

DPM PELTON WHEEL FLOW SENSOR



Flow
Pressure
Level
Temperature
measurement
monitoring
control



- Flow Ranges 0.24-11.1 GPH to 0.8-80 GPH
- Brass or Stainless Steel Bodies
- Pulse or 4-20 mA Outputs
- Long-Life Sapphire Axle/Bearing Assembly
- Compact Design

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Model:
DPM



Features

- Flow ranges 0.24-11.1 GPH to 0.8-80 GPH
- Brass or stainless steel bodies
- Pulse or 4-20 mA outputs
- Long-life sapphire axle/bearing assembly
- Compact Design

The DPM series flow sensor uses the pelton wheel principle to measure the flows of water and low viscosity liquids. Liquid passes through a nozzle at the inlet of the flow body and is precisely directed onto a flat blade pelton turbine. The turbine wheel rotates at a speed which is proportional to flow rate. The movement of the pelton wheel is detected optically. The signal from the optical sensor is processed as an amplified pulse or 4-20 mA signal which are proportional to flow rate. In addition to the compact design, the inlet flow is redirected via a nozzle, therefore no inlet or outlet straight piping is required and the sensor can be mounted in any orientation. These features make the DPM ideal for mounting in locations where space is tight.

Specifications

Accuracy: ±1.5% of full scale

Maximum Pressure: 230 PSIG

Operating Temperature: -10 to 176°F

Materials of Construction

Housing: 316L stainless steel or brass depending on model number

Nozzle: 316L stainless steel
Axle/Bearing: Sapphire

Pelton Wheel: Polypropylene

Receiver: Polysulfone

O-ring: NBR for brass housings, FKM for 316L SS housings



KOBOLD DPM Series Pelton Wheel Turbine

Electrical Specifications

Frequency Output

Output Type: PNP open collector, 25 mA max.

Input Power: 24 VDC ±20%

Frequency Range: Based on model number

Electrical Protection: NEMA 4X/IP 65

Electrical Connection: 6 ft. PVC cable or Micro-DC plug, 4-pin male

4-20 mA Output

Output Type: 4-20 mA, 3-wire

Max. Loop Load: 500 ohms

Power Requirement: ±24 VDC 20%

Electrical Protection: NEMA 4X

Electrical Connection: Micro-DC plug, 4-pin male or DIN 43650 (hirschmann) plug

Compact Electronics

Output Types: Analog output with 1 open collector switch or 2 open collector switches

Analog Output: 4-20 mA, 3-wire RL<500 ohms

Switch Type: PNP open collector based on ordering code

Switch Rating: 300 mA Max. short circuit protected

Power Requirement: 24 VDC ±20%

Display Type: 3 digit LED

User Programmable Functions: Transmitter span, switch setpoint, lockout code

Housing: 304 SS, NEMA 4X

Electrical Connection: Micro-DC plug, 5-pin male

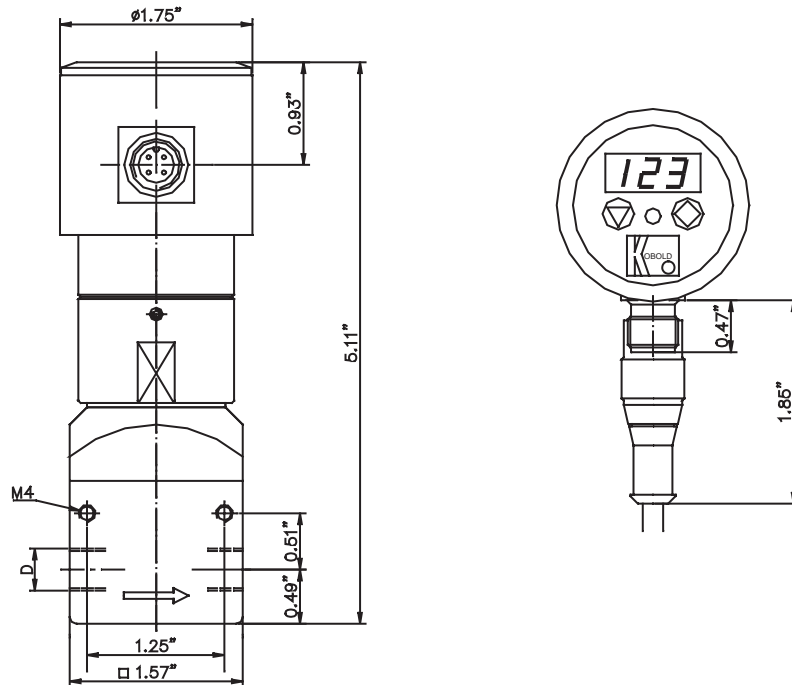
Ordering Information

Range GPH Water	DP at Max. Flow (PSI)	Housing Material		Fitting Size	Output/Electronic
		Brass	316L SS		
0.24-11.1	16.8	DPM-1157...	DPM-1557...	N1=1/8" NPT N2=1/4" NPT	F300 = Frequency output Micro-DC plug F500 = OEM Frequency output with 6ft. PVC cable L343 = 4-20 mA, 3-wire output with Micro-DC Plug L443 = 4-20 mA, 3-wire output with DIN 43650 plug C34P = Compact electronics 4-20 mA + 1 PNP switch C30R = Compact electronics 2 PNP switches Z340 = Analog Indicator +4-20 mA, 3-wire
0.8-15.0	17.7	DPM-1160...	DPM-1560...		
0.8-30.0	13.2	DPM-1170...	DPM-1570...		
0.8-48.0	8.8	DPM-1180...	DPM-1580...		
0.8-60.0	8.3	DPM-1190...	DPM-1590...		
0.8-80.0	8.3	DPM-1195...	DPM-1595...		
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					

Example: DPM-1157N1F300

DIMENSIONS

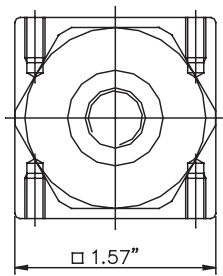
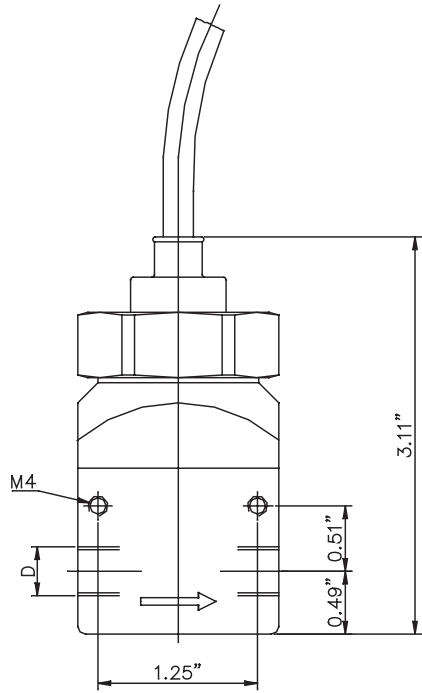
Compact Electronics



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DIMENSIONS

OEM Frequency Output



DPM w/ Micro-DC Plug

