# DPL PLASTIC FLOW SENSOR

**Flow**
**Pressure**
**Level**
**Temperature**
measurement
monitoring
control

- **Precision Flow Transducer**
- **Square Wave Pulse Output**
- **Linearity: ± 1.5% of Full Scale**
- **Low Pressure Drop**
- **Polypropylene Construction**
- **Sapphire Bearings**

S4


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Model:
DPL

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**
- **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

**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:** ½" 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, PVC 1/2" |
| 0.8 – 28 | 0.028 – 1.0 | 11 | 471 | DPL-1018 | -E: EPDM | -F2: ½ frequency | |
| 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« |



Subject to change without prior notice.