



## AMMONIUM MEASUREMENT

# AmNiSys



*Transmitter with user interface and sensor wet end assembly*

### Features:

- Automatic air cleaning
- Auto-compensation for interfering ions
- Single or multiple parameters including NH<sub>4</sub>, NO<sub>3</sub>, pH, T, K, Cl-
- Graphic display from up to 4 sensors
- 4 off analogue outputs, 5 configurable relays, RS232, profibus option
- Fully refurbishable low cost sensors,

### Applications:

- Optimal SBR control for nitrification/denitrification
- Complete mix and plug flow aeration control
- Return liquor control for ammonia load balancing
- Effluent quality surveillance

**AmNiSys** is a low cost, in-situ combination **Ammonia and Nitrate** measuring system for use in waste water applications. Its unique formulation membrane has much improved specificity and automatic compensation for residual interferences are made with integral ISE sensors. It is simple to deploy and is an ideal solution for "in-process" monitoring and control of wastewater plants, with a proven track record from an installed base of over 300 units.

### Benefits:

- Low capital cost
- No reagents required
- Simple routine maintenance
- Reduced aeration costs
- Increased confidence in process performance



*Installation on plug flow aeration unit for DO set point control*



## System Specification

<b>Operational Principle:</b>	Ammonium, Nitrate selective Electrode, compensated for Potassium, Chloride, pH and temperature
<b>Range:</b>	0.1 - 1000 mg/l NH <sub>4</sub> -N 0.1 - 1900 mg/l NO <sub>3</sub> pH 2-12 Temp - 0-40°C
<b>Resolution:</b>	dependant on parameter
<b>Repeatability:</b>	dependant on parameter
<b>Accuracy:</b>	+/- 5% of full scale
<b>Response time:</b>	95% < 1min
<b>Calibration Method:</b>	Manual, single pt offset or 2 point calibration in sample matrix

## Transmitter/Controller Specification

<b>Mechanical Construction:</b>	<b>Dimensions (hwxwd)</b>	255x215x120 mm
	<b>Weight:</b>	2.5 kg (approx)
	<b>Materials:</b>	Polystyrol Ambient
	<b>conditions:</b>	0-50 °C
	<b>Weather Protection:</b>	IP 65
<b>Outputs:</b>	<b>Display:</b>	Numeric/graphic LCD
	<b>Current loop:</b>	4 off 0/4 – 20 mA into 500 ohms
	<b>Relay outputs:</b>	5 off user config relays (6A @250V)
	<b>Data interface:</b>	RS 232 C (PC/laptop) RS485 for NAS760
<b>Inputs:</b>	<b>Wet end assemblies:</b>	up to 2 under normal circumstances
	<b>Parameters:</b>	Up to 4 normally, max of 3 in one assembly
<b>Power requirements:</b>	<b>Supply voltage:</b>	100-240 VAC
	<b>Load:</b>	15VA max (excluding compressor)

## Sensor assembly Specification

<b>Mechanical Construction:</b>	<b>Dimensions (hwxwd)</b>	armature dia: 75mm x 125mm length
	<b>Weight:</b>	4.5kg approx.
	<b>Materials:</b>	Armature - polyethylene
	<b>Connections:</b>	¼" push fit air line, RS485 signal line
	<b>Overall sensor dimension:</b>	
	<b>Short:</b>	125mm deep and 610mm long
	<b>Long:</b>	125mm deep and 1350mm long
	<b>Electrodes:</b>	Type: Ion selective measuring electrode + ref.
	<b>Dimensions:</b>	12mm dia x 120mm long (ref and measurand)
	<b>Materials:</b>	Measurand: POM, Ref: Quartz glass
	<b>Reference:</b>	Ag/AgCl
	<b>Electrolyte:</b>	KCl
	<b>Junction:</b>	Double chamber electrode with bridge

## Ordering Information

- Please supply the following to our sales staff:
1. How many measuring points are to be served , i.e. no of wet end assemblies
  2. What parameters are required from each assembly (upto 3, normally from NH<sub>4</sub>, NO<sub>3</sub>, K, Cl<sup>-</sup>, pH,)
  3. Do you want an air clean compressor or will you provide your own air?
  4. Will the transmitter(s) be wall mount or rail mount? Do you require a support framework? How far will it be from the sensor?
  5. Please send drawing and/or photo of required installation point with dimensions showing water level, ground level, rail level etc. Different lengths of support pole and sliding cradles with rail guides for deep access locations are available. If rail mounting required please indicate rail diameters.
  6. Please indicate outputs required, with ranges, and alarm levels to be set.
  7. An optional profibus module may be provided if required – please indicate.
  8. State operating voltage
  9. Indicate if you require installation/commissioning and / or maintenance contract

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