

## WATER INSTRUMENTATION



**Paperless recorder:** Endress and Hauser has several different types of recorders depending on the functionality required. The most basic is a data logger with 2 inputs with remote monitoring and Tele-Alarm. The Ecograph replaces standard chart strip and dotting recorders while the Memograph M can store, visualize, analyze and communicate process values and can be used for basic control and batching. Both the Ecograph and Memograph have remote monitoring and Tele-Alarm functions and keep data even in the event of power failure.

One recorder can be used to monitor flow, level, pH and many more parameters. There is no need for maintenance and information can be printed directly from the recorder or downloaded to a PC.

**Flowmeters:** There are several types depending on the desired application and accuracy. They can be either placed in line or clamped onto the pipe to fit existing pipe lines.

They can be quite easily interfaced with other instrumentation to give co-ordinated control. For example in a dosing application the flowmeter can control the valve leading from the dosing tank to the dosing line.





**pH/ORD Sensors:** With Memosens Endress and Hauser have improved the reliability and ease of use of pH and ORD sensors. It allows you to calibrate the probes in the laboratory so increasing the accuracy of the measurement. It also removes the need to have specialised staff to change maintain the unit in the field and the sensor automatically detects when it needs replacement.

**Pressure units:** Absolute, and differential pressure can be measured be as well as the units used for level, volume or mass measurement in liquids. The available range of measurement is 5mbar to 700bar depending on the model.

There are also different sensor types and seals, depending on the properties of the process being monitored, such as whether it is acidic, corrosive or abrasive. The units have the options of analog, HART, PROFIBUS PA or FOUNDATION Fieldbus signal outputs.



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**Turbidity:** Sensors are available in measuring ranges of 0.00 to 9999 FNU or 0.0 to 300 g/l for applications ranging from monitoring in sewage plants to drinking water. The CUS65 uses a 4-beam alternating method of measuring turbidity so they are not sensitive to the aeration systems used in sewage treatment. The CUS41 measures at a 90° scattered light angle using infrared light allowing it to be insensitive to the effects of colour or dyes.

Units have ultrasonic or automatic air cleaning if required.

**Sampling and analysis:** Several types of units are available, from portable samplers to ones that sample and can measure, online, pH, temperature, redox potential, conductivity, turbidity, dissolved oxygen and options are available to measure nitrates, chlorides and spectral adsorption coefficient (SAC).



Sensors for measuring, chlorine, dissolved oxygen, nitrates, ammonia, phosphates, BOD and conductivity are available.



**Level:** Hydrostatic pressure, capacitive, guided and unguided radar and ultrasonic and differential pressure units are made for any application where level monitoring or switching is desired.

Levels can be measured in open or closed tanks or even in canals.

**Present customers:** Endress and Hauser are active in many industries and offer expertise in equipment selection, maintenance, calibration and training. Some of our customers include:

- Marondera municipality
- Chegutu municipality
- Kadoma municipality
- Cairo Montenotte municipality (Italy)







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