Portable, battery powered measurement …

raw & waste water measurement solutions

PPM has considerable experience providing bespoke measurement systems that include portable battery powered systems using robust sensor technology, suitable for raw and waste water quality measurement. The data logging instrument and battery pack can be supplied with an inter-connecting cable or alternatively a single waterproof case can contain the instrument and battery, to provide the ultimate security. Plug & play sensors and a spare battery pack allows for simple field exchange.

Battery Powered IQ System (separate cases)

Instrument: IQ Sensor Net

Description: The digital controller can accept multiple sensors using a common waterproof connector to

allow for simple field exchange, to suit the monitoring application. The integral data logger will collect data, provide local trending & transfer to pen drive via USB. Option to integrate GSM communications for remote data interrogation.

Battery Powered IQ System (combined case)

Instrument: IQ Sensor Net

Description: The digital controller, junction box (to accept multiple sensors) & battery pack are all

contained in a single, waterproof case (with wheels & extendable handle) assisting transportation. The case may be padlocked & chained to a hand rail, providing increased security & protection on remote sites. Integral data logger with USB.

Robust Digital Sensors (Individual sensor options)

Instrument: IQ Sensor Net

Description: A wide selection of robust digital sensors, that have a universal connector, provides plug &

play measurement capability. Single, dual or triple sensor installation. Various cable lengths to suit install & application (7/15/20/25m). Quick field deployment facilitates reactive data collection to investigate non-compliance & process anomalies. Inlet, process & final effluent.

Pollution & Process Monitoring

www.pollution-ppm.co.uk

Southern Sales & Service Centre (Head Office)
Units 18 & 19 Bourne Enterprise Centre,
Borough Green, Kent TN15 8DG.
tel: 01732 882044
mail: TOC@pollution-ppm.co.uk

Northern Service Office
Unit 9 High Hazel Court, Coombe Road, Newthorpe,
Nottinghamshire. NG16 3SU.
tel: 01773 717318
mail: service@ppm-north.co.uk

Various sensors may be connected to the IQ system providing complete measurement flexibility. Field exchange of the lithium ion battery pack, is typically weekly (for a single sensor) coinciding with the need for manual cleaning, required to optimise measurement quality. All sensors are rated to IP68 immersion to enable measurement of raw water, crude sewage, in-process & treated final effluent. The system is ideal for rapid or temporary deployment & site optimisation. The table below provides a brief summary, further information is available on our website.

Measurement ♦ Parameter	**Application** ♦ Raw Water ♦ Waste Water	**Measuring ranges** ♦ Auto-scaling	**Description** ♦ Measurement Technology & Features
Ammonium	♦ **Crude sewage** ♦ **Process** ♦ **Final effluent>5.0mg/L**	**0.1 … 2,000mg/L N** **0-40◦C**	Digital ISE probe technology for in-situ ammonium analysis with integral temperature measurement & compensation & option for potassium correction. Typically used to monitor nitrification process.
Conductivity	♦ **Raw water** ♦ **Crude sewage** ♦ **Process**	**10uS/cm … 1,000mS/cm** **0…60◦C**	Digital 4 electrode sensor with integral temperature measurement & compensation. Typically used to identify saline intrusion.
Dissolved Oxygen (DO)	♦ **Raw water** ♦ **Crude sewage** ♦ **Process**	**0…20.00mg/ l** **0…200.0% sat** **0…50◦C**	Digital optical sensor with integral temperature measurement & compensation. Typically used to monitor & control aeration in activated sludge.
Nitrate	♦ **Raw water** ♦ **Crude sewage** ♦ **Process** ♦ **Final effluent>5.0mg/L**	**0.1 …2,000mg/L N** **0…40◦C**	Digital ISE probe technology for in-situ nitrate analysis with integral temperature measurement & compensation & option for chloride correction. Typically used to monitor nitrogen balance associated with nitrification/denitrification process.
pH	♦ **Raw water** ♦ **Crude sewage** ♦ **Process**	**0…14.00pH** **0…60◦C**	Digital armature / replaceable combination electrode & integral temperature measurement / compensation. (pH or ORP by exchanging sensor). Installed on crude affected by traders , post coagulation & pH regulation.
Redox / ORP	♦ **Crude sewage** ♦ **Process**	**-2,000 … +2,000mV** **0…60◦C**	Digital armature / replaceable combination electrode & integral temperature measurement / compensation. (pH or ORP by exchanging sensor). Used at inlet to indicate septicity / H2S & for nitrification /denitrification control.
Suspended Solids (SS)	♦ **Crude sewage** ♦ **Process**	**0.003 … 1,000g/l**	Digital optical probe (IR) back scatter measurement with up to 7 point user calibration. Typically installed within aeration basin to control MLSS.
Turbidity (NTU)	♦ **Raw water** ♦ **Final effluent**	**0.05 … 4,000 FTU**	Digital probe (IR) nephlometric measurement. Typically used to monitor final effluent quality.

Other bespoke systems include instruments pre-mounted within small secondary enclosures or walk-in analyser kiosks to suit requirements, including electrical & sample distribution, frost protection & internal lighting. Analytical systems are supported by a range of sample preparation systems removing suspended solids & biology which can otherwise impact upon measurement reliability. Probe technologies may be integrated in sample break-tanks receiving a pumped sample, flow cells or mounted directly into open channels & tanks, for in-situ measurement.

Walk-in Analyser Kiosks

Small Secondary Enclosures

Instrument Panels