Low Volume, Rotating Vane Flowmeter
for Liquids

- Ranges: 0.4...8.0 to 16...400 GPH
- Linearity: ± 1%
- Max. Pressure: 145 PSIG
- Max. Temperature: 158 °F
- Connection: G 1/2, Hose Barb
- Square Wave Pulse, Analog, or Switch Outputs
- PP Housing, Sapphire Bearings
Low Volume, Rotating Vane Flowmeter Model DPL

Description

The KOBOLD DPL is ideal for applications requiring a low cost, accurate means of measuring transparent liquids. With all wetted parts constructed of synthetic materials, it resists aggressive media. The compact size is ideal for situations providing minimum installation space. It is suited for a variety of industrial, commercial, and laboratory applications. The principle of operation is as follows: a jet of liquid is directed at a free running turbine in a specially shaped chamber. The blade interrupts an internal infra-red beam and converts this into a pulse output with a frequency that is directionally proportional to the rate of flow. Sapphire bearings ensure high linearity and durability.

Technical Details

Accuracy: ± 2.5% of Full Scale
± 5% of Full Scale (OEM Version)
Linearity: ± 1% of Full Scale
Media Temperature: -40...158 °F
Ambient Temperature: -22...140 °F
Max. Pressure: 145 PSIG
Protection: IP 65
Materials
Housing: Polypropylene
Rotating Vane: Polypropylene
Axle/Bearing: Sapphire
Vane Mount: Polysulfone
Gasket: NBR, FKM, or EPDM

Frequency Output (OEM without CE-Mark)
Power Supply: 4.5 - 12 VDC
Supply Current: ± 7 mA
Signal Amp. High: Approx. Power Supply
Signal Amp. Low: ≤ 0.2 V
Trans. Supply Current: 10 - 12 mA
Output Loss: Max. 2.5 mWatt
Electrical Connection: 5' Cable, 5-wire
Pulse Output: NPN, Open Collector, Max. 10 mA

Analog Output
Power Supply: 24 VDC ± 20%
Output: 4-20 mA, 3-wire
Max. Load: 500 Ω
Electrical Connection: Plug Connector M12x1 or DIN 43 650
Option: Plug-on Display (DIN 43 650 Only)

Compact Electronic
Display: 3-Digit, LED
Analog Output: 4-20 mA, Adjustable, Max. 500 Ω
Switching Outputs: 1 (2) Semiconductor, PNP or NPN, Factory Set
Contact Operation: Programmable N/C or N/O
Setting: Via 2 Buttons
Power Supply: 24 VDC ± 20%, Approx. 100 mA, 3-wire
Electrical Connection: Plug Connector M12x1

Pointer Indication with Analog Output
Housing: Aluminum (PA6 GF30)
Display: Moving Coil Instrument, 240°
Power Supply: 24 VDC ± 20%
Output: 4-20 mA, 3-wire, Factory Set
Max. Load: 250 Ω
Electrical Connection: Plug Connector M12x1
Low Volume, Rotating Vane Flowmeter Model DPL

**Order Details (Example: DPL-1PU1 G4 K000)**

<table>
<thead>
<tr>
<th>Range (GPH)</th>
<th>Nominal Frequency at Max. Flow (Hz)</th>
<th>Max. Diff. Pressure (PSI)</th>
<th>Model / Gasket Material</th>
<th>Connection</th>
<th>Electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4...8.0</td>
<td>272</td>
<td>11</td>
<td>DPL-1PU1.. DPL-1VU1.. DPL-1EU1..</td>
<td>..K000 = Frequency Output, NPN, w 5’ Cable (OEM), no CE-mark</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>..F300 = Frequency Output, Plug M12x1, PNP</td>
</tr>
<tr>
<td>0.8..28</td>
<td>471</td>
<td>11</td>
<td>DPL-1PU2.. DPL-1VU2.. DPL-1EU2..</td>
<td>..L343 = 4-20 mA Output, M12x1 Plug</td>
<td></td>
</tr>
<tr>
<td>3.0...95</td>
<td>505</td>
<td>10</td>
<td>DPL-1PU3.. DPL-1VU3.. DPL-1EU3..</td>
<td>..L443 = 4-20 mA Output, Din 43 650 Plug</td>
<td></td>
</tr>
<tr>
<td>6.0...190</td>
<td>265</td>
<td>15</td>
<td>DPL-1PU4.. DPL-1VU4.. DPL-1EU4..</td>
<td>..C30R = LED Display, 2X Open Collector, PNP, Plug M12x1</td>
<td></td>
</tr>
<tr>
<td>16...400</td>
<td>399</td>
<td>19</td>
<td>DPL-1PU5.. DPL-1VU5.. DPL-1EU5..</td>
<td>..C34P = LED Display, 4-20 mA, 1 Open Collector, PNP, Plug M12x1</td>
<td></td>
</tr>
</tbody>
</table>

Accessories: Part Number 807.037 = Mating 4 pin Micro-DC connector with 6 ft. cable for output ..F300 & ..L343
Part Number 807.007 = Mating 5 pin Micro-DC connector with 6 ft. cable for output ..C34P, ..C30R & ..Z340

**Plug-On Display:** for Model DPL-..L443 (4-20 mA Output, DIN Plug Connector)

<table>
<thead>
<tr>
<th>Description</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Digit LED, Plug Connector DIN 43 650, 3-wire, Power Supply Via Analog Output</td>
<td>AUF-3000</td>
</tr>
</tbody>
</table>

**Electrical Connection**

- **DPL-..K000**

- **DPL-..L343, ..Z340, ..F300**

- **DPL-..C3xx**

- **DPL-..L443**
Low Volume, Rotating Vane Flowmeter Model DPL

Dimensions

DPL-.K000

DPL-.F300, ..L343

DPL-.L443 (Analog Output with AUF-3000 Plug-on Display)

DPL-.C3xx (Compact Electronic)

DPL-.Z340 (Analog Output and Pointer Indication)