLICATIONS

Connected to a basic counter, the DFS meter can monitor flow rates and/or total quantities. In conjunction with a stand-alone controller or interfaced with process control or general purpose computers, the DFS is an integral part of flow controlled processes. DigiFlow units are adaptable to a wide range of monitoring and controlling applications including: dosing of chemicals into main stream, dosing of pharmaceuticals on filling lines, medical equipment, and beverage dispensing.



Both units shown are model DFS-2W.



PRINCIPLE OF OPERATION

The fluid flows through the meter, first passing the fixed worm (1) imparting a spiral flow which, in turn, spins the rotor (2) on a virtually friction free bearing. The rotor blades interrupt an infrared beam (3), thus generating a square wave digital output signal.

The rotor is the only moving part. Due to its light weight and the helical pattern of the fluid flow, the rotor has a minimal response time, thus resulting in a very high level of resolution and exceptional accuracy, linearity, and repeatability throughout flow and viscosity ranges.

DFS meters can be mounted in any position and do not require flow straighteners or other specialized installations.

SPECIFICATIONS	DFS-2W	DFS-3W
(Data based on water)		
Media	liquids	liquids
Flow Range	0.07– 4.5 l/m (.02–1.2GPM)	0.66 – 25 l/m (.17– 6.6 GPM)
Turndown Ratio	64:1	38:1
Accuracy	±0.5% (of actual flow reading)	±0.5% (of actual flow reading)
Linearity Deviation	0.5%	0.5%
Repeatability	<0.15%	<0.10%
Resolution (pulses)	60,000 pulses/l (227,100/Gal.)	4,500 pulses/l (17,000/Gal.)
Temperature Range		
Operational	–15 to +85°C (+5 to +185°F)	–15 to +85°C (+5 to +185°F)
Static	–20 to +130°C (–4 to +266°F)	–20 to +130°C (–4 to +266°F)
Viscosity Range	0.8 – 10mm ² /s (0.8 – 10 cSt)	0.8 – 15mm ² /s (0.8 – 15 cSt)
Operational Pressure	25 bar (360 PSIG)	25 bar (360 PSIG)
Pressure Drop	0.2 bar @ 1 l/m (2.9 PSI @ .25GPM)	0.2 bar @ 5 l/m (2.9 PSI @ 1.3 GPM)
Power Supply	5 VDC, 12 – 36 mAmp*	5 VDC, 12 – 36 mAmp*
Output Signal	Square Wave	Square Wave
Materials – Rotor Assy	PVDF–Solef® (Polyvinylidene fluoride)	PVDF–Solef®
– Mounting Assembly	Polycarbonate	Acetal
Electrical Lead	1 meters (39") in length	1 meters (39") in length
Dimensions – Rotor Assembly	38mm (1.5") x 7mm (0.28")	52mm (2.05") x 12mm (0.47")
– Mounting Assembly	35mm x 23mm x 7.9mm (1.4" x 0.9" x 0.3")	30mm x 15mm x 17mm (1.2" x 0.6" x 0.7")
Connections	7mm (½") hose barb fitting	12mm (½") hose barb fitting or ⅞"-14 (M22) male thread

*Units set up internally for 5 volts. Other voltages accommodated with external resistor, or internal modification with quantity orders.

Solef® is a registered tradename of Solvay S.A.

DigiFlow Systems B.V.
Postbus 46
6580 AA Malden
The Netherlands

Ph: 31-243-582929
Fx: 31-243-586060
<http://www.avd.nl/digiflow>

DigiFlow Systems
781 Clifton Blvd
Mansfield, OH 44907
USA

Ph: (419) 756-1746
Fx: (419) 756-0643

Represented By: