The ORAKEL System is the ultimate water flow and water quality measuring product range. Created as a modular system, a wide range of sensors can be added to measure various water characteristics, for a truly bespoke and cost-effective solution.

**HOW IT WORKS**

Capable of measuring a range of water characteristics, the control unit connects up to 2 sensors as standard but is expandable up to 16 sensors.

Optional comms packages allow Profibus, Modbus ASCII, Modbus RTU, Modbus TCP, 4-20mA analogue outputs and relays for alarms and control.

Equipped with a display screen, readings can be taken directly from the control unit or downloaded from the internal data logger. An optional Detectronic modem allows for remote communication capabilities.

**APPLICATIONS**

The ORAKEL System is suitable for use in closed, partially filled and open channels.

The wide variety of sensors that can be added make it suitable for many applications, including: municipal and industrial wastewater; chemical process; food and dairy; paper and pulp; pharmaceutical; brewing and other process industries.

The ORAKEL System has sensors available to monitor the following.

- Velocity
- Level and Depth
- Flow
- Temperature
- pH
- Dissolved Oxygen
- Conductivity
- BOD/COD/TOC
- Biofilm
- Residual Ozone
- ORP
- Chlorine
- Turbidity
- Suspended Solids
- Chlorine Dioxide
- Oil on Water
KEY FEATURES

**PID Control**
Full PID control suitable for nearly all dosing requirements, from simple to very complex processes.

**Diagnostics**
Includes a full set of instrument and measurement diagnostics.

**Precision Positioning**
An integrated signal oscilloscope optimises sensor positioning and diagnostics.

**Easy Configuration**
Includes a comprehensive internal database of pipe, fluid and lining materials.

**Built-in Parameters**
Built-in fluid parameters allow calculation to compensate for sound speed, density, viscosity, specific heat capacity and temperature (if temperature is known from optional temperature probe).

**Flexible Measurement**
Liquid can be measured in M, m³, USgal, mg, cf, bbl and Imp bbl. All measured values can be selected as flow rate per second, minute, hour or day and are automatically totalised.

**Data Analysis**
An optional GSM data-logger can be added and date sent to an online portal for detailed analysis.

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**TECHNICAL SPECIFICATION**

**Inputs**
2 configurable sensor inputs; 4-20mA loop-powered, 0-2 VDC, +/- 1200 mV for pH, ORP, or ISEs, PT100, pulse and Modbus. Unused inputs can be used as Outputs. Up to 8 digital inputs.

**Dimensions**
230 x 309 x 103mm.

**Alarms**
2 user configurable alarms with deadband and delay for each parameter and control output.

**Thresholds**
2 user configurable thresholds (for control) with deadband and delay for each measurement and control output.

**PID**
Configurable flow proportional PID - multiple loops.

**Communication (Optional)**
Modbus ASCII/RTU (RS485).

Profibus DP.

Modbus TCP (Ethernet) 2G/3G modem.

**Data Logging**
Internal - single parameter data log or status message log over 1 million records (downloadable data logs optional).

**Outputs**
2 configurable analogue outputs; 0-20mA, 4-20mA, 0-1 VDC, 0-10 VDC, 1-10 VDC.

Up to 8 SPST electromechanical relays rated 380 VAC, 6A maximum (relays are rated 6A for resistive loads and 2A for inductive loads).

**Languages**
Any non-pictogram by request.

Any Latin, Cyrillic, Hellenic.

**Memory Backup**
All user configuration is stored in non-volatile on-board flash memory.

**Enclosure**
ABS flame retardant IP65N, Nema 4X.

**Display**
4.3", 480 x 272, 8 bit, greyscale (4.3", 480 x 272, full colour optional).

**Weight**
2kg.

**Warranty**
12 months from date of purchase.

To learn more about the Detectronic ORAKEL System and how it can help your business, get in touch:

**Call:** +44 (0)1282 449 124

**Email:** sales@detectronic.org

**Visit:** www.detectronic.org

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