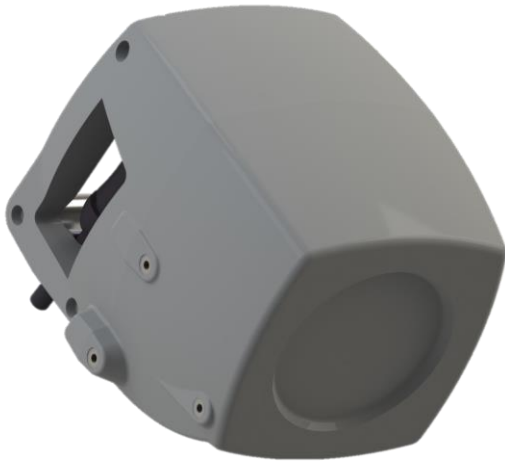


PHOENIX 2

Open Channel Non-Contact Radar Flow Meter For Rivers



The PHOENIX 2 is the new non-contact RADAR area/velocity flow meter specially designed for rivers or large irrigation channels. Elaborated opening angle of 32° allows the radar to see a full spectrum of velocities over the river or channel width.

The PHOENIX 2 provides highly accurate flow measurements under a wide range of flow and site conditions.

The PHOENIX 2 is featured with the well-known **auto-diagnostic system** introduced by Flow-Tronic on the RAVEN-EYE. Internal sensors monitor and report the condition or "health" of the measuring system.

Flow Measurement Method

- Conversion from surface velocity measurement to average velocity based on profiler measurement (For rivers: ADCP or current meter).
- Possibility to apply conversion on models.
- Conversion of water level and profile size to fluid area.
- Multiplication of fluid area by average velocity to obtain the flow rate.



FLOW-TRONIC

www.flow-tronic.com

Technical Specifications

The PHOENIX 2 is a universal non-contact level/velocity flow sensor that can be connected to the IFQ MONITOR/MINI. Optionally it can also be connected to any device using the Modbus ASCII/RTU communication protocol.

Velocity Measurement

Method	Radar
Type	Continuous Wave Doppler
Range	±0,08 to ±15 m/s (depending on flow conditions*) (±0.33 to ±49.21 ft/s) (bi-directional / flow direction detection)
Frequency	24,125 GHz (K-Band)
Accuracy	±1%
Resolution	1 mm (0.003 ft)
Distance to water	0,50 ... 35 m (1.64 ... 114.83 ft)

Radar Opening Angle

Opening angle	32°
Installation angle	60°

Power

Supply	4 to 26 VDC
Consumption	0,62 W at 12V (during active measurement)

Internal Angle Measurement

Accelerometer	Pitch, roll and yaw angle measurement and compensation
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Analog Input for Level Measurement

Input	1x 4-20 mA input (active 16 VDC) for loop powered analog level sensor
Impedance	5 Ω

Separate Level Measurement (Radar)

Method	Radar
Range	0,01 to 15 m (standard range) (0.03 to 49.21 ft) 0,01 to 35 m (extended range) (0.03 to 114.83 ft)
Accuracy	±2 mm of reading (±0.08" of reading)
Resolution	1 mm
Operation temp.	-40 ... +80 °C (-40° ... 158 °F)
Frequency	80 GHz

Optional Separate Level Measurement

Method	Any 4-20 mA loop powered sensor (When used with IFQ series)
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Communication

RS-485 communications port with Modbus ASCII/RTU slave communication protocol. Automatic recognition between protocols.

Outputs

4-20 mA	1 for flow (Q), validated surface velocity (vQP) or validated surface velocity including median filter (vQPMF)
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*: 3 mm (0.12") necessary minimum water wave height

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Technical Specifications

Material & Dimensions

Dimensions	166 mm H x 157 mm W x 178 mm L (6.54" H x 6.18" W x 7.01" L)
Weight	2,60 kg (5.73 lb)
Material	Robust PU
Protection	IP68
Color	Grey

Internal Temperature Measurement

Method	Digital sensor
Range	-40° to 80° C

Internal Humidity Measurement

Method	Digital sensor
Range	0 to 100 %

Internal Pressure Measurement

Method	Digital sensor
Range	0 to 1500 HPa

Auto diagnostic system using internal sensors
(Humidity, pressure, temperature)

Environmental Conditions

Operating temperature	-30° to 70° C (-22 to 158°F)
Storage temperature	-40° to 80° C (-40 to 176°F)

Certifications

CE

Sensor Cable

Material	Polyurethane jacketed
Length	Standard: 10 m Optional: 20 m, 30 m or length as needed up to 300 m

Software (included)

FUZION	Configuration software for FLOW-TRONIC flow systems
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*Specifications are subject to change without notice
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