



# Alyza IQ: The Simple choice for PO<sub>4</sub> and NH<sub>4</sub> Analyzers



a xylem brand

# How much reagent does

## Less Reagents

Minimized reagent consumption and waste

## Simple Service

Regular maintenance takes just 10 minutes every 3 months

## Better Data

Reliable results from low to high measuring levels

TresCon®



## Simple Service

Built with Service in mind, all service items can be quickly and easily exchanged without calling a service technician or service contracts.



## Long Life Reagents

Easy and safe reagent replacement with no-drip reagent pouches.

# your analyzer use?

P700IQ



Alyza IQ

## The advantages

- Measurement of PO<sub>4</sub> or NH<sub>4</sub>
- High accuracy at low measuring ranges
- Extremely low reagent consumption
- Connectable to the IQ SENSOR NET (provides 10 W)
- Installation of PO<sub>4</sub> and NH<sub>4</sub> analyzer directly at the basin
- One- and Two-channel versions available
- Safe and easy replacement of reagents
- Optimized user interface and self diagnostics
- Minimum maintenance and easy handling

CONTROLLER	03 July 2018	15:16	🗑️	⚠️	🔍
S01/S02 Alyza IQ PO4					
◀ Settings   Maintenance   Status   Remaining ▶					
Last measurement					
15:05		15:10			
1.12 mg/L		1.12 mg/L			
PO4-P		PO4-P			
S01: 22222222		S02: 22222222			
S01: 22222222					
Measuring (approx. 5 minutes): Mixing					
Select ⬅➡, exit with ESC					

## Clear Information

Clear measurement menu - even for 2 channel versions and monitoring of reagent life time.

CONTROLLER	03 July 2018	15:22	🗑️	⚠️	🔍
S01 Alyza IQ NH4 11111111					
◀ Settings   Maintenance   Status   Remaining ▶					
Days (approx.)					
Mixing unit:	178				
Reagents:	108	A	██████████		
		B	██████████		
		C	██████████		
Standard solutions:	167	1	██████████		
		2	██████████		
Cleaning solution:	31	██████████			
Attention: The quoted availability periods are only correct if replacement was done in the maintenance menu!					
Select ⬅➡, exit with ESC					



The Alyza IQ is fully integrated into the IQ SENSOR NET as a sensor. The new analyzer can be operated in the system 2020 and the System 282/284.

Learn more about IQ SENSOR NET on our website:  
[www.IQ-Sensor.Net](http://www.IQ-Sensor.Net)



Learn more about Alyza IQ on our website:  
[www.WTW.com/Alyza-IQ](http://www.WTW.com/Alyza-IQ)



# Ammonium measurement

## Method

Indophenol method according to DIN 38 406

As the name suggests, the Indophenol method results in a blue coloration of the sample. The color is generated by the reaction of ammonium ions from the sample with hypochlorite ions and carbolic acid or a carbolic acid derivative under alkaline conditions (pH approx. 12.6). For acceleration of the reaction, a catalyst is used. The reaction can be sped up further by increasing the temperature of the reaction solution. The colored sample then is analyzed photometrically in the red spectral range. The higher the ammonium concentration, the more intense the blue coloration.

## Fields of application

### Wastewater treatment plant effluent monitoring

- High measuring accuracies even at low concentrations
- Easy handling due to optimized user interface
- Increased employee protection by safe exchange of reagents



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### River monitoring

- Long lifetime of reagents due to minimum consumption
- Minimal maintenance effort reduces work and travel times
- Full remote access via IQ WEB CONNECT, at any time



# Orthophosphate measurement

## Method

Molybdate-Vanadate method (Yellow method)

In the Molybdate Vanadate process, Orthophosphate (dissolved  $\text{PO}_4^{3-}$ ) is detected. Thereby, a color reagent consisting of Molybdate and Vanadate is added to the sample. Under acid conditions, the  $\text{PO}_4^{3-}$  ions are integrated into the generated polyanions. The intensity of the occurring yellow color depends on the concentration of  $\text{PO}_4^{3-}$ . Subsequently, the sample is analyzed in the photometer at approx. 420 nm.

## Fields of application

### Precipitation control

- Automatic cleaning reduces maintenance effort and increases operational safety
- Reduction of precipitant costs without overdosing by reliable and fast measurement
- One instrument for up to two sample streams



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### Wastewater treatment plant effluent monitoring

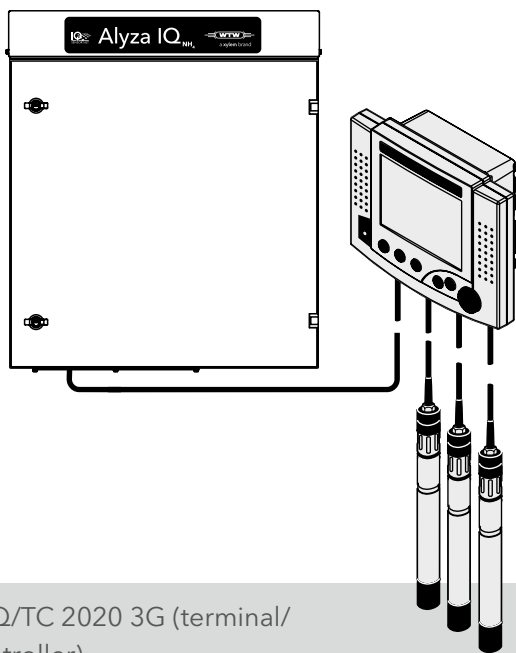
- Precise results via automatic 1- and 2-point calibration
- Easier everyday life due to self diagnostics with display of reagent lifetime
- Requirements for further decreasing effluent values are not a problem due to low measuring range



# Configuration examples Alyza IQ in IQ SENSOR NET

## Example 1 - System 2020

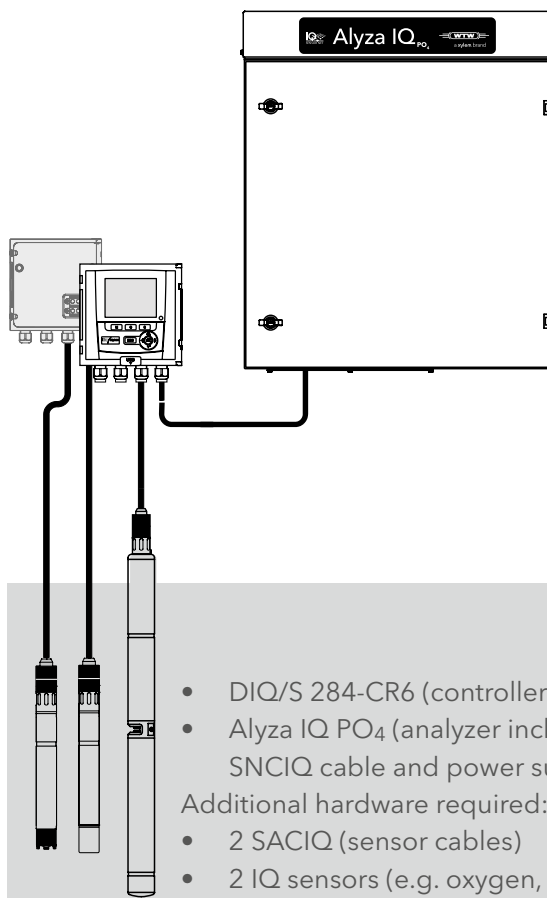
Example configuration	Order no.
MIQ/TC 2020 3G	470022
MIQ/JB	480008
SACIQ-7,0	480042
IQ Sensors	user selected



- MIQ/TC 2020 3G (terminal/controller)
  - MIQ/JB (module for system expansion)
  - Alyza IQ NH<sub>4</sub> (Analyzer incl. SNCIQ cable and power supply)
- Additional hardware required:
- 3 SACIQ (sensor cables)
  - 3 IQ sensors (e.g. turbidity, pH, oxygen)

## Example 2 - System 282/284

Example configuration	Order no.
DIQ/S 284-CR6	472130
MIQ/JB	480008
SACIQ-7,0	480042
IQ Sensors	user selected



- DIQ/S 284-CR6 (controller)
  - Alyza IQ PO<sub>4</sub> (analyzer incl. SNCIQ cable and power supply)
- Additional hardware required:
- 2 SACIQ (sensor cables)
  - 2 IQ sensors (e.g. oxygen, NH<sub>4</sub>)
  - 1 IQ spectral sensor (e.g. COD)

Neither example 1 nor example 2 needs a power supply module MIQ/PS, as the Alyza IQ provides 10W to the systems.

## Technical data

Model	Alyza IQ NH <sub>4</sub>	Alyza IQ PO <sub>4</sub>
<b>Measurement method</b>	Berthelot method (Indophenol method)	Moybdate-Vanadate method (Yellow method)
<b>Measurement range</b>	Two measuring ranges	One measuring range
	<b>MR1:</b> 0.02 ... 4.00 mg/l NH <sub>4</sub> -N Displayed: 0.00 ... 4.00 mg/l NH <sub>4</sub> -N Resolution: 0.01 mg/l NH <sub>4</sub> -N Accuracy: ± 3 %, ± 0.02 mg/l	0.02 ... 15.00 mg/l PO <sub>4</sub> -P 0.00 ... 15.00 mg/l PO <sub>4</sub> -P 0.01 mg/l PO <sub>4</sub> -P ± 2 %, ± 0.02 mg/l
	<b>MR2:</b> 0.10 ... 20.00 mg/l NH <sub>4</sub> -N Displayed: 0.00 ... 20.00 mg/l NH <sub>4</sub> -N Resolution: 0.05 mg/l NH <sub>4</sub> -N Accuracy: ± 3 %, ± 0.10 mg/l	0.2 ... 50.0 mg/l PO <sub>4</sub> -P 0.0 ... 50.0 mg/l PO <sub>4</sub> -P 0.05 mg/l PO <sub>4</sub> -P ± 2 %, ± 0.2 mg/l
<b>Sample streams/channels</b>	1- and 2-channel versions available	
<b>Cleaning</b>	Automatic cleaning with cleaning solutions	
<b>Calibration</b>	Automatic 1- and 2-point calibrations	
<b>Operational temperature</b>	-4 ... 104 °F (-20 ... +40) °C	

For further technical data please see datasheets D2.24 and D2.25

## Order information

Model	Description	Order no.
<b>Alyza IQ for Ammonium measurement</b>		
<b>Alyza IQ NH<sub>4</sub>-111</b>	NH <sub>4</sub> analyzer, 1-channel, with 2 measuring ranges, Indophenol method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2m SNCIQ cable; reagent sets need to be ordered separately	825011
<b>Alyza IQ NH<sub>4</sub>-112</b>	NH <sub>4</sub> analyzer, 2-channel, with 2 measuring ranges, Indophenol method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2m SNCIQ cable; reagent sets need to be ordered separately	825012
<b>Reagenzien-Sets</b>		
<b>R-Set NH<sub>4</sub>/1-1</b>	Reagents for Alyza IQ NH <sub>4</sub> , when using MR1	827540
<b>R-Set NH<sub>4</sub>/1-2</b>	Reagents for Alyza IQ NH <sub>4</sub> , when using MR2	827541
<b>SC-Set NH<sub>4</sub>/1-1_0/1</b>	Calibration standards and cleaning solution for Alyza IQ NH <sub>4</sub> , when using MR1; Calibration standards with 0 mg/l and 1 mg/l	827545
<b>SC-Set NH<sub>4</sub>/1-1_0/4</b>	Calibration standards and cleaning solution for Alyza IQ NH <sub>4</sub> , when using MR1; Calibration standards with 0 mg/l and 4 mg/l	827546
<b>SC-Set NH<sub>4</sub>/1-2_0/16</b>	Calibration standards and cleaning solution for Alyza IQ NH <sub>4</sub> , when using MR2; Calibration standards with 0 mg/l and 16 mg/l	827547
<b>Alyza IQ for Orthophosphate measurement</b>		
<b>Alyza IQ PO<sub>4</sub>-111</b>	PO <sub>4</sub> analyzer, 1-channel, with MR1, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable; reagent sets need to be ordered separately	825511
<b>Alyza IQ PO<sub>4</sub>-112</b>	PO <sub>4</sub> analyzer, 2-channel, with MR1, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable; reagent sets need to be ordered separately	825512
<b>Alyza IQ PO<sub>4</sub>-121</b>	PO <sub>4</sub> analyzer, 1-channel, with MR2, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable; reagent sets need to be ordered separately	825521
<b>Alyza IQ PO<sub>4</sub>-122</b>	PO <sub>4</sub> analyzer, 2-channel, with MR2, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable; reagent sets need to be ordered separately	825522
<b>Reagent sets</b>		
<b>R-Set PO<sub>4</sub>/1-1</b>	Reagents for Alyza IQ PO <sub>4</sub> -X1X with MR1	827550
<b>R-Set PO<sub>4</sub>/1-2</b>	Reagents for Alyza IQ PO <sub>4</sub> -X2X with MR2	827551
<b>SC-Set PO<sub>4</sub>/1-1_0/1</b>	Calibration standards and cleaning solution for Alyza IQ PO <sub>4</sub> -X1X with MR1; Calibration standards with 0 mg/l and 1 mg/l	827555
<b>SC-Set PO<sub>4</sub>/1-1_0/10</b>	Calibration standards and cleaning solution for Alyza IQ PO <sub>4</sub> -X1X with MR1; Calibration standards with 0 mg/l and 10 mg/l	827556
<b>SC-Set PO<sub>4</sub>/1-2_10/40</b>	Calibration standards and cleaning solution for Alyza IQ PO <sub>4</sub> -X2X with MR2; Calibration standards with 10 mg/l and 40 mg/l	827557

# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)

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