AMMONIA NH3-N

NH3-Sys: PBS1

Features:

- In-Situ operation
- Auto cleaning and calibration
- No sample preparation needed
- Analysis specific to NH3-N
- Data logging
- Graphical display
- Analogue & digital outputs

Benefits:

- Minimised installation costs
- Low chemical consumption
- No interference by other ions
- Low operational and maintenance costs
- Real time and historic data display
- Auditable results

Applications:

- Activated sludge monitoring & control
- Final effluent monitoring
- Process monitoring

PBS1 in use in final effluent

NH3Sys – PBS1 is an insitu Ammonia - Nitrogen 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 NH3-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.

System Specification

Operational Principle:	**Specific gas electrode**
Range:	**0.1 -50 mg/l NH3 – N**
Resolution:	**0.1 mg/l**
Repeatability:	**3%**
Detection Limit:	**0.1 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/Controller Specification

Mechanical Construction:	**Dimensions wxhxd**	**264x 360 x 345 mm**
	Weight:	**12 kg**
	Weather Protection:	**IP54 (transmitter), IP65 wet end sensor**
	CE:	**Compliant**
Outputs:		
	Display:	**LCD graphic display 16 lines x 40 characters Backlit. 6hr graph + current value with 5 digit resolution. 14 days internal data storage**
	Analogue out:	**0/4–20 mA isolated, 500 ohm, 10V max Dig**
	Digital out:	**$ definable fault relays – NC, max 0.2A/50V**
	Diskette drive:	**3.5” diskette**
Power requirements:	**Supply voltage:**	**115 or 230VAC at 50/60 Hz**
	Load:	**45W max**
	Immunity to V change	**EN50022**

Sensor assembly Specification

Mechanical Construction:	**Materials:**	**SS, perspex**
	Dimensions:	**215mm max dia, 715mm long (950mm inc pole stub) Weight: 12Kg (filled)**
	Standard pole length:	**1.5m**
	Std umbilical length:	**5m**
Process conditions:	**Medium Quality:**	**Mixed liquors, bed effluents, final effluents**

When placing an order it is important to indicate the following requirements to our sales staff:

1. **Please indicate operational voltage required.**
2. **Please provide details of proposed installation site – distance from ground level to TWL, potential level fluctuation, wall mount or stand mounted transmitter. If possible provide photos or drawings.**
3. **Please indicate liquid instrument is to be used in.**
4. **Please indicate if sample depth is less than 400mm**

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