

## 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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### USA

KOBOLD Instruments Inc.  
1801 Parkway View Drive  
USA-Pittsburgh, PA 15205  
☎ +1 412-788-2830  
Fax +1 412-788-4890  
E-mail: info@koboldusa.com



### CANADA

KOBOLD Instruments Canada Inc.  
9A Aviation  
Pointe-Claire, QC H9R 4Z2  
☎ +1 514-428-8090  
Fax +1 514-428-8899  
E-mail: kobold@kobold.ca

Visit KOBOLD Online at  
[www.kobold.com](http://www.kobold.com)

Model:  
DPL

### Features

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- Low Pressure Drop
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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

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

**Optional:**  $\pm 1.5\%$  of full scale

#### Sensor Linearity:

$\pm 1.5\%$  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 $\Delta P$ (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	-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			
					Calibration for $\pm 1.5\%$ Accuracy:		Add Suffix: "-C"