

# Paddlewheel Flow Sensor Systems



Shown Smaller Than Actual Size

OMEGA® FP7000 paddlewheel flow sensors are ideal for accurate monitoring of typical industrial water flows, hard-to-handle corrosive aqueous solutions, and high purity fluids (see "Wetted Materials" for details). The FP7000 utilises a paddlewheel-like rotor whose motion is converted into a high-level square wave pulse output by an open collector Hall effect sensor. Pulse amplitudes from 5 to 18 V are possible, depending on input power. The DPF700 Series panel meter

supplies power for the flow sensor and provides rate indication, or totalisation and batch control (when ordered with the dual relay option). When ordered with the analogue output option, the DPF700 can be used to interface the FP7000 flow signal to such items as strip chart recorders, dataloggers, and computer interfaces.

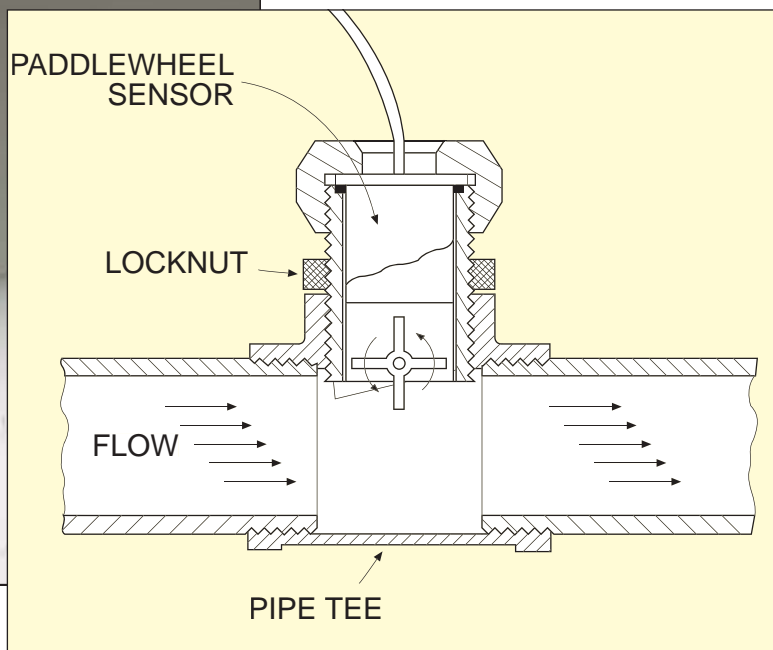
The system consists of the flow sensor, a pipe fitting, and the electronics. The glue on PVC tee

Model FP7000

£164



- ✓ Very Economical
- ✓ Wide Chemical Compatibility
- ✓ High Level Pulse Output - No Amplifier Needed



fittings are supplied with a PVC locking nut.

The FP7000 is not compatible with FP-5300 or FMG-5300 Series installation fittings. When powered with 5 Vdc, the FP7000 has a TTL level pulse output which can be used with a variety of pulse input flow indicators, signal conditioners and controllers. It is not compatible with the FPM 5500/5740.





DPF700 Series compatible indicators, for flowrate, or total or batch control (sold separately)  
See Section S

## Preliminary Specifications

**Accuracy:**  $\pm 2\%$  of full scale

**Repeatability:**  $\pm 1\%$  of full scale

**Power:** 5 to 18 Vdc @ 10 mA maximum

**Wetted Materials:** FP7000 Series sensor: polypropylene body, PVDF paddle, Viton™ O-ring, 316SS shaft. PVC tee has PVC insert and locking nut.

### Fluid Temperature/Pressure Range:

Do not exceed the maximum ratings of your piping. The operating temperature/pressure may be limited by your piping and not by the sensor. For all PVC tee fittings, do not exceed 10bar @ 27°C, 6.9bar @ 38°C, 4bar @ 49°C 2bar @ 60°C, due to the insert in the tee. FP7000 sensor: 0 to 26°C up to 10bar; max. pressure decreases 75mbar per each .56°C above 27°C for a max. temperature of 93°C at 1.2bar max.

**Frequency Output:** Nominal 0.3 Hz/m/s. amplitude of open collector pulse = Vdc input power

**Cable Length:** 2.4 m (8 feet)

### Weight:

**FP7001:** 0.2 kg (½ lb)

**FP7030:** 4.3 kg (9½ lb)

**Max Viscosity:** 5 cps



Available with PVC Pipe Fittings

## Sensors

**HIGHLIGHTED MODELS IN STOCK FOR FAST DELIVERY!**

### To Order (Specify Model Number)

Model No.	Price	Description
<b>FP7001</b>	<b>£164</b>	Polypropylene body/316SS shaft

Comes with complete operator's manual.

**Ordering Example:** FP7001 plus FP7007, paddlewheel sensor and fitting.

## Required Installation Fittings (Includes Locking Nut)

PVC, Sched. 40*					
Model No.	Price	Lay Length m (in)	K Factor	Pipe Size	Range l/m
<b>FP7007</b>	<b>£63</b>	0.53 (21)	108.78	¾"	7.6-110
<b>FP7010</b>	<b>63</b>	0.66 (26)	70.53	1"	11-190
<b>FP7012</b>	<b>66</b>	0.79 (31.25)	41.16	1¼"	19-340
<b>FP7015</b>	<b>74</b>	0.95 (37.5)	29.46	1½"	26-470
<b>FP7020</b>	<b>82</b>	1.27 (50)	15.52	2"	42-775
<b>FP7025</b>	<b>86</b>	1.59 (62.5)	11.40	2½"	56-1075
<b>FP7030</b>	<b>103</b>	1.91 (75)	6.64	3"	95-1740

\*All fittings include some straight pipe.

**Ordering Example:** To purchase a complete system, order:

- 1) Flow Sensor
- 2) Installation Fitting
- 3) Electronics

**Example:** FP7001 sensor (polypropylene body/316SS shaft), FP7012 PVC installation fitting, plus DPF701 panel meter, £164 + 66 + 213 = **£443**.