

POSITIVE DISPLACEMENT FLOW METERS

FPD4000 Series



- ✓ ±0.5% Rdg Accuracy
- ✓ Aluminum, 303 or 316 SS Bodies
- ✓ Pressure Rating Up to 345 bar (5000 psi)
- ✓ Pulse or mA Outputs Available
- ✓ Bi-Directional Flow Capabilities
- ✓ Economical Cost

The FPD4000 Series represents a positive displacement meter that is affordable and accurate. One primary feature is the ability to maintain consistent accuracy despite changing viscosity conditions. This reliability, coupled with a large turndown range, offers an affordable replacement for older turbine technology. The meter's solid construction and excellent dynamic response are well suited to the measurement of oil, grease, fuel, solvents, polyurethanes, brake fluid, skydrol as well as other nonabrasive lubricating fluids. Since there is no need for straight run piping upstream or downstream of the flowmeter, the FPD4000 flow meters are simple to use and to install. The meters produce good resolution and high accuracy at low flow rates. Flow may be bi-directional, such as for cylinder position measurements, without damage to internal parts.



FPD4012 shown smaller than actual size.

SPECIFICATIONS

Accuracy: ±0.5% over 10:1 turndown with 30cP fluid

Repeatability: ±0.1%

Max Fluid Temperature:

Aluminum Body: Meter 85°C (185°F)

Stainless Body: Meter 204°C (400°F)

Pressure Maximum: 413 bar (6000 psi)

Wetted Materials

Body:

FPD2000 Series: Aluminum

FPD2010 Series: 303 SS

FPD2020 Series: 316 SS

Gear: Stainless steel

O-Ring: PTFE, FKM (optional)

Bearings: Stainless steel

Outputs

Temperature Range (Electronics): Standard

Aluminum and SS versions -40 to 85°C (-40 to 185°F)

(-HT) up to 149°C (300°F).

Square Wave: (Basic unit)

Supply Voltage: +10 to 28 Vdc

Supply Current: 8 mA @ 12 Vdc, 12 mA @ 24 Vdc

Duty Signal: 50% ±15%

Minimum Signal: 0.5 Hz

Frequency: Flow dependent, up to 2000 Hz

Driving Capacity: 50 mA max resistive load

Output Impedance: 40 Ω - analog switch and self-resetting fuse

Analog Output (-A Models)

Supply Voltage: 10 to 30 Vdc

Output: 4 to 20 mA

Input: 0.25 Hz to 5 kHz

Amplitude: 1 to 40 Vp-p

Update Time: 1/F + 25 msec

Linearity: ±0.01% rdg

Model No.	Pulses/Liter (Pulses/Gallon)	Body Dia cm (inch)	*Body Height cm (inch)	Filtration (microns)
FPD40X1	14,000 (53,000)	7.6 (3)	8.6 (3.4)	30
FPD40X2	4200 (15,900)	8.4 (3.3)	8.6 (3.4)	30
FPD40X3	1700 (6600)	8.4 (3.3)	8.6 (3.4)	30
FPD40X4	470 (1800)	12.4 (4.9)	13.8 (5.45)	30
FPD40X5	420 (1600)	21.3 (8.4)	17 (6.7)	200

* On analog output models (FPD2XXX-A) add 12 cm (4.8") to the body height to obtain overall height.



DPF75 shown smaller than actual size.

To Order			
Model No.	NPT	Range LPM (GPM)	Description
FPD4001	¼	0.01 to 3 (0.003 to 0.8)	Aluminum gear meter with pulse output
FPD4002	¼	0.04 to 7.5 (0.01 to 2)	Aluminum gear meter with pulse output
FPD4003	½	0.11 to 26.4 (0.03 to 7)	Aluminum gear meter with pulse output
FPD4004	¾	0.19 to 75 (0.05 to 20)	Aluminum gear meter with pulse output
FPD4005	1¼	1.9 to 227 (0.5 to 60)	Aluminum gear meter with pulse output
FPD4001-A	¼	0.01 to 3 (0.003 to 0.8)	Aluminum gear meter with 4 to 20 mA output
FPD4002-A	¼	0.04 to 7.5 (0.01 to 2)	Aluminum gear meter with 4 to 20 mA output
FPD4003-A	½	0.11 to 26.4 (0.03 to 7)	Aluminum gear meter with 4 to 20 mA output
FPD4004-A	¾	0.19 to 75 (0.05 to 20)	Aluminum gear meter with 4 to 20 mA output
FPD4005-A	1¼	1.9 to 227 (0.5 to 60)	Aluminum gear meter with 4 to 20 mA output
FPD4011	¼	0.01 to 3 (0.003 to 0.8)	303 SS gear meter with pulse output
FPD4012	¼	0.04 to 7.5 (0.01 to 2)	303 SS gear meter with pulse output
FPD4013	½	0.11 to 26.4 (0.03 to 7)	303 SS gear meter with pulse output
FPD4014	¾	0.19 to 75 (0.05 to 20)	303 SS gear meter with pulse output
FPD4015	1¼	1.9 to 227 (0.5 to 60)	303 SS gear meter with pulse output
FPD4011-A	¼	0.01 to 3 (0.003 to 0.8)	303 SS gear meter with 4 to 20 mA output
FPD4012-A	¼	0.04 to 7.5 (0.01 to 2)	303 SS gear meter with 4 to 20 mA output
FPD4013-A	½	0.11 to 26.4 (0.03 to 7)	303 SS gear meter with 4 to 20 mA output
FPD4014-A	¾	0.19 to 75 (0.05 to 20)	303 SS gear meter with 4 to 20 mA output
FPD4015-A	1¼	1.9 to 227 (0.5 to 60)	303 SS gear meter with 4 to 20 mA output
FPD4021	¼	0.01 to 3 (0.003 to 0.8)	316 SS gear meter with pulse output
FPD4022	¼	0.04 to 7.5 (0.01 to 2)	316 SS gear meter with pulse output
FPD4023	½	0.11 to 26.4 (0.03 to 7)	316 SS gear meter with pulse output
FPD4024	¾	0.19 to 75 (0.05 to 20)	316 SS gear meter with pulse output
FPD4021-A	¼	0.01 to 3 (0.003 to 0.8)	316 SS gear meter with 4 to 20 mA output
FPD4022-A	¼	0.04 to 7.5 (0.01 to 2)	316 SS gear meter with 4 to 20 mA output
FPD4023-A	½	0.11 to 26.4 (0.03 to 7)	316 SS gear meter with 4 to 20 mA output
FPD4024-A	¾	0.19 to 75 (0.05 to 20)	316 SS gear meter with 4 to 20 mA output

Accessories

Model No.	Description
DPF75	Pulse input 6-digit panel meter for rate or total

Comes complete with operator's manual, K-factor certificate, and connector. Certificate does not include points and is not a NIST certificate. For High Temperature option on stainless steel models, add suffix "-HT" to model number, for additional cost.

Ordering Examples: FPD4003, aluminum gear meter with pulse output, ½ NPT connections, 0.03 to 7 GPM range and DPF701 digital

⅛ DIN panel meter with red LED display.

FPD4012-A, 303 SS gear meter with 4 to 20 mA output, ¼ NPT, 0.01 to 2 GPM range.