

# SERIES 1000 MULTIPARAMETER

## WATER QUALITY MONITOR



An IP65 microprocessor based instrument capable of measuring up to 5 different parameters together with alarm and retransmission facilities. The 5 channels can be selected from:

- Dissolved Oxygen
- pH
- Redox
- Conductivity
- Turbidity
- Residual Chlorine
- Temperature
- Suspended Solids

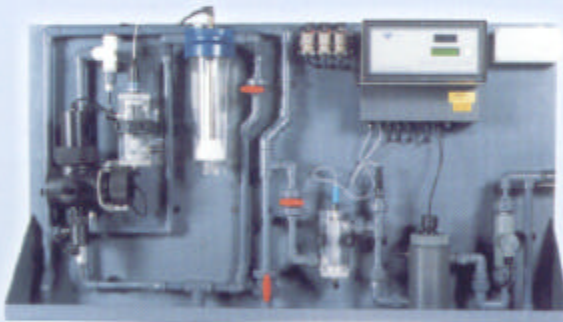
Alternatively, the 1000 can be delivered to monitor up to 5 channels of one parameter or any mix of the above.

A powerful microprocessor controls the measuring instrument making all functions available to the user. There are menu modes for

- Calibration
- Service
- Output Signals
- Auto Clean
- Sensor Diagnostics

All accessible through operator entry codes.

The front panel offers a clear LED display for measured value with an LCD for calibration, alarm settings, analogue output and other control functions.



### The Heart of the System

The 1000 can serve as the heart of a monitoring configuration or with an integrated flow line sensor package forming part of an intake protection, final effluent, or river monitor.

### Data Logging

The Series 1000 can be fitted with an onboard data recording memory card based system. Each card typically having sufficient memory for a minimum of two weeks logging. Stored information can be transferred to a PC for archiving or analysis.

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## GENERAL FEATURES

**Parameter Selection** - up to five different (or similar) sensors can be connected to the instrument. Temperature is normally required for compensation of readings. Special combinations may require custom engineering of software.

**Eeprom Memory** - all critical setup information is stored in a non volatile eeprom. This type of memory is immune to corruption even under prolonged powerdown or storage conditions.

**Real Time Clock** - provides full leap year date and time functions. These functions are used for logging operations and controlling the timing of automatic cleaning functions.

**Calibration Record** - to assist with keeping track of calibration the last event is recorded along with the time and date.

**Diagnostic Features** - during calibration of the probes, the processor automatically measures the change in zero and offset value. This allows the sensor condition to be monitored.

**Alarm Relays** - Each parameter can have a single or double alarm set. Alarms can be upward or downward going with latching or non-latching functions.

**Analogue Outputs** - as standard, isolated 4-20 mA outputs are provided. Alternative options are available including high resolution isolated outputs.

**Data Logging** - one of the two serial ports provided on the instrument is dedicated to providing a data stream based on a time interval. Data is averaged over the logging period and the output is in readable engineering units with comma separation. In standard configuration, this data can be sent to a PC memory card based logger which provides a convenient means of storing the data. Memory cards up to 4 megabytes are available.

**Software Structure** - the operating software is menu structured and allows access to all calibration, alarm, control and service functions.

**Remote Communications** - the second serial port on the instrument can be configured to connect to a modem. Special software versions are available for remote data downloading.

## GENERAL SENSOR SPECIFICATIONS

### Temperature

Sensor Type : Solid State semi conductor  
Range : 0 - 50°C  
Accuracy : +/- 0.2°C  
Resolution : 0.01°C  
Calibration : Single point

### pH

Sensor Type : Combination  
Range : 0-14pH  
Accuracy : +/- 0.1pH  
Resolution : 0.01pH  
Calibration : Selectable buffers

### Conductivity

Sensor Type : Carbon electrodes  
Range : 0-1 mSiemens to 0-10 mSiemens  
Accuracy : +/- 2% fsd  
Resolution : 0.01 mSiemens  
Calibration : Standard solution KCl @ 25°C

### Dissolved Oxygen

Sensor Type : Galvanic cell  
Saturation : 0-200% sat  
Solubility : 0-20 mg/l  
Accuracy : +/- 1% fsd  
Resolution : 0.05% range  
Calibration : 100% in air

### Turbidity

Sensor Type : 90 degree scatter  
Range : 0-5 NTUs or 0-500 NTUs  
Accuracy : +/- 0.5% fsd  
Resolution : 0.01 NTUs or 0.1 NTUs depending on range

Calibration : Solid standard

Light Source : LED 880nm or 660nm or laser

### Suspended Solids

Sensor Type : 180 degree forward scatter  
Range : 0-1000 mg/l (0-10,000 mg/l)  
Accuracy : +/- 0.5% fsd  
Resolution : 1 mg/l  
Calibration : Solid standard

Light Source : LED 880nm

### Chlorine Residual

Application : Potable water monitoring

Sensor Type : Membrane electrode, polarographic cell

Range : 0 - 2.0 mg/l to 0 - 10mg/l

Accuracy : +/- 2% fsd

Resolution : 0.01 mg/l

Calibration : Secondary calibration using DPD test kit

### External 4-20mA Interface

for Flow inputs. Other options are available on request.

Load : 100 ohms

DC Isolation : 1 kV

Resolution : 0.01mA

Conversion : 10 bits

Accuracy : +/- 1 bit

Please ask about alternative sensor options

### Power Supply

Mains Power : 240/110Vac. 12 watts

Low Voltage : 24 Vac or 12 Vdc (option)

Remote low power: requires special engineering

### Weight and Dimensions

Weight : 2.0 kgs

Dimensions : 220h x 280w x 182d



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