

Innovation in Environmental & Process Technology

We Understand Water & Waste water monitoring

## **PBS1 - InSitu Autocalibrating Ammnonia Analyser**



Contact us for more info:





**PBS1** is an insitu Ammonia analyser, utilising a gas sensitive electrode as the detection device. It is a complete wet chemical analyser + sample preparation system in a single insitu housing, removing the need for pumps, pipes sample preparation and GRP housings. Sampling is by means of hydrostatic head, which first fills a settlement chamber to reduce solids to a minimum. Clarified liquid is then allowed into the measuring chamber, where EDTA/caustic solution is dosed and stirred to raise pH to 11.5.



When equilibrium is reached the NH4-N signal is logged and stored. The system is then pressurised by the on board compressor to evacuate the liquid sample and the whole cycle is repeated. On calibration the sample is retained in the measuring cell and dosed with one and then eight aliquots of high standard, the response being logged on each occasion. The method of standard addition is then applied to calculate the new offset and slope.



The data is logged and displayed in numeric and graphical format. The system is designed for use in activated sludge basins, bed effluents and final effluents.

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| System Specification  |   |  |
|-----------------------|---|--|
| Operation Principle:  | Specific gas electrode  |  |
| Range:                | 0.05- up to 1000 mg/l NH4-N - range subject to calibrationsolutions |  |
| Resolution:           | 0.05 mg/l   |  |
| Repeatability:        | 3%  |  |
| Detection limit:      | 0.05 mg/l   |  |
| Response Time:        | 3-5 minutes, measurements normally taken at 15 min intervals        |  |
| Reagent consumption:  | 0.5-1litre/month  |  |
| Standard consumption: | ~ 3ml standard solution per day                                     |  |

| Transmitter Specificat | ion                    |  |
|------------------------|------------------------|--|
| Construction           | Dimensions (h x w x d) | 264 x 360 x 345mm  |
|                        | Weight                 | 12 kg  |
|                        | Materials              | Fibreglass   |
|                        | Protection class       | IP54 (transmitter) IP65 (wet end sensor)   |
|                        | CE                     | Compliant  |
| Outputs                | Display:               | LCD graphic display 16 lines x 40 characters<br>backlit. 6hr graph + current value with 5 digit<br>resolution. 14 days internal storage. |
|                        | Analogue out:          | 0/4-20mA isolated, 500 ohm, 10V max Dig  |
|                        | Digital out:           | 4 definable fault relays - NC, max 0.2a/50v  |
|                        | Disk drive:            | 3.5" disk  |
| Power requirements     | Supply voltage:        | 115 VAC -60Hz, 230VAC -50 Hz   |
|                        | Load:                  | 45Watts m a x  |
|                        | Immunity to V change:  | EN50022  |
| Sensor assembly spec   | cification             |  |
| Construction           | Materials:             | SS, Perspex  |
|                        | Weight:                | 12 Kg (filled)   |
|                        | Dimensions:            | 215mm max dia, 715mm long (950mm inc pole stub)  |
|                        | Standard pole length:  | 1.5m   |
|                        | Std umbilical length:  | 5m   |
| Process conditions:    | Medium Quality:        | Mixed liquors, bed effluents, final effluents  |

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