

F3.10 Paddlewheel MINIFLOW Sensor



The simple and reliable paddlewheel technology has been moved into this new MINIFLOW sensor type F3.10, designed for use with every kind of solid-free liquids. The sensor can measure flow from 0.25 m/s (0.8 ft/s) producing a frequency output signal highly repeatable. A rugged construction and a proven technology guarantee exceptional performances with little or no maintenance required. The very small dimension and a special design make it suitable for installation on FIP standard Tee-fittings from DN15 to DN40 (0.5 to 1.5 in.).

Main Features

- IP 68 enclosure.
- ABS body with EPDM or FPM seal.
- ABS 4-blade paddlewheel (no bearings).
- Mono-directional design.
- Installation on standard FIP tees.

Applications

- Water treatment.
- Filtration systems.
- Pure water production.
- Water monitoring.
- Fertigation.

Operating principle

The flow sensor consists of a transducer and a four-blade paddlewheel using insertion technology. The paddlewheel is equipped with a permanent magnet integrated in two blades. As the magnet passes close to the transducer a pulse is generated.

When liquid flows into the pipe, the paddlewheel is set in rotation producing a square wave output signal. The frequency is proportional to the flow velocity.

Connections to FlowX3 Instruments

FLOWX3 Sensor	FLOW X3 Instruments						
F310.H	F9.00	F9.01	F9.02	F9.03	F9.20	F9.50	F9.51
	■	■	■	■		■	■

Dimensions



41 mm
1,6 in.

Length = 41 mm (1,6")
Width = 20 mm (0,8")
Cap = 3/4"

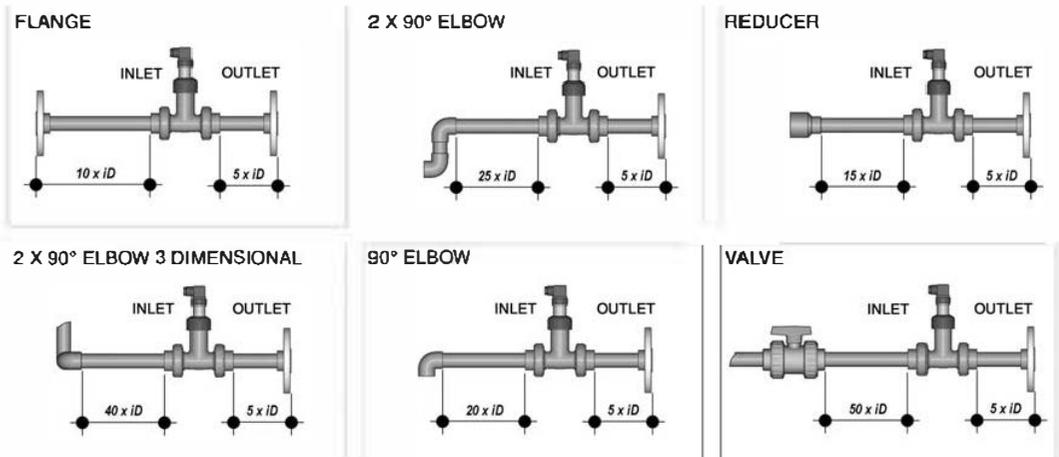
Installation Fittings

Please refer to Installation Fittings section for more details and a complete listing of items.

Image	Type	Description
	Plastic Tees	Size: D20 to D50 (0.5" to 1.5") Materials: PVC, CPVC
	Brass Tees	Internal diameter: 23 mm Process connection: 1/4" BSP Male Threads

Installation Guidelines

- Different pipe configurations and obstacles in the flow line such as valves, elbows, pipe bends and strainers create variations on the flow profile.
- The six most common installation configurations are shown to help in selecting the best location in the pipeline for paddlewheel flow sensor.
- For more information, please refer to EN ISO 5167-1.
- Always maximize distance between flow sensors and pumps.



Mounting Positions

Make sure the pipeline is always full.

■ Horizontal pipe runs:

Fig.1: installation with no sediments present

Fig.2: installation with no air bubbles present

Fig.3: installation if sediments or air bubbles may be present.

■ Vertical pipe runs:

Install sensor in any orientation.

Upward flow is preferred to ensure full pipe.

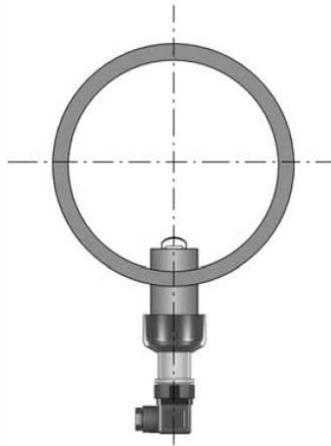


Fig. 1

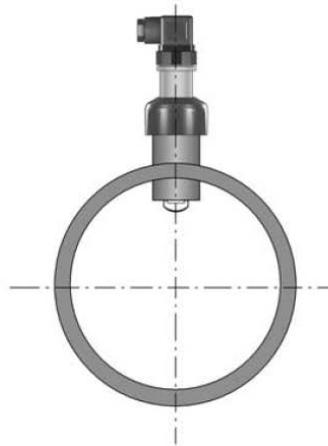


Fig. 2

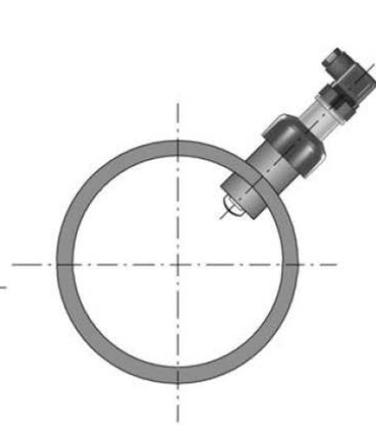
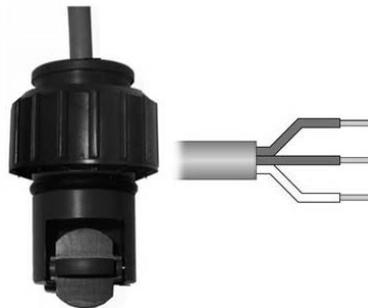


Fig. 3

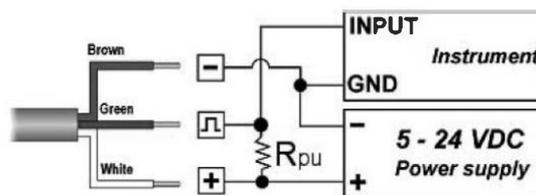
Wiring

F3.10.H IP68 Sensor Connection to FlowX3 Instruments



SENSOR		
Brown	5	GND
Green	6	IN
White	7	V+
		B

F3.10.H IP68 Sensor Connection to Other Brand Instruments



2 K Ω to 10 K Ω Pull-up resistor may be required.