PX FLOW SENSOR

KONGSBERG

- Monitors the speed of the water flow allowing you to make real time decisions to maintain a correct towing speed
- Makes it easy to adapt the vessel speed to the target species
- Multifunction: up to eight measurements
- Built-in ADCP to measure the speed of the water a distance from the net
- Fast update rate
- Easy to carry and mount
- Metal protective cage available to avoid damages

SIMRAD PX FLOW SENSOR

Wireless sensor to measure the water speed

Different species swim at different speeds. For an efficient fishery it is important to know the trawl's speed through water not the vessel's GPS speed. The flow through the net can be affected by many factors like the tide, currents, towing up or downhill, or even by the physical properties of the net itself.

When you know the water speed (flow) in the trawl's opening or the tunnel in real time, you can increase or decrease the vessel speed to adjust to the target species.

The Simrad PX Flow sensor is a wireless multifunction catch monitoring sensor that measures the speed of the water entering the trawl opening or inside the trawl. Unlike other water speed sensors, the PX Flow sensor makes this measurement with the small built-in acoustic doppler current profiler (ADCP).

Using the Doppler principle is a huge benefit because it enables you to measure the speed of water at a distance from the net. This is particularly important if you want to measure inside a trawl where you have a boundary layer with much less water speed close to the net than in the centre of the tunnel.

Available versions and measurements

The Simrad PX Flow sensor is provided in two different versions. The version of a sensor is defined by its lid:

- PX Flow sensor standard (neutral lid)
- PX Flow sensor D/T (Depth/Temperature lid)

SIMRAD
By KONGSBERG

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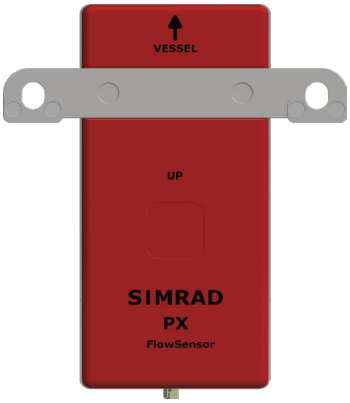
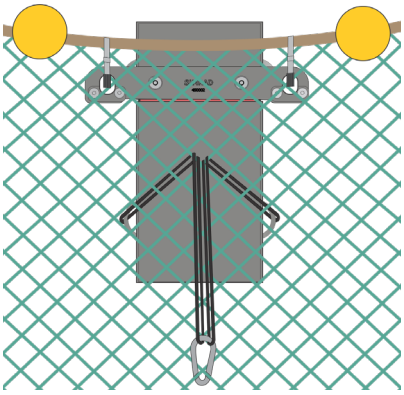
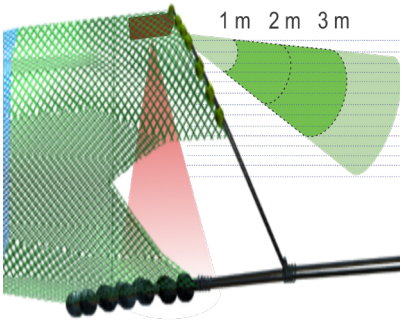


The protective metal cage offers extra protection to the sensor.



The water flow closer to the net is reduced compared to the flow in the center of the trawl.The built-in ADCP uses the Doppler effect to measure the water speed.



The PX Flow sensor measures the water flow starting 1 meter away from the sensor and in two range cells (cones) of 1 meter each.

By default, the sensor can make four measurements. With a proper license, the Simrad PX Flow sensor can make up to eight measurements:
Flow - Geometry - Height - Roll - Pitch - Battery - Depth (lid dependent) - Temperature (lid dependent).

In order to receive the information from the sensor, you need a suitable receiver, one or more hydrophones, as well as a computer running the Simrad TV80 program.

Mounting

For maximum performance, place your sensor on the headrope and/or on the tunnel, below the net.
You can mount the sensor by attaching two snap shackles from its mounting bar to the headrope or net.
A protective metal cage is also available. The use of this cage will ensure that the sensor is not damaged during shooting and hauling.

Range cells

The water flow, or speed, is measured in one axis in two range cells:

- Cell 1 refers to the volume of water starting 1 m away from the sensor and ending 2 m away from the sensor
- Cell 2 refers to the volume of water starting were Cell 1 ends, that is, 2 m away from the sensor and ending 3 m away from it.

TECHNICAL SPECIFICATIONS

Maximum depth:	1,400 m
Communication transducer:	
- Beamwidth:	60° (-3 dB)
- Source level:	192 dB (maximum power)
- Communication range:	typical 1,500-2,500 m
Flow measurement:	-7.5 to 7.5 kts (±0.1 kts accuracy)
Roll angle measurement:	±90° (±2° accuracy)
Pitch angle measurement:	±90° (±2° accuracy)
Geometry measurement range:	0-600 m
Height measurement range:	0.7-95 m
- Beamwidth (height element):	50° (-3 dB)
Depth accuracy*:	0.1 % of full scale depth (lid dependant)
Update rate:	1.9-35 seconds approx.

Battery lifetime
The battery lifetime of a PX sensor depends on its number of measurements and their update rate, channel and output power, as well as the water temperature.
Normal charging time for a fully depleted sensor battery is approximately three hours.

Weights and outline dimensions

Weight in air:	9.5 kg Approximately
Weight in water:	3.5 kg Approximately
Outline dimensions:	
- Height:	128.5 mm
- Width:	150 mm
- Length:	310 mm

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