

LIGHTSPEED™ Fibre Optic Paddlewheel Flow Sensors – Inherently Safe Design

FP9000 Series

£185



- ✓ Unique Fibre-Optic Design for Hazardous Areas
- ✓ Fibre-Optic Signal – Insensitive to Electrical Interference
- ✓ Non-Magnetic Design Resists Fouling from Rust
- ✓ Optical Interface

FP9000 Series LIGHTSPEED™ paddlewheel flow sensors are ideal for applications with low viscosity solutions (like water) which are low in suspended solids.

A patented fibre-optic sensing mechanism makes these sensors especially well suited for applications in hazardous environments, where the paddlewheel electronics can be mounted in a non-hazardous location and the near-infrared light signal can be sent down an optic cable to the paddlewheel inside the hazardous location. This non-magnetic design tolerates some rust, often found in iron pipes. FP9000 Series flow sensors must be used with the companion FP9000 Series pipe installation fittings.

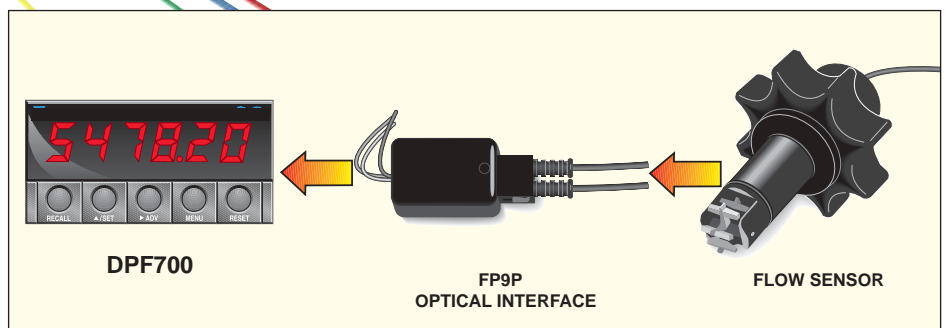
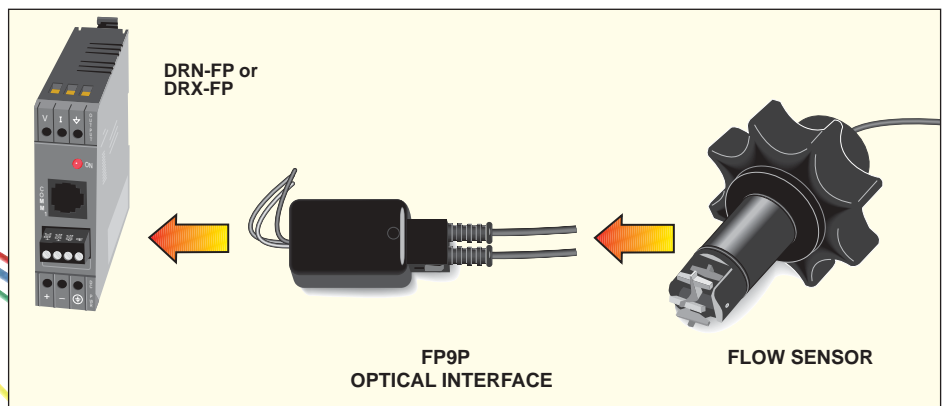
The high amplitude pulse output from the FP9P opto-electronic interface is ideally suited for hook up to the model DPF700 ratemeter/totaliser. For 4-20 mA output, connect to OMEGA's FLSC90 Series signal conditioner. (Please specify fitting and calibration range for the 4-20 mA output.) The FLSC90 includes the required optical interface for the FP9000 sensor.

Flow Sensor Specifications

Pipe Size	Range (l/m)		Accuracy (% Full Scale)	Repeatability (% of Full Scale)	Nominal K Factor	Nominal Hz @ 3.8l/m
	Min.	Max.				
0.5"	3.8	75	±2%	±2%	938	15.6
0.75"	7.6	113	±2%	±2%	528	8.80
1.0"	15	208	±2%	±2%	322	5.37
1.25"	17	340	±2%	±2%	161	2.68
1.5"	30	473	±2%	±2%	112	1.87
2.0"	57	757	±2%	±2%	63.6	1.06
2.5"	75	1135	±2%	±2%	48.4	0.807
3.0"	95	1890	±3%	±3%	15.5	0.258

FP9001 Sensor shown with FP9P-T interface

Covered by U.S. and Foreign Patents and Pending Applications

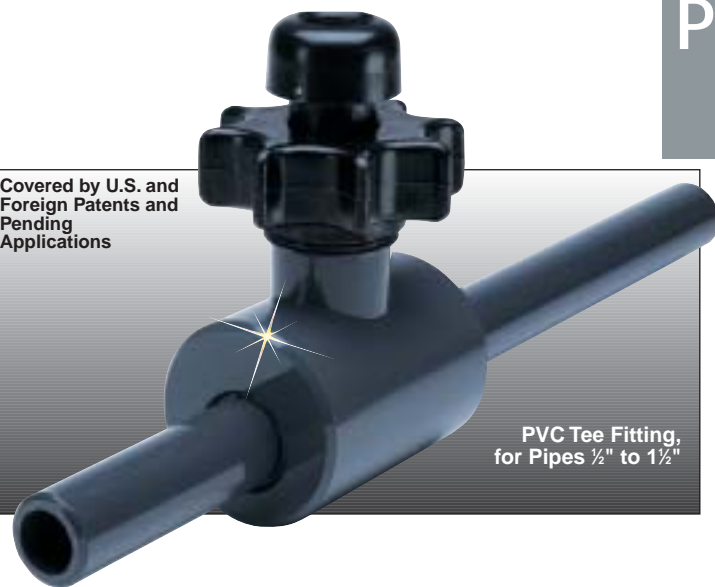




FP9001 Sensor with FP9P-T interface

Model FP9001 Sensor
Wetted Parts: Polypropylene body and impeller, Hastelloy C shaft, Viton® O-rings, acrylic fibre-optic cable
Maximum Fluid Viscosity: 1 centipoise
Temperature/Pressure: ½" PVC fitting: 100 psi @ 23°C, 50 psi @ 60°C; ¾" to 1½": 200 psi @ 23°C, 100 psi @ 60°C; 2" to 3": 200 psi @ 23°C (73°F), 50 psi @ 60°C (140°F)
Fibre-Optic Cable Length: 2.7 m (9')
Sensor Weight: 0.45 kg (1 lb)

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PVC Tee Fitting, for Pipes ½" to 1½"

Flow Sensor Ordering Guide

IN STOCK FOR FAST DELIVERY!

To Order (Specify Model No.)

Model No.	Price	Description
FP9001*	£185	Paddlewheel sensor for pipes ½" to 3"

*Must be used with FP9P, FP9250, or FLSC90 optical interface. Please order separately below.

Installation Fittings* PVC Schedule 80

Model No.	Price	Pipe Size	Flow Range (l/m)
FP9005	£66	½"	3.8-75
FP9007	74	¾"	7.6-113
FP9010	74	1"	15-208
FP9012	82	1¼"	17-340
FP9015	82	1½"	30-473
FP9020	82	2"	57-757
FP9025	82	2½"	75-1135
FP9030	98	3"	95-1890

*Note: PVC fittings from ½" to 1½" are tee-style; those from 2" to 3" are saddle-type.

Works With:



DP41-U Universal Panel Meter See Section S



FLSC-90A Signal Conditioner See Page P-15

DRN-FP/DRX-FP Signal Conditioners See Page P-17



DPF400 Digital Flow Meter See Section S



DPF700 Digital Flow Meter See Section S



FP9P OPTO-ELECTRONIC INTERFACE

Power Input: 12 to 28 Vdc @ 25 mA maximum
Pulse Output: TTL level output versions
Dimensions: 41 L x 17 W x 15.9 mm H (1½ x ⅙ x ⅝")
Weight: 170 g (6 oz)
Operating Temp. Range: 0 to 60°C (32 to 140°F)



Accessories

Model No.	Price	Description
FP9P-T	£127	Optical-to-TTL pulse interface
DRN-PS-1000	123	DIN Rail Mount power supply, 95 to 240 Vac input, 24 Vdc out
TX4-100	23.25	4-wire shielded cable, 30 m

Ordering Example:

Qty	Description	Price
1	FP9001, sensor	£185
1	FP9010, fitting for 1" pipe	74
1	FP9P-T, optical pulse interface	127
1	DRN-PS-1000 power supply	123
1	TX4-100 4-wire shielded cable, 30 m	23.25
Total		£532.25

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