

# Model GEO-WFM300

## HIGH-ACCURACY NON-CONTACT OPEN CHANNEL WATER FLOW METER



### PRODUCT DESCRIPTION

GEO-WFM300 flow meter uses radar technology to provide precise contactless measurement of surface flow velocity. Contactless radar technology enables quick and simple sensor installation above the water surface, and requires minimum maintenance.

GEO-WFM300 flow meter is used to monitor flow velocity of open channels such as rivers, irrigation channels or sewer systems, and for monitoring and control of hydropower plants and wastewater treatment plants. The flow meter is also suitable for various mass flow metering applications in mining processing plants, industrial installations, and, due to operation without moving parts and robust mechanical design, is ideal for measurement of flammable fluids and harsh chemical applications.

The radar operates in K-band (24.075 - 24.175 GHz), and provides flow speed readings 10 times per second over serial (RS-232, RS-485) and 4-20mA output. Integrated tilt sensor measures inclination angle of the sensor and the flow velocity measurement is automatically cosine-corrected according to the measured mounting tilt angle.

### HIGHLIGHTS

- Contactless, above the water, flow measurement
- Built on robust radar technology
- Wide measurement range from 0,02 m/s to 15 m/s
- Long range operation up to 20 m
- Compact, low-power design
- Wide input voltage range, suitable for solar applications
- Supports variety of communication interfaces
- IP68-rated enclosure  
(for outdoor applications and harsh environments)
- Automatic mounting angle compensation (cosine correction)
- Configurable direction of the flow measurement
- PC application for radar setup and live flow monitoring
- Easy pole, wall or enclosure mounting.
- Direct connection to **METEODATA / HYDRODATA** datalogger

GEO-WFM300 radar sensor is certified according to both European and American standards, and it is being used worldwide.



**METEODATA / HYDRODATA**  
Datalogger with Integrated Comms  
(3G / GPRS, Line, Radio or Satellite)

## DETAILED SPECIFICATIONS

### GENERAL

Radar Type	K-band 24.075 - 24.175 GHz Doppler radar, 20 dBm EIRP
Beam Angle	12° Azimuth, 24° Elevation
Detection Distance	20 m above the water
Speed Range	0,02 m/s to 15 m/s
IP Rating	IP68
Speed Resolution	0.001 m/s
Accuracy	1%

### INTERFACE

Serial Interface	1x serial RS-485 half-duplex 1x serial RS-232 (two wire interface)
Serial Baud Rate	9600 bps to 115200 bps
Serial Protocols	ASCII-S, NMEA, Modbus
Analogue Output	1x 4-20 mA
Alarm Output	1x open collector, max 50V 200mA
Connector	M12 circular 12-pin

### ELECTRICAL & MECHANICAL

Power Input	9 to 27 VDC
Power Consumption	950 mW operational 85 mW standby
Max Current	< 250 mA
Temperature Range	-40°C to +85°C (without heating or coolers)
Enclosure Dimensions	110 mm x 90 mm x 50 mm

## STANDARDS & CERTIFICATIONS

EN 50293:2000  
EN 61000-6-2, EN 61000-6-4:2007  
EN 61000-3-2:2006+A1:2009+A2:2009  
EN 61000-3-3:2008  
EN 300 440-1, EN 300 440-2  
FCC Part 15 Subpart C  
CE approved

