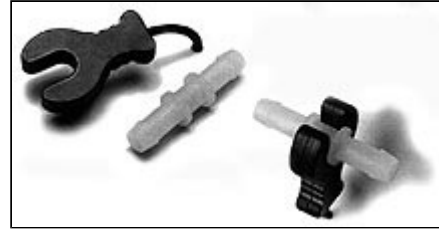


DFS-2W / 3W Disposable Flowmeters

Sterilizable Interchangeable/Disposable Flow Meter

The DigiFlow DFS-2W/3W flowmeters have been specifically designed for use in pharmaceutical, medical, food processing and other OEM/end-use applications requiring 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 which include all wetted surfaces.
- A permanent, fixed electronics/mounting assembly.



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

Design Features

- Two ranges of 0.07 – 25 litres/minute (.02 – 6.6 GPM).
- Accuracy within 0.5%.
- Wetted surfaces of high quality polymers.
- Quantity measurements as small as 0.2 ml.
- Housing of high quality polymers.
- Friction free fluid bearings yielding long life.
- Low pressure drops.
- Compatible with most acids and bases.
- Infrared signal pick-up.
- Resolution of up to 60,000 pulses/litre (227,100/gallon).
- Turn down ratios of up to 64:1.
- Mount in any position without flow straighteners.

Systems & Applications

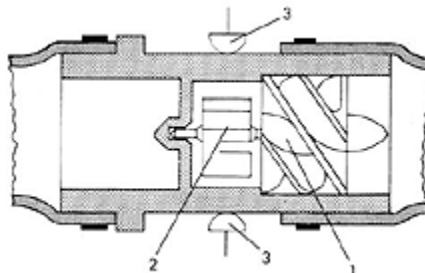
The DFS meter can monitor flow rates and/or total quantities when connected to a basic counter. . In conjunction with a stand-alone controller or interfaced with process control or general purpose computers, the DFS is an integral part of flow controlled processes. In end-use, or in OEM applications, including those requiring disposable components, the DFS is a key part in a systems approach to a wide range of monitoring and controlling applications including:

- Medical/Pharmaceutical equipment.
- Beverage dispensing
- Monitoring/Controlling fuel flows.
- Dosing of chemicals into main stream flows for agricultural, water treatment, and other requirements.
- Additive injection in chemical processes.
- Monitoring pulse feed pump flows.

Advantages

- Interchangeable/Disposable rotor assembly.
- 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.

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 turbine flow meters can be mounted in any position and do not require flow straighteners or other specialized installations. Meters are available with hose/barb, threaded and sanitary fittings, as well as with disposable rotor assemblies.

SPECIFICATIONS

(Data based on water)

	DFS-2W	DFS-3W
Media	liquids	liquids
Flow Range	0.07 - 4.5 L/m (.02 - 1.2 GPM)	0.66 - 25 L/m (0.17 - 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 pulses/Gal.)	4,500/L (17,000 pulses/Gal.)
Temperature Range	-15 to +85 °C (+5 to +185 °F)	-20 to +130 °C (-4 to +266 °F)
Static		
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 @ .25 GPM)	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®
Materials - Mounting Assy	Polycarbonate	Acetal
Electrical Lead	1 meter (39") in length	1 meter (39") in length
Dimensions - Rotor Assy	38 mm (1.5") x 7 mm (0.28")	52 mm (2.05") x 12mm (0.47")
Dimensions - Mounting Assy	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	7 mm (9/32") hose barb fitting	12 mm (15/32") hose barb fitting or 7/8"-14 (M22) male thread

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

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