

In-Situ Water Quality Station - WQM-2080

Features

- Monitor and log readings from a variety of sensors;
- Large memory capacity > 5,000,000 sensor data points;
- LCD for viewing data on site;
- Solar powered;
- Digital I/O's for switching on/off control gear such as aerators and pumps (for cost efficiency);
- Capable of handling up to 15 analogue sensors (more if sensors are SDI-12, Modbus or RS-232);
- Transmitting the data wirelessly to a PC for displaying real-time data (using WiFi radio);
- Alarm out by sending alert emails or switching on/off external equipment.

Overview

The WQMS2080 (Water Quality Monitoring Station) is designed to provide organisations with an automatic means of continuously monitoring the quality of ponds, streams, sewers, drains and watercourses etc. Liquid trade waste effluent being discharged from manufacturing and processing facilities is a concern not only for the environment but can also impact on the production and efficiency of the facility.

The standard WQMS2080 monitors parameters such as

- pH;
- Electrical Conductivity
- Dissolved Oxygen
- ORP (redox)
- Turbidity

The system is also capable of monitoring other parameters such as:

- Ammonium
- Nitrates
- Nitrites
- Suspended Solids
- Chlorine
- Underwater UV
- Flow or level

Flow or level is a popular choice and can be measured by a variety of flowmeters and level sensors, including electromagnetic flowmeters, turbine (impellor) flowmeters, area / velocity and doppler / ultrasonic / radar flowmeters.

The WQMS2080 is a stand-alone station with the only cabling need being the cabling to the sensors and to any control equipment being switched by the station. The power for the station and sensors is typically supplied by solar panels and a rechargeable backup battery but can be supplied by other means such as 240VAC mains supply (with standby, battery backup), diesel generator or wind generator.

Communications to the station can be made either by direct connect (Ethernet, USB or RS-232) with a PC or by WiFi radio connection or other modem (GSM, CDMA or satellite).



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Station Comprises

- Submersible in-situ water quality transmitters for each water quality parameter that is required to be monitored. These are connected to the control unit by cables which may be up to 100 meters long;
- The control unit containing the supervisory module, the data logger, the radio telemetry module and any accessories; all housed in a weatherproof outdoor enclosure;
- Power supply (either solar panel with mounting brackets, mains adaptor or wind generator).

Specifications

Sensor Measuring Ranges:

- pH: 0 to 14 pH
- Conductivity: 0 to 1,000, 2,000, 5,000, 10,000, 20,000, 60,000 uS/cm
- Turbidity: 0 to 50, 100, 250, 500, 1,000, 2,000 NTU
- Temperature: -10 to 100°C
- ORP (REDOX): -500 to +500 mV
- Dissolved Oxygen: 0 to 20 ppm O₂
- Flow Level: 0 to 1, 2.5, 5, 10, 20, 35, 70 meters



Power Supply

- DC: 11-24V
- Battery: Either 12V 9Ah or 12V 35Ah

Power Consumption:

	Awake:	Sleep:
• Datalogger	<420mA	<25mA
• GSM Modem	<200mA	<45mA
• Sensors	Depending on the sensor: (Typically 20-50mA)	

Memory Capacity:

- 5,000,000 readings (each time and date stamped)

Logging Interval:

- 1 - 99 minutes (typically 5, 10, 15 or 30 minutes)

Analog Channels:

- 15 single ended / 5 differential

Digital Channels:

- 8

Counters

- 4



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