

DPL PLASTIC FLOW SENSOR



Flow
Pressure
Level
Temperature
measurement
monitoring
control



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



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Model:
DPL



Features

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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 Kobold 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.

Specifications

Detector/Emitter LED:

Power: 4.5 to 12 VDC
7 mA typical
15 -25 mA max.

Output Sink: 10 mA max.
Internal Pull-Up: 10 kohm
Output Signal: NPN, Open Collector
Signal Amplitude (High): Approx. +V
Signal Amplitude (Low): $\leq 0.2V$
Output Loss: max. 2.5 mW

Analog Outputs, Digital Indication available upon request.

Wiring: 6 ft. PVC cable

Sensor Accuracy

Standard: $\pm 5\%$ of full scale

Sensor Linearity:

$\pm 1.5\%$ of full scale

Wetted Parts

Body: Polypropylene, sapphire, polysulfone

Seals: Standard: Buna-N
Optional: FKM, EPDM

Fittings: Standard: 1/2" BSPP
Optional: 1/2" PVC Hose barb

Max. Pressure: 145 PSIG
Media Temp. Range: -40°F to + 158°F
Protection: NEMA 4X/IP65

Ordering Information

| Range | | Maximum ΔP (PSI) | Nominal Frequency at Max Flow (Hz) | Model Number | Options | | |
|-----------|--------------|--------------------------|------------------------------------|--------------|----------|--|--------------------------|
| GPH | oz/sec | | | | O-Rings | Signal | Fittings |
| 0.4 – 8.0 | 0.014 – 0.28 | 11 | 272 | DPL-1005 | -V: FKM | -F2: 1/2 frequency -F4: 1/4 frequency -F8: 1/8 frequency | -S: Hose barbs, PVC 1/2" |
| 0.8 – 28 | 0.028 – 1.0 | 11 | 471 | DPL-1018 | -E: EPDM | | |
| 3.0 – 95 | 0.11 – 3.4 | 10 | 528 | DPL-1060 | | | |
| 6.0 – 190 | 0.21 – 6.8 | 15 | 300 | DPL-1120 | | | |
| 16 – 400 | 0.57 – 14 | 19 | 399 | DPL-1250 | | | |