

CLARK SOLUTIONS

DFS-2 Flow Sensor

Liquids to 4.5 LPM, Frequency Output

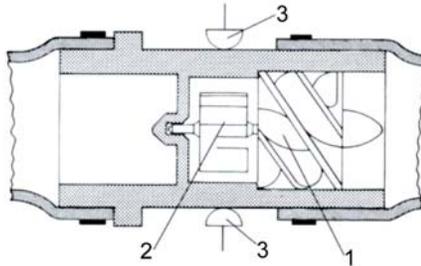
DESCRIPTION

Connected to a basic counter, the DFS flow 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. In end-use or 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.

In 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

Media :	liquids
Flow Range - Linear:	0.07 - 4.5 L/m (0.02 - 1.2 GPM)
Turndown Ratio:	64:1
Accuracy:	+/-0.5% (of actual flow reading)
Linearity Deviation:	0.5%
Repeatability:	<0.15%
Resolution Pulses (K-factor):	65,000 pulses/L (246,000 pulses/Gal.)
Oper. Temperature- Media:	-20 to +85°C (-4 to +185°F)
Static Temperature Range (no flow, useful for sterilization):	-20 to +130°C (-4 to +266°F)
Viscosity Range:	0.8 - 10mm ² /s (0.8 - 10 cSt)
Operational Pressure:	Max 20 bar (284 PSIG)*
Pressure Drop:	0.02 bar @ 1 L/m (0.29 PSI @ 0.25 GPM)
Power Supply :	5 VDC, 12 - 36 mA*
Output Signal:	Square Wave
Materials - Rotor Assy:	PVDF - Solef® (Polyvinylidene fluoride)
Materials - Housing:	PVDF - Solef®
Materials - O-rings:	Fluorine Rubber (Viton®)
Electrical Lead :	4 meters (157") in length
Dimensions - Length:	63.3 mm (2.5")
Dimensions - Max Diameter:	21.0 mm (0.83")
Connections:	7 mm (9/32") hose barb fitting, 1/4" NPT or BSP Male

OPTIONS

Materials - Housing	316L SS, other moldable polymers
Materials - O-rings	EPDM (Ethylene Propylene Rubber), or other
Output Signal	Converter to 4 - 20 mA, 1 - 5V analog signal available
Power Supply	12 - 24 VDC accommodated externally, or internal modification for OEM orders
Electrical Lead	Other lengths available / or terminal box

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

ORDERING INFORMATION

DFS-2PV4V- PVDF rotor/housing, Viton O-rings, 4 meter cable, hose barb fittings

DFS-2PV4VN- Above with 1/4" NPT male connection

DFS-2SSVN- Above with 1/4" NPT male 316L stainless outer housing

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