

Low Volume, Rotating Vane Flowmeter for Liquids



measuring
•
monitoring
•
analyzing

DPL



- Ranges: 0.4...8.0 to 16...400 GPH
- Linearity: $\pm 1\%$
- 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



KOBOLD companies worldwide:

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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. Cut-Off Voltage: 3 V Max.
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

Frequency Output

Power Supply: 24 VDC ± 20%
Supply Current: 40 - 50 mA
Signal Amp. High: Approx. Power Supply
Signal Amp. Low: ≤ 0.2 V
Output Loss: Max. 2.5 mWatt
Electrical Connection: Plug M12x1
Pulse Output: PNP, Open Collector, Max. 20 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



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

| Range (GPH) | Nominal Frequency at Max. Flow (Hz) | Max. Diff. Pressure (PSI) | Model / Gasket Material | | | Connection | Electronics |
|-------------|-------------------------------------|---------------------------|-------------------------|------------|------------|--|---|
| | | | NBR | FKM | EPDM | | |
| 0.4...8.0 | 272 | 11 | DPL-1PU1.. | DPL-1VU1.. | DPL-1EU1.. | ..G4.. = G 1/2 Male ..S4.. = Hose Barbs, 1/2" PVC | ..K000 = Frequency Output, NPN, w 5' Cable (OEM), no CE-mark ..F300 = Frequency Output, Plug M12x1, PNP ..L343 = 4-20 mA Output, M12x1 Plug ..L443 = 4-20 mA Output, DIN 43 650 Plug ..C30R* = LED Display, 2X Open Collector, PNP, Plug M12x1 ..C34P* = LED Display, 4-20 mA, 1 Open Collector, PNP, Plug M12x1 ..Z340* = 240° Pointer Indication, 4-20 mA, Plug M12x1 |
| 0.8...28 | 471 | 11 | DPL-1PU2.. | DPL-1VU2.. | DPL-1EU2.. | | |
| 3.0...95 | 505 | 10 | DPL-1PU3.. | DPL-1VU3.. | DPL-1EU3.. | | |
| 6.0...190 | 265 | 15 | DPL-1PU4.. | DPL-1VU4.. | DPL-1EU4.. | | |
| 16...400 | 399 | 19 | DPL-1PU5.. | DPL-1VU5.. | DPL-1EU5.. | | |

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

* Please specify flow direction when ordering

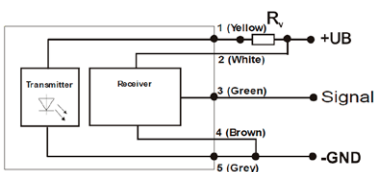
Plug-On Display: for Model DPL-..L443 (4-20 mA Output, DIN Plug Connector)

| Description | Model Number |
|--|-----------------|
| 4-Digit LED, Plug Connector DIN 43 650, 3-wire, Power Supply Via Analog Output | AUF-3000 |

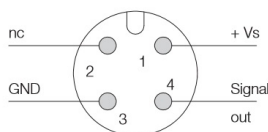


Electrical Connection

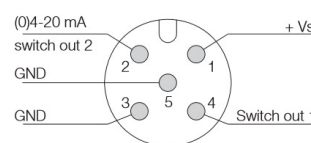
DPL-..K000



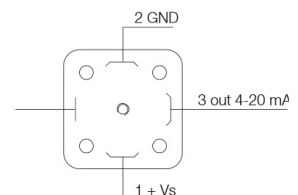
DPL-..L343, ..Z340, ..F300



DPL-..C3xx



DPL-..L443

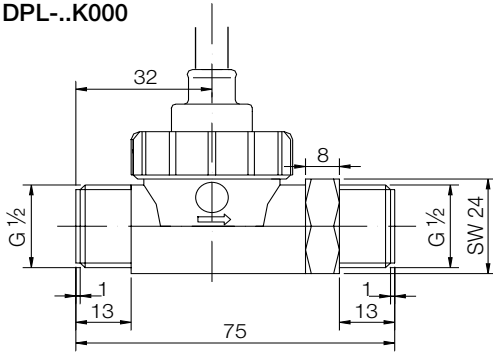




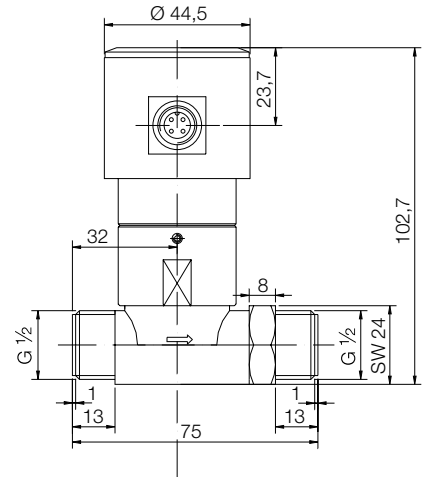
Low Volume, Rotating Vane Flowmeter Model DPL

Dimensions

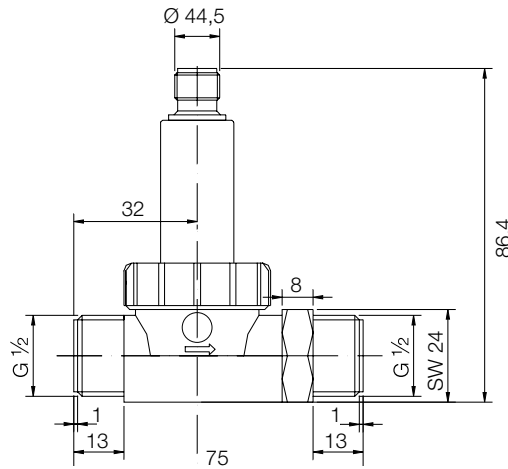
DPL-..K000



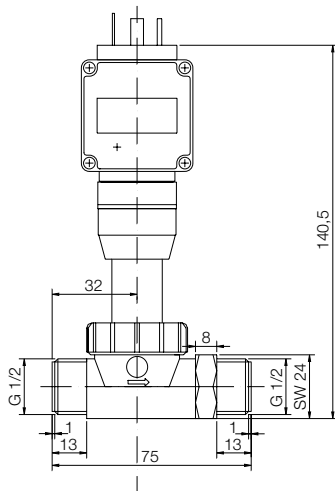
DPL-..C3xx (Compact Electronic)



DPL-..F300, ..L343



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



DPL-..Z340 (Analog Output and Pointer Indication)

