DPL – Low Cost - All Plastic Low Flow Paddle Wheel Sensor Excellent for Aggressive media

Benefits and Features

- Precision Flow Transducer
- Square Wave Pulse Output
- Linearity: ± 1.5% of Full Scale
- Low Pressure Drop
- Polypropylene Construction
- Sapphire Bearings
- Analog Output, Digital Indication on Request

General Description

The DPL Flow Sensor is a versatile transducer capable of accurately measuring flow rates to 400 GPH. It is ideal for applications requiring low cost, yet accurate, flow measurement of transparent liquid media. All wetted parts are made of synthetic materials, giving the DPL excellent resistance to aggressive media. The compact size of the DPL makes it an ideal candidate for jobs requiring a minimum installation size, such as in the interior of larger systems. These features make the DPL a suitable choice for a wide variety of industrial, commercial, and laboratory flow applications.

The DPL's operational principle is very simple. A jet of liquid is directed at a free running turbine in a specially shaped chamber. The turbine blade interrupts an internally generated infra-red light beam (LED) and converts this into a pulse output. The frequency of these pulses is directly proportional to flow rate. This signal may be used directly, or after processing by the optionally available frequency divider circuitry. Use of sapphire bearing components ensures that the DPL offers high linearity and excellent durability.

OPTIONAL READOUT FOR DPL MODEL 693 Pulse Input – Rate meter Totalizer

Pulse Inputs

- Pulse, open collector, NPN, PNP, TTL, switch contact, square wave inputs
- 12 VDC @ 50 mA or 24 VDC @ 20 mA excitation
- Gate function for rate display of slow pulse rates
- K-Factor, internal or external calibration
- 4-20 mA output option converts the pulse input to an isolated 4-20 mA output

5065 Vail Drive Acworth, GA 30101 Phone (770) 917-0940 Fax (770) 917-8352 Email Sales@Flow-Network.com

DPL – Low Cost - All Plastic Low Flow Paddle Wheel Sensor Excellent for Aggressive media

Specifications

Detector
Power: 4.6 to 16 VDC, 7 mA typical, 15 mA max.
Output Sink: 18 mA max.
Internal Pull-Up: 10 kohm
Output Signal: frequency Analog Output, Digital Indication on Request

Emitter (LED)
Typical Supply: 15 mA
Max. Supply: 50 mA
Forward Voltage: 1.2 VDC typical, 1.5 VDC max.
Wiring: 6 ft. PVC cable

Sensor Accuracy
Standard: ± 5% of full scale
Optional: ± 1.5 % of full scale
Sensor Linearity: ± 1.5 % of full scale

Wetted Parts
Body: Polypropylene, sapphire, polysulfone
Seals: Standard: Buna-N
Optional: Viton, EPDM

Fittings:
Standard: 1/2" bsp
Optional: hose-barb, PVC 1/2"
Max. Pressure: 145 PSIG
Temperature Range: – 40 °F to + 160 °F
Protection: NEMA 4X

Ordering Information

Range		Maximum Δ P (PSI)	Nominal Frequency at Max Flow (Hz)	Model Number	Options		
GPH	oz/sec				O-Rings	Wiring	Fittings
0.4 – 8.0	0.014 – 0.28	11	272	DPL-1005	-V: Viton		-S: Hose barbs,
0.8 – 28	0.028 – 1.0	11	471	DPL-1018	-E: EPDM	-F2: ½ frequency	PVC 1/2"
3.0 – 95	0.11 – 3.4	10	528	DPL-1060		-F4: ¼ frequency	
6.0 –190	0.21 – 6.8	15	300	DPL-1120		-F8: ⅛ frequency	
16 – 400	0.57 – 14	19	399	DPL 1250			
					Calibration for ± 1.5 % Accuracy:		Add Suffix: "-C"