



Process Instrumentation

D.O. · pH/ORP · CONDUCTIVITY · TURBIDITY/TSS · $\text{NH}_4/\text{NO}_3/\text{NO}_2$ ·
COD/BOD/TOC/DOC/SAC/UVT · PHOSPHATE · SLUDGE LEVEL · CHLORINE · COLOR

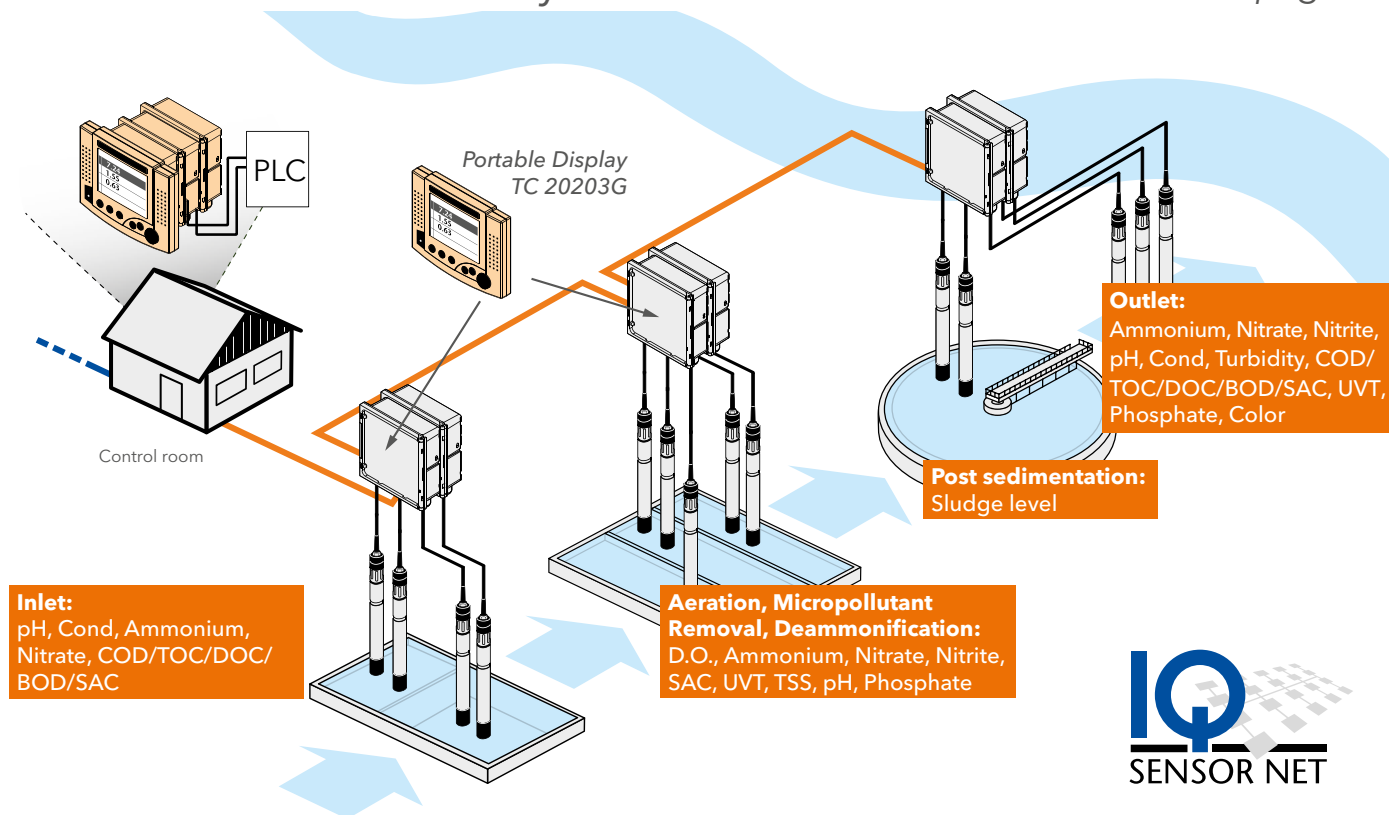


a xylem brand

IQ SENSOR NET – the System for Wastewater Treatment Plants, Industrial Applications and much more

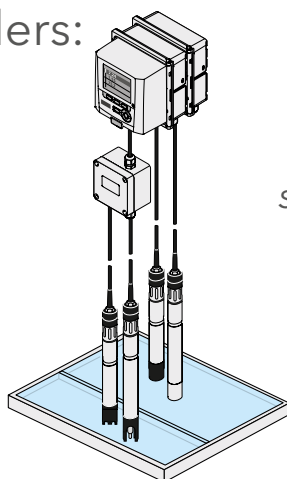
① IQ Sensor Network: System 2020

see from page 50



② Outstanding among the compact Controllers: System 282/284

see from page 58



Oxygen measurement with FDO® 700 IQ

- Calibration free sensor
- Reduces energy and operational costs
- Long lifetime of membrane cap
- Precise results without drift

see page 11

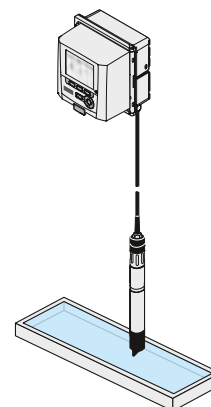
Ammonium & Nitrate measurement with ISE sensors (e.g. VARiON® Plus 700 IQ)

- Easy and fast matrix adjustment
- Up to 2,000 mg/l NH₄
- Extremely robust electrodes
- Compensation with K and Cl

see page 30

③ The Single Parameter Measuring Point: System 281

see from page 60



Reagent-free COD measurement with NiCaVis® 701/705 IQ NI

- No reagent consumption
- Integrated ultrasonic cleaning
- Extremely low in maintenance
- No wear parts
- Additionally BOD, TOC, DOC, SAC, UVT, Nitrate and Nitrite

see page 38

All measurement parameters at a glance

see catalog page

12 11 15 20 24 25 30 30 30 34 34 38 38 32 38 32 43 41 34 47

Parameters	Sensors																			
	TriOxmatic® 700 IQ	FDO® 700/701 IQ	Sensolyt® 700 IQ	TetraCon® 700 IQ	VisoTurb® 700 IQ	ViSolid® 700 IQ	AmmoLyt® 700 IQ	NitraLyt® 700 IQ	VARiON® 700 IQ	NitraVis® 701/705 IQ (TS)	NitraVis® 701/705 IQ NI	CarboVis® 701/705 IQ (TS/Co)	NiCaVis® 705 IQ (TS/SF/Co)	NiCaVis® 701/705 IQ (NI) SF	UV 701/705 IQ SAC	UV 701/705 IQ NOx	IFL 700 IQ	Alyza IQ PO ₄	Alyza IQNH ₄	ColorVis 705 IQ
Usable with System 2020	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 282/284	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 281	■	■	■	■	■															
Power consumption [W]	0,2	0,7	0,2	0,2	1,5	1,5	0,2	0,2	0,2	8,0°	8,0°	8,0°	8,0°	8,0°	8,0°	8,0°	5,5°	**	**	8,0°
Parameter																				
Temperature	■	■	■	■			■	■	■											
Dissolved Oxygen (electrochem.)	■																			
Dissolved Oxygen (optical)		■																		
pH			■																	
ORP			■																	
Conductivity				■																
Salinity				■																
TDS				■																
Turbidity (optical)					■															
TSS (optical)					■	■				■		■								
Ammonium (ion-selective)							■		■											
Nitrate (ion-selective)								■	■											
Nitrate (optical/spectral)										■	■		■	■		■†				
Nitrite (optical/spectral)											■			■		■				
Potassium (ion-selective)							■		■											
Chloride (ion-selective)								■	■											
COD (optical/spectral)												■	■	■						
BOD (optical/spectral)												■	■	■						
TOC (optical/spectral)												■	■	■						
DOC (optical/spectral)												■	■	■						
SAC (optical/spectral)												■	■	■	■					
UVT (optical/spectral)												■	■	■	■					
Sludge Level																	■			
Orthophosphate (optical/wet chem.)																		■		
Ammonium (optical/wet chem.)																			■	
Color												■	■							■

** Power delivery: Alyza IQ PO₄ provides 10W

° When operating with System 282/284, the average power consumption can be used. Details see operating manual System 282/284.

† Nitrite and Nitrate are included in the measured value.

Systems in Detail

see catalog page 55 55 56 56 56 56 57 57 56 56 56 54 57 57 57 57 66 66 57

Module	MIQ/PS	MIQ/24V	MIQ/C6	MIQ/R6	MIQ/CR3	MIQ/IC2	MIQ/3-MOD	MIQ/3-PR	MIQ/JB	MIQ/JBR	MIQ/WL PS (SET)	MIQ/TC2023G	Terminal IQ	MIQ/MC3	MIQ/MC3-MOD	MIQ/MC3-PR	Cleaning Air Box - 230 VAC	Cleaning Air Box - 115 VAC	MIQ/CHV PLUS
Usable with System 2020	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 282/284	■	■	■	■	■	■			■		■						■	■	■
Available IQSN connectors	3	3	2	2	2	2	2	2	4	4	3	✗	✗	2	2	2	✗	✗	2
Electrical current [W]	**	**	3.0	1.5	3.0	0.2	3.0	3.0	0.0	0.2	0.6	3.0	3.0	2.5	3.0	3.0	***	***	2.5
Module features																			
Power supply																			
100...240 V AC	■																		
24 V AC/DC		■																	
Analog outputs/relays																			
6 x 0/4...20 mA			■																
6 x relays				■															
3 x 0/4...20 mA, 3 x relays					■														
Analog inputs																			
2 x 0/4...20 mA						■													
Interfaces																			
MODBUS							■								■				
PROFIBUS								■								■			
USB							✗	■	✗	■		■		■	■	■			
Ethernet/LAN (Profinet, Ethernet/IP, Modbus TCP)														■	■	■			
Intra-system connectivity																			
4 available IQSN connectors									■										
4 available IQSN connectors including signal amplification for large distances										■									
Radio transmission											■								
Controller																			
Controller/Terminal (with display)												■							
Terminal (with display)													■						
Controller in std IQ module w/o display														■	■	■			
Compensation																			
Air-pressure compensation for D.O. measurement														■	■	■			
Compressed air cleaning																			
Air compressor 230 VAC																	■		
Air compressor 115 VAC																		■	
Valve for automatic cleaning																			■

** Power delivery: MIQ/PS and MIQ/24V provide 18W each

*** Integrated power supply

✗ USB interface only for software updates



Dr. Robert Reining and Ulrich Schwab,
Xylem Analytics Germany Managing Director
and Side Leader Mainz and Weilheim

WTW a Brand, rich in Tradition

Since 2011, WTW is part of the Xylem Group, which operates worldwide in its core business of water. As a brand of *Xylem Analytics Germany GmbH* and being rich in tradition, we see our task in using our expertise and innovative technologies to find solutions for our customer's measurement tasks.

For many years the IQ SENSOR NET has been a technology leader in wastewater quality measurement. It can be used both as single on-site measurement and in a network. The innovative digital sensors represent the heart of the system. As a result the IQ SENSOR NET is the most flexible digital multi-parameter system for up to 20 sensors.

With the new MIQ/MC3 controller family with integrated USB and LAN interfaces, the IQ SENSOR NET System can be connected to internet communication via TCP/IP technology. The new Analyzer family Alyza IQ augments the System with wet chemical analyzers for the measurement of orthophosphate. They provide extremely low reagent consumption and produce very small amounts of waste.

This as well as our entire product portfolio of process instrumentation can be found on the following pages. If you need any information or solution on laboratory equipment of the brand WTW or other Xylem brands, don't hesitate to contact us or take a look on our new website www.xylemanalytics.com.

With more than 70 years of experience, the WTW brand has established a first-class reputation through its exemplary customer-support. Our Customer Care Center is ready to find an individual solution for any customer's measurement tasks. WTW's comprehensive application collection, in combination with expert application specialists, ensures fast solutions for technical challenges. The dealer and service network extends around the world.

As it always has been the largest percentage of our products are produced at our facility in Weilheim in Upper Bavaria, south of Munich, by nearly 400 employees – quality-measurement technology with expert support, "Made in Germany".

You can find out more about Xylem on our website:
www.xyleminc.com

Publisher



Xylem Analytics Germany Sales
GmbH & Co. KG, WTW
Am Achalaich 11
82362 Weilheim
Germany

Phone +49 881 1830
Fax +49 881 183-420
Info.WTW@xylem.com
www.xylemanalytics.com



Xylem Analytics Germany Sales GmbH & Co. KG, WTW · Am Achalaich 11 · 82362 Weilheim · Germany
Tel +49 881 1830 · Fax +49 881 183-420 · Info.WTW@xylem.com · www.xylemanalytics.com

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IP-Code (International Protection Code)

Protection types acc. to DIN EN 60529

1st number:

instrument
protected against
entry of solid bodies

- 0 not protected
- 1 with $\varnothing \geq 50$ mm
- 2 with $\varnothing \geq 12$ mm
- 3 with $\varnothing \geq 2.5$ mm
- 4 with $\varnothing \geq 1.0$ mm
- 5 dust protected*
- 6 dustproof

* limited amounts of dust
may enter under certain
conditions

2nd number:

protection against water

- 0 not protected
- 1 vertically falling drops
- 2 drops of water at angles of up to 15° to vertical
- 3 drops of water at angles of up to 60° to vertical
- 4 splashes from any direction
- 5 jets of water from any direction
- 6 strong jets of water from any direction
- 7 intermittent submersion (max. 1 m deep, 30 min)
- 8 permanent submersion
(conditions must be specified)

If numbers 7 and 8 are fulfilled this does not necessarily
mean that numbers 5 or 6 are also fulfilled.



These test marks indicate that **he national safety standards applicable in the USA and Canada have been complied with.**

Our certification partners, UL (Underwriter Laboratories) and ITS (Intertek Testing Services), are officially authorized testing centers in both countries.



Warranty for perfect operation of instruments supplied by us.
Faults resulting from natural wear and tear in proper use/handling or from alterations/repairs carried out by the customer or third parties to the items supplied are excluded from this warranty.



Reference to **Data sheets**
at the end of the catalog or separately available



This test mark indicates that **the product complies with the applicable EU and UK directives.**

For WTW products these are essentially:

CE: **Directive 2014/35/EU**

UK: **Electrical Equipment (Safety) Regulations 2016**

Electrical equipment for use within particular voltage limits
(low-voltage directive/product safety)

CE: **Directive 2014/30/EU**

UK: **Electromagnetic Compatibility Regulations 2016**

Electromagnetic compatibility (EMC directive)

CE: **Directive 2011/65/EU**

UK: **The restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012**

Restriction Of Hazardous Substances (ROHS)

CE: **Directive 2014/53/EU**

UK: **Radio Equipment Regulations 2017**

Radio Equipment Directive (RED)

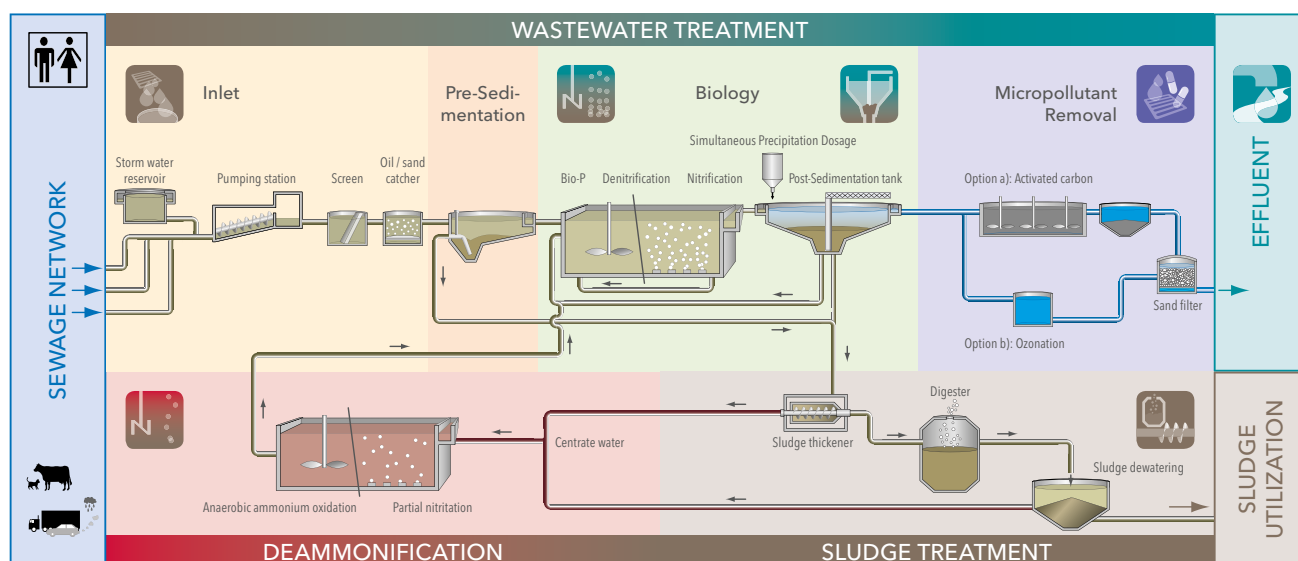
Typical Applications

Process Instrumentation



Wastewater (municipal wwtp)

see also www.xylemanalytics.com/en/applications/wastewater



	Inlet	pH: Conductivity:	SensoLyt® 700 IQ EX measuring point TetraCon® 700 IQ EX measuring point	page 15 page 16 page 20 page 20	NH₄, NO₃: ISE sensors TSS, NO₃, NO₂, NO_x, COD, BOD, TOC, DOC, SAC, UVT: Spectral sensors page 32 page 32
	Biological Cleaning (Aeration)	D.O.: NH₄, NO₃:	FDO® 700 IQ TriOxmatic® 700 IQ ISE sensors Alyza IQ NH4	page 11 page 12 page 32 page 34	TSS, NO₃, NO₂, NO_x, COD, BOD, TOC, DOC, SAC, UVT: Spectral sensors TSS: ViSolid® 700 IQ Orthophosphate: Alyza IQ PO₄ page 32 page 25 page 41
	Sedimentation	Sludge level:	IFL 700 IQ	page 43	
	Effluent	pH: Conductivity: NH₄, NO₃:	SensoLyt® 700 IQ TetraCon® 700 IQ ISE sensors Alyza IQ NH4	page 15 page 20 page 32 page 34	TSS, NO₃, NO₂, NO_x, COD, BOD, TOC, DOC, SAC, UVT, Color: Spectral sensors Turbidity: VisoTurb® 700 IQ Orthophosphate: Alyza IQ PO₄ page 32 page 24 page 41
	Micropollutant Removal	SAC, UVT:	UV 705 IQ SAC	page 38	NO₃, NO₂, COD, BOD, TOC, DOC, SAC, UVT: NiCaVis® 705 IQ NI page 32
	Sludge Treatment	TSS:	ViSolid® 700 IQ	page 25	pH: SensoLyt® 700 IQ EX measuring point page 15 page 16
	Deammonification (Anammox)	pH: D.O.:	SensoLyt® 700 IQ FDO® 700 IQ	page 15 page 11	NH₄, NO₃: ISE sensors NO₃, NO₂: NitraVis® 701 IQ NI page 30 page 32

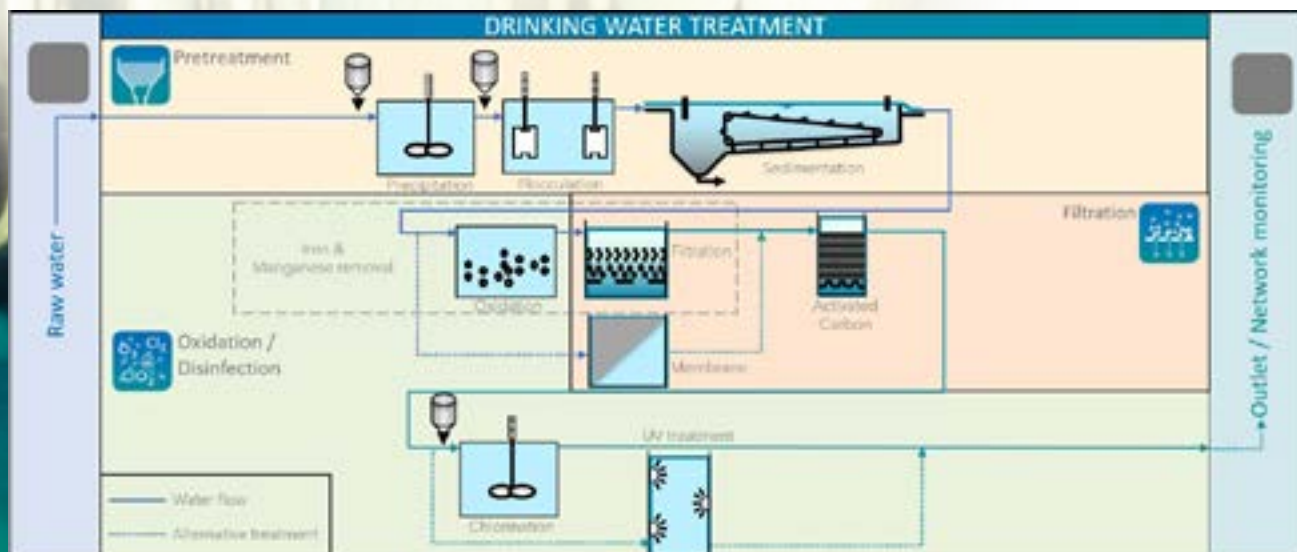
Typical Applications

Process Instrumentation



Drinking Water

see also www.xylenalytics.com/en/applications/drinking-water



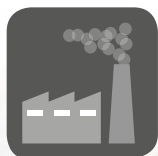
Icons fehlen noch

	Raw water (Groundwater, Surface waters)	pH: Conductivity:	<i>SensoLyt® DW (A)</i> <i>SenTix® ML 70</i> <i>TetraCon® 700 IQ</i> <i>LR ML</i> <i>LRD 325</i>	<i>page 16</i> <i>page 17</i> <i>page 20</i> <i>page 21</i> <i>page 20</i>	Oxygen: Turbidity: Temperatur:	<i>FDO® 700 IQ</i> <i>Turb PLUS 2000</i> <i>available in several other sensors</i>	<i>page 11</i> <i>page 27</i> <i></i>
	Pretreatment (Precipitation, Flocculation, Sedimentation)	Turbidity:	<i>VisoTurb® 700 IQ</i> <i>Turb PLUS 2000</i>	<i>page 24</i> <i>page 27</i>	SAC:	<i>UV 705 IQ SAC</i>	<i>page 32</i>
	Filtration (Matrix filter, Membrane filter, Activated Carbon)	Turbidity:	<i>VisoTurb® 700 IQ</i> <i>Turb PLUS 2000</i>	<i>page 24</i> <i>page 27</i>			
	Oxidation/Disinfection (Chlorination, Ozonation, UV treatment, iron and manganese removal)	Chlorine: UVT: Turbidity:	<i>Chlorine 3017M</i> <i>FCML 412 N</i> <i>UV 705 IQ SAC</i> <i>Turb PLUS 2000</i>	<i>page 49</i> <i>page 49</i> <i>page 32</i> <i>page 27</i>	pH: Oxygen: Temperatur:	<i>SensoLyt® DW (A)</i> <i>SenTix® ML 70</i> <i>FDO® 700 IQ</i> <i>available in several other sensors</i>	<i>page 16</i> <i>page 17</i> <i>page 11</i> <i></i>
	Outlet & Network monitoring	Turbidity: pH: Conductivity:	<i>Turb PLUS 2000</i> <i>SensoLyt® DW (A)</i> <i>SenTix® ML 70</i> <i>TetraCon® 700 IQ</i> <i>LR ML</i> <i>LRD 01</i> <i>LRD 325</i>	<i>page 27</i> <i>page 16</i> <i>page 17</i> <i>page 20</i> <i>page 21</i> <i>page 21</i> <i>page 20</i>	Oxygen: Chlorine: ORP: Temperature:	<i>FDO® 700 IQ</i> <i>Chlorine 3017M</i> <i>FCML 412 N</i> <i>SensoLyt® Pt (A)</i> <i>SenTix® ML ORP</i> <i>available in several other sensors</i>	<i>page 11</i> <i>page 49</i> <i>page 49</i> <i>page 16</i> <i>page 17</i> <i></i>

Typical Applications



Process Instrumentation



Industry

see also www.xylymanalytics.com/en/applications/industry



The IQ SENSOR NET can further be used for different industrial applications.

Please consider the application range of our sensors, e.g. pH, temperature, corrosion or resistance. Given lifetimes and accuracies might differ due to the specific composition of the measured media.

IQ SENSOR NET

IQ Sensors

IQ Sensors (corrosion resistant SW versions)

from page 50

from page 10

from page 11



Water

see also www.xylymanalytics.com/en/applications/environmental-monitoring-surface-water



For the continuous monitoring of surface water Xylem Analytics Germany offers the IQ SENSOR NET with its standard IQ sensors and especially developed reagent free spectral probes (SF versions).

<i>pH:</i>	<i>SensoLyt® 700 IQ</i>	<i>page 15</i>
<i>Conductivity:</i>	<i>TetraCon® 700 IQ</i>	<i>page 20</i>
<i>D.O.:</i>	<i>FDO® 700 IQ</i> <i>TriOxmatic® 700 IQ</i>	<i>page 11</i> <i>page 12</i>
<i>Turbidity:</i>	<i>VisoTurb® 700 IQ</i>	<i>page 24</i>
<i>Nitrate (NO₃):</i>	<i>NiCaVis® 705 IQ SF</i>	<i>page 32</i>
<i>Nitrite (NO₂):</i>	<i>NiCaVis® 705 IQ NI SF</i>	<i>page 32</i>
<i>Color</i>	<i>ColorVis 705 IQ</i> <i>NiCaVis® 705 IQ SF Co</i>	<i>page 32</i> <i>page 32</i>
<i>COD/BOD</i>	<i>NiCaVis® 705 IQ SF</i>	<i>page 32</i>

Typical Applications

Process Instrumentation



Fish Farming

see also www.xylenanalytics.com/en/applications/aquaculture



From extensive to intensive management, from fresh to salt water fish farming – to monitor relevant parameters like pH, oxygen concentration, salinity, total suspended solids or turbidity, we offer respective sensors; including temperature.

	Freshwater	Saltwater
pH (incl. Temperature)	<i>SensoLyt® 700 IQ</i> page 15	<i>SensoLyt® 700 IQ SW</i> page 15
Carbon	<i>Spectral sensors</i> page 38	<i>Spectral sensors</i> page 38
D.O. (incl. Temperature)	<i>FDO® 700 IQ</i> (protective cap MSK FDO® against fish bites must be ordered separately) page 11 <i>TriOxmatic® 700 IQ</i> page 12	<i>FDO® 700 IQ SW</i> (protective cap MSK FDO® against fish bites included) page 11 <i>TriOxmatic® 700 IQ SW</i> page 12
Salinity (incl. Temperature)	<i>TetraCon® 700 IQ</i> page 20	<i>TetraCon® 700 IQ SW</i> page 19
TSS/Turbidity	<i>ViSolid® 700 IQ</i> page 25 <i>VisoTurb® 700 IQ</i> page 24	<i>ViSolid® 700 IQ SW</i> page 25 <i>VisoTurb® 700 IQ SW</i> page 24

D.O. Measurement

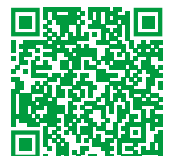
Measuring . Monitoring . Controlling



Reliable and continuous measurements of dissolved oxygen have become vitally important in many areas of the water/ wastewater treatment facilities. The availability of accurate and real-time measured concentrations is an absolute requirement for process monitoring and dynamic process control to ensure an efficient plant operation.

Fields of application:

- Nitrification/Denitrification
- Deammonification
- Inlet and Effluent Monitoring
- Water Pollution Control
- Fishfarming/Aquaculture



see also <https://www.xylymanalytics.com/en/parameters/dissolved-oxygen-do>

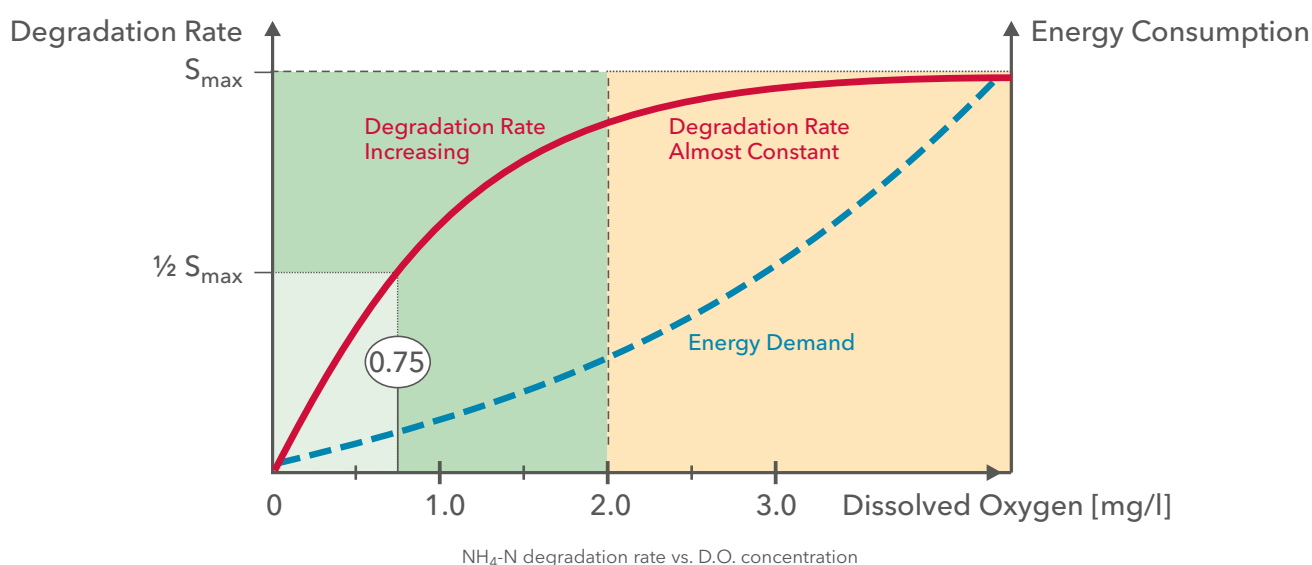
Monitoring and Control

In the **biological nutrient removal process** of wastewater treatment plants, continuous and precise measurement of dissolved oxygen concentration is of vital importance to an optimal and trouble free operation of the water/wastewater treatment facility. The efficiency and energy demand of the purification process, in the nitrification and denitrification phase, is mainly determined by the performance of the aeration control system; i.e. by a load-dependent regulation of the oxygen supply.

In the presence of dissolved oxygen, the nitrifying bacteria convert ammonium to nitrate. The activity of the microorganisms depends on the oxygen concentration, with an economic break point at about 2 mg/l. Higher oxygen concentrations do not increase the rate of degradation, but require significantly more energy for the oxygen blowers (see illustration).

The aerator equipment is responsible for the majority of energy consumption in a biological wastewater plant. To reduce the energy and maintenance costs, it is therefore important to reduce the aerator operation time to a minimum depending on the required dissolved oxygen concentration.

The residual dissolved oxygen in the sludge, however, has a negative effect on the conditions in the denitrification stage. On the other hand in nitrification, a certain amount of dissolved oxygen is needed for optimal growth and ammonium oxidation. **Only the use of precise and reliable on-line measuring instruments will ensure an efficient and energy saving control of the process.**



Measurement Systems

For more than 70 years, WTW has been recognized as a leader in the field of Dissolved Oxygen measurements. Innovative technologies, creative and continuous product development, and extensive appli-

cation expertise have resulted in superior instruments and systems of outstanding performance, reliability and design for the most precise online measurements available.

FDO®: Optical D.O. Measuring

The innovative geometry of the membrane cap with a 45° angle enables the precise oxygen measurement and avoids false readings through air bubble adhesion. Due to the automatic recognition of the calibration free cap, a manual input of the serial number is not needed (potential source of error). The fast and easy cap change saves a lot of work and time.

The long lifetime of the cap (3-5 years) ensures sustainable operation and minimized maintenance costs. Further, the moveable sensor mounting enables a self cleaning effect at the measuring window.

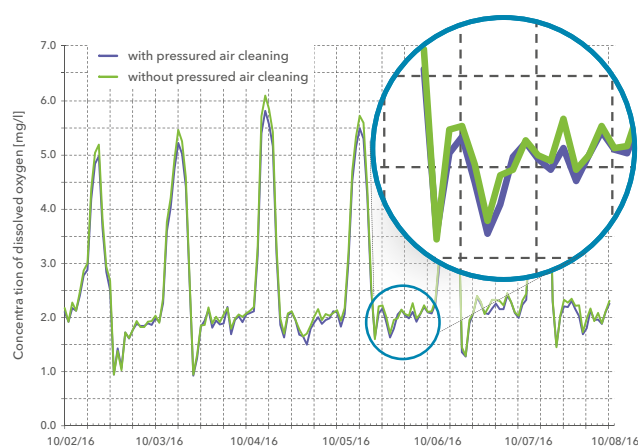
Additional cleaning with pressured air is possible for special applications but not required for typical municipal wastewater treatment plants (see figure).



FDO® 700 IQ



- Calibration and flow free
- Insensitive to air bubbles
- Low usage costs



Comparison of two FDO® sensors with and without pressured air cleaning

Sensor Caps

The caps for the digital FDO® sensors are calibration free and provide reliable DIN compliant results.

SC-FDO 700

for wastewater treatment plants, with a response time ideal for treatment processes

SC-FDO 701

with faster response time



Ordering Information

Model	Description	Order No.
SC-FDO 700	Universal sensor cap for FDO® 700 IQ/700 IQ SW	201654
SC-FDO 701	Fast response time sensor cap for FDO® IQ 701/IQ 701 SW	201655



For technical data please see datasheet D2.02

Optical FDO® D.O. sensors see from page 11

Information about IQ SENSOR NET system see from page 50

Digital

Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ SENSOR NET to regulate biological cleaning steps.



FDO® 700 IQ

for the IQ SENSOR NET



FDO® 700 IQ SW

for use in corrosive media



FDO® 701 IQ

with a faster response time



FDO® 701 IQ SW

with a faster response time, for use in corrosive media



Ordering Information

Model	Description	Order No.
FDO® 700 IQ	Optical O ₂ sensor for connection to the IQ SENSOR NET.	201650
FDO® 701 IQ	like the FDO®700 IQ, but with a faster response time	201660
FDO® 700 IQ SW	like the FDO®700 IQ, but as sea water model with plastic arming (POM)	201652
FDO® 701 IQ SW	like the FDO®700 IQ SW, but with a faster response time	201653



For technical data please see datasheet D2.02

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Analog dissolved oxygen sensors see from page 13

TriOxmatic®: Electrochemical D.O. Measuring

Precise and accurate results with mature and proven oxygen sensors with 3 electrodes system.

The amperometric sensors provide an outstanding high accuracy – without startup phase. The robust teflon membrane is resistant towards organic deposits. The self diagnostic systems SensLeck and SensReg are continuously monitoring the membrane and the electrolyte consumption.



TriOxmatic® 700 IQ



- Low investment costs
- No startup time, no long-term drift – stable from the beginning to the end
- Self-diagnosis system SensReg/ SensLeck by means of 3 electrodes system



Digital

TriOxmatic® IQ: The digital amperometric oxygen sensors are automatically recognized by the IQ SENSOR NET.



TriOxmatic® 700 IQ

for the IQ SENSOR NET

TriOxmatic® 700 IQ SW

for use in corrosive media

TriOxmatic® 701 IQ

for the measurement of trace oxygen

TriOxmatic® 702 IQ

trace sensor (ppb range) – for pure or boiler feed water

Ordering Information

Model	Description	Order No.
TriOxmatic® 700 IQ	Universal oxygen sensor for the measurement and regulation of oxygen input in wastewater treatment plants	201640
TriOxmatic® 700 IQ SW	Like TriOxmatic®700 IQ, but as a sea water model	201641
TriOxmatic® 701 IQ	Like TriOxmatic®700 IQ, but with faster response times	201644
TriOxmatic® 702 IQ	Like TriOxmatic®700 IQ, but as a trace sensor (ppb area) suitable for pure or boiler feed water	201646



For technical data please see datasheet D2.01

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Optical IQ dissolved oxygen sensors see from page 10

Analog

Analog oxygen sensors to be connected to the analog transmitters Oxi 298.

TriOxmatic® 690



suitable for pure measuring tasks in wastewater/water

TriOxmatic® 701

increased resolution for the residual oxygen in the denitrification



analog TriOxmatic® sensor

Ordering Information

Model	Description	Order No.
TriOxmatic® 690-7	Universal oxygen sensor without self diagnosis, with normal response time, cable length 7 m	201690
TriOxmatic® 701-7	Oxygen sensor with automatic self diagnosis and faster response time, cable length 7 m	201678



For technical data please see datasheet D3.02

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 66

Optical IQ dissolved oxygen sensors see from page 10

Further analog Sensors

For drinking water monitoring: The sensor can be connected to the Oxi 298 Pt1000 transmitter as well as to the multiparameter system MULTILINE 1000 with the open wires.



- Including cable
- Integrated temperature sensor
- Easy handling



D7.04

Ordering Information

Model	Description	Order No.
Oxi ML 41	Electrochemical D.O. sensor with 1 m (3.3 ft) fixed cable for transmitter MULTILINE 1000 or Oxi 4000. Range: 0-20 mg/l or 0 - 200%, temperature range: -5-45 °C, with temperature sensor Pt 1000; open cable ends.	201931



For technical data please see datasheet D7.04

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 66

Optical IQ dissolved oxygen sensors see from page 11

pH / ORP Measurement

Reliable with convenient calibration

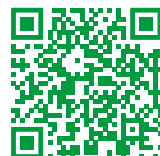


pH is one of the most important parameters measured throughout the water, wastewater and many process industries. In the biological treatment of wastewaters, for example, the acidic or alkaline condition of the waste water has an essential influence on the activity of the microorganisms; continuous online pH control is required. Precise and reliable systems for pH monitoring and control are also necessary in drinking water plants and in a variety of industrial process technologies.

Fields of application:

- Wastewater Treatment Facilities
- Water Treatment Utilities
- Neutralization Plants
- Surface Waters and Groundwater
- Industrial Processes
- Food Industry
- Pharmaceutical industry

see also <https://www.xylenalytics.com/en/parameters/ph-and-orp-redox>



SensoLyt® System Design

Especially in difficult conditions, which are often found in sewage treatment facilities, high demands towards the continuous pH/ORP measurements are made. These concern in particular the reliability and the operational safety of the employed systems. Especially developed for these harsh applications, the SensoLyt® sensors are precision engineered assemblies, which consist of a submersible housing with a built-in preamplifier and the appropriate combination of pH or ORP electrode. In combination with our WTW controllers they form a reliable pH/ORP measuring system, which represents the highest standard with regard to accuracy, EMC noise immunity and economy.



SensoLyt® 700 IQ



- Stable signals by digital signal processing
- Convenient calibration in the lab and glass breakage detection
- Reliable measurements by integrated temperature sensor



D2.03, D3.03-04, D4.04

Digital

To be connected to the digital, modular, and expandable IQ SENSOR NET as well as to the single parameter controller 281.



SensoLyt® 700 IQ

for the IQ SENSOR NET



SensoLyt® 700 IQ SW

for use in corrosive media



Ordering Information

Model	Description	Order No.
SensoLyt® 700 IQ	Digital pH/ORP fitting for SensoLyt® electrode, with integrated preamplifier and temperature sensor (please order cable separately)	109170
SensoLyt® 700 IQ SW	Like the SensoLyt® 700 IQ, but as a sea water model	109171



For technical data please see datasheet D2.03

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Analog pH/ORP fitting see from page 16

Analog

To be operated with analog transmitters.

SensoLyt® 650



Passive fitting without preamplifier for the high-impedance measuring process. The fitting is connected directly to the high ohm input of the WTW pH monitor pH 298 NTC.

SensoLyt® 650 EX



Version for explosive areas of zone 1, to be connected to the Stratos Pro A 201 X pH controllers.



SensoLyt® 650

Ordering Information

Model	Description	Order No.
SensoLyt® 650-7	pH/ORP armature with high-impedance signal transmission and integrated temperature sensor, cable length 7 m	109195
SensoLyt® 650-7 EX	as above, but for explosion-endangered area (Ex ib IIC T6 Gb X), connectable to StratosProA201XpH-0(-1). Electrodes need to be ordered separately	109195EX



For technical data please see datasheets D3.03 and D4.04

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 65



Controllers / isolated amplifier for EX area see from page 69

Combination Electrodes

SensoLyt® electrodes for all applications – from drinking water to municipal and industrial wastewater.

Armored Versions

for connection with SensoLyt® armature:
SEA(-EX/-HP), TFA, ECA, DWA, PtA,
and **PtFA**.

Electrode without armor

to be installed into flow cells; can be connected directly to pH 298 transmitters.



SEA-HP



EC

SensoLyt®



Ordering Information

Model	Description	Order No.
SensoLyt® SEA	pH electrode for heavily loaded wastewater, to be connected to SensoLyt® armature, range 2 ... 12 pH	109115
SensoLyt® SEA EX	Like model SEA, but for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor)	109115EX
SensoLyt® TFA	Like model SEA, but for not typically municipal or industrial wastewater	109114
SensoLyt® DWA	Like model SEA, but for drinking water, range 0 ... 14 pH	109119
SensoLyt® PtA	ORP electrode for heavily loaded wastewater, to be connected to SensoLyt® armature, range ±2000 mV	109125
SensoLyt® PtFA	ORP electrode for heavily loaded wastewater, to be connected to SensoLyt® armature, range ±2000 mV	109126
SensoLyt® SE	Like model SEA, but unarmored, to be installed by example in flow cells	109100



For technical data please see datasheets D3.04 and D4.04

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 65

SensoLyt® armature see page 15

Analog ProcessLine® Combination Electrodes

The special construction of the ProcessLine® electrodes brings them very close to the optimum for liquid electrolyte electrodes with respect to their accuracy, stability, fast response time and durability. To be installed in a flow cell or in a retractable armature. The low maintenance SteamLine electrodes are designed to be used in a SIP treatment (sterilization in place) and a CIP cleaning (clean in place).



PL 81-225pHT VP



- Low maintenance
- Without contamination or blocking of the reference electrode
- Fast and stable readings
- SIP and CIP capable



Ordering Information

Model	Description	Order No.
PL 80-120pH	pH electrode, S8, 0...14 pH, no Temp., 120 mm	109233
PL 80-225pH	pH electrode, S8, 0...14 pH, no Temp., 225 mm	109234
SL 80-120 PH	pH electrode, S8, 0...14 pH, no Temp., 120 mm, capable for SIP and CIP	285113213
PL 82-225pHT VP	pH electrode, VP, 0...14 pH, Pt100, 225 mm	109239
SL 81-120 PHT-VP	pH electrode, VP, 0...14 pH, Pt1000, 120 mm, capable for SIP and CIP	285113308
PL 81-120 pHT VP	pH electrode, VP, 0...14 pH, Pt1000, 120 mm	285113550



For technical data please see datasheet D3.05

Alternatives and accessories see brochure "Product Details" and website

Combination electrodes for SensoLyt® fittings see from page 16

Analog monitors see from page 65

Analog SenTix® Electrodes

To measure pH and ORP in drinking water, WTW offers analog sensors to be connected to analog transmitters pH 298 and MULTILINE 1000.

The pH electrode **SenTix® ML 70** ist equipped with a thread PG 13.5 and a S7 plug head. The ORP sensor **SenTix® ML RP** provides a measuring range of -2000 ... +2000 mV and a temperature range of 0 ... 80 °C.



- Economic
- With thread for pipe installation
- Easy handling



Ordering Information

Model	Description	Order No.
SenTix® ML 70	pH combination electrode with gel electrolyte, S7 plug head, glass-shaft; PG 13.5 screw thread	104100
SenTix® ML ORP	ORP combination electrode with gel electrolyte, S7 plug head, glass-shaft; PG 13.5 screw thread	104150



For technical data please see datasheet D7.04

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 67

Analog pH electrodes see from page Seite 14

Conductivity Measurement

Reliable in multiple applications

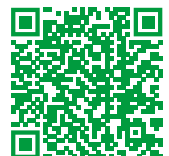


Conductivity is a well recognized and often indispensable parameter of state-of-the-art water, wastewater and industrial process analysis. Continuous measuring systems are employed to monitor the salt load of the influent in wastewater treatment plants, to control quality of drinking water and ultra-pure water or to determine non-specific contaminants in industrial processes.

Fields of application:

- Municipal and Industrial Wastewater
- Water Treatment
- Surface Waters
- Sea Water, Brackish Water, Fishfarming
- Boiler Feed Water
- Demineralization
- Industrial Process Fluids

see also <https://www.xylenalytics.com/en/parameters/conductivity-and-salinity>

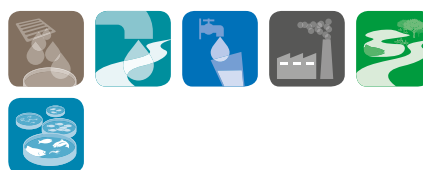


TetraCon® 4-electrode Design

Compared to the 2-electrode conductivity sensors, the 4 electrode version of the TetraCon® series provides a very large measuring range. For several years now, the proven technique guarantees smooth operation, especially in the area of higher conductivities. Further on, the 4 electrode cell is very resistant against contamination and provides a fast temperature compensation by its integrated temperature sensor. A pressure resistance of up to 10 bar enables the installation in pipes.



TetraCon® 700 IQ



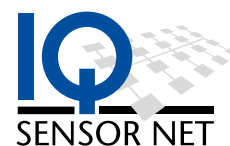
- Highest linearity with 4 electrode measuring cell
- Extremely robust and durable
- Large measuring range (1 µS/cm ... 2 S/cm) with only one single cell
- Highly resistant to fouling



TD D2.04, D3.06, D4.03

Digital

To be connected to the digital, modular, and expandable IQ SENSOR NET as well as to the single parameter controller 281.



TetraCon® 700 IQ

for the IQ SENSOR NET



TetraCon® 700 IQ SW

for use in corrosive media



Ordering Information

Model	Description	Order No.
TetraCon® 700 IQ	Digital 4 electrode conductivity measuring cell for highly contaminated wastewater	302500
TetraCon® 700 IQ SW	Like TetraCon® 700 IQ, but as a sea water model	302501



For technical data please see datasheet D2.04

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Analog conductivity measuring cells see from page 18

Analog

To be operated with analog transmitters.

TetraCon® 700



especially developed submersible sensor assembly for use in wastewater treatment plants



TetraCon® 700 EX



Version for explosive areas of zone 1, to be connected to the Stratos Pro A 201 X Cond controllers.



TetraCon® 325

Suitable for universal applications



IP 65

TetraCon® DU/T

flow measuring cell for standard industrial applications



LRD 325

for installation in pipes



Ordering Information

Model	Description	Order No.
TetraCon® 700-7	Universal 4 electrode conductivity cell especially for wastewater treatment plants, 7 m (23 ft) cable	302316
TetraCon® 700-7 EX	Analog 4 electrodes conductivity measuring cell with integrated temperature sensor and 7 m cable with open wires	302316EX
TetraCon® 325	4 electrodes measuring cell, with integrated temperature sensor, cell constant $K=0.475 \text{ cm}^{-1}$, cable length 1.5m	301960
TetraCon® DU/T	4 electrodes flow measuring cell, with integrated temperature sensor, cell constant: $K=0.0778 \text{ cm}^{-1}$	301252
LRD 325-7	4 electrodes measuring cell to be screwed into pipe, with integrated temperature sensor, cable length 7 m	302229



For technical data please see datasheets D3.06 and D4.03

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 65



Controllers / isolated amplifier for EX area see from page 69

2-electrode Measuring Cells

Pipe installation, drinking water, ultra-pure water and trace measurements – the right cell for any application. The reliable 2 electrode cell provides high resolution and accuracy.



- The right solution for any application
- High operational safety by robust workmanship

Analog

To be operated with analog transmitters.



LRD 01



for installation in pipes

LR 325/01

for ultra-pure water applications

LR 325/001

for trace measurement in both aqueous and non-aqueous or partially aqueous media

LR ML



for drinking water and connection to LF 298 or MULTILINE 1000



Ordering Information

Model	Description	Order No.
LRD 01-7	2 electrodes measuring cell to be screwed into pipe, with integrated temperature sensor, cable length 7 m	302222
LR 325/01	Conductivity measuring cell for ultrapure water, with integrated temperature sensor, cell constant K=0.1cm ⁻¹ , Glass flow cell	301961
LR 325/001	as above, but for trace measurement, Stainless steel flow cell	301962
LR ML	Conductivity cell, with 1 m fixed cable, 2 graphite electrodes; - 5-80°C; range 100 µS/cm - 20 mS/cm; temperature measurement with Pt 1000, PG 13.5 screw thread	301150



For technical data please see datasheet D3.06

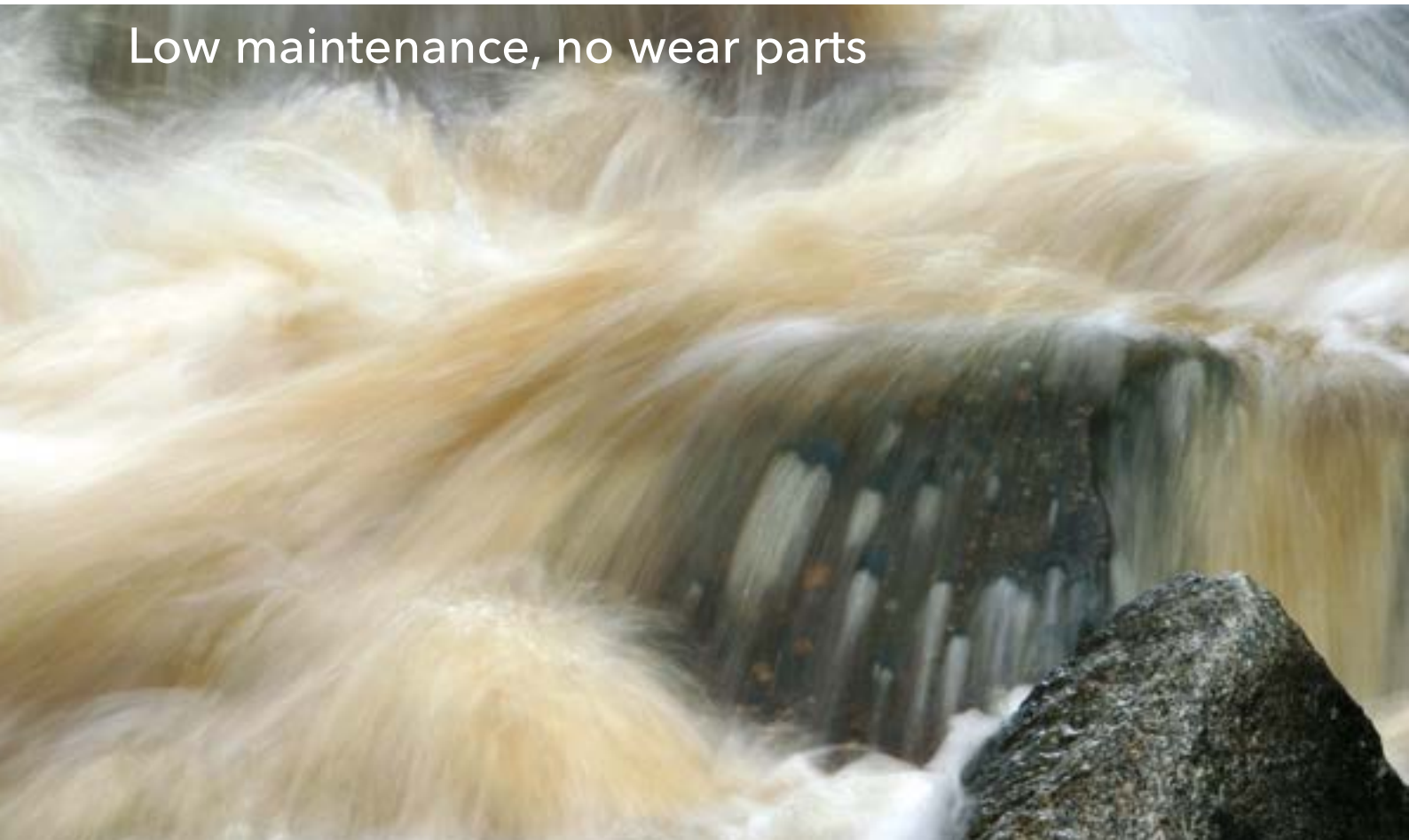
Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 65

Digital conductivity measuring cells see from page 19

Turbidity / Suspended Solids

Low maintenance, no wear parts



Turbidity

For people, turbidity of water is highly comprehensible. For most persons, turbid water is nasty or even repellent. Smell, taste and turbidity are the most important indicators for the quality of potable water. Turbidity is typically determined using 90 degree scattered light principle in compliance with EN ISO 7027.

Fields of application:

- Outlet of wastewater treatment plants
- Sludge concentration
- Monitoring/Controlling of sludge cycle
- Drinking water
- Surface water

Suspended Solids (TS)

The concentration of suspended solids is a very important process parameter for today's sludge treatment. A continuous gravimetric analysis is not possible in wastewater treatment process – therefore on-line methods are used. Total suspended solids can be determined on-line using scattered light or light absorbance.

Under normal conditions there is a good correlation to gravimetric analysis. However, sludges can be totally different – concerning coloration, particle size and structure. Therefore of course a "multi-point" user calibration is possible. This can also be done with the mandatory required gravimetric determination of total suspended solids.

Cleaning System

The fouling of the optical path requires an effective cleaning system realized by WTW using a unique Ultrasonic System. This ultrasonic module, integrated in the VisoTurb® 700 IQ and in the ViSolid® 700 IQ, causes a permanent oscillation on the optical windows avoiding biological fouling. Pictures (right) show the same sensor with ultrasonic cleaning system switched-off and switched-on in a typical wastewater application.

The sensor with a switched off ultrasonic cleaning (upper picture) ist totally covered with organic deposits after 16 days. The sensor with switched on ultrasonic cleaning (below) doesn't show any negative impact.

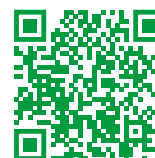
Likewise, the IQ spectral sensors provide the integrated ultrasonic cleaning.



ViSolid® 700 IQ with switched-off cleaning system is completely covered with a biological layer after 16 days.



ViSolid® 700 IQ with working ultrasonic cleaning system shows no adverse effect.



see also <https://www.xylenanalytics.com/en/parameters/turbidity-and-tss>

Turbidity Sensor VisoTurb®

The VisoTurb® is ideal to monitor turbidity, for example in the outlet of a wastewater treatment plant. The unique integrated ultrasonic cleaning system ensures low-maintenance and continuously reliable measuring. By this, whether spare nor wear parts are needed.

With the nephelometric measuring principle, the scattered light is measured at a 90° angle. The measuring setup is suitable for low and medium turbidity values up to 4000 FNU. The sensor works according to EN ISO 7027.



VisoTurb® 700 IQ



- Ultrasonic cleaning without wear or spare parts
- Extremely low maintenance
- Highly accurate factory calibration
- High operational safety (SensorCheck function)



Digital

To be connected to the digital, modular, and expandable IQ SENSOR NET as well as to the single parameter controller 281.



VisoTurb® 700 IQ

for the IQ SENSOR NET



VisoTurb® 700 IQ SW

for use in corrosive media



Ordering Information

Model	Description	Order No.
VisoTurb® 700 IQ	Digital turbidity sensor with integrated ultrasonic cleaning	600010
VisoTurb® 700 IQ SW	Like VisoTurb®700 IQ, but as a sea water model	600011



For technical data please see datasheet D2.05

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Sensors for suspended solids measurement see from page 25

Suspended Solids Sensor ViSolid®

The unique integrated ultrasonic cleaning system ensures low-maintenance and continuously reliable measuring. By this, whether spare nor wear parts are needed.

The sensor uses two methods, which are selected depending on the total suspended solids concentration. At low concentrations, scattered light is measured. At higher concentrations, the direct back scattering provides optimal results.



ViSolid® 700 IQ



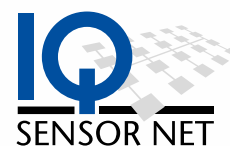
- Ultrasonic cleaning without wear or spare parts
- Extremely low maintenance
- Highly accurate factory calibration
- High operational safety (SensorCheck function)



TD D2.06

Digital

To be connected to the digital, modular, and expandable IQ SENSOR NET.



ViSolid® 700 IQ

for the IQ SENSOR NET



ViSolid® 700 IQ SW

for use in corrosive media



Ordering Information

Model	Description	Order No.
ViSolid®700 IQ	Digital suspended solids sensor with integrated ultrasonic cleaning	600012
ViSolid®700 IQ SW	Like ViSolid®700 IQ, but as a sea water model	600013



For technical data please see datasheet D2.06

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

UV-VIS spectral sensors for TSS measurement see from page 26

UV-VIS Spectral Sensors

With spectral sensors (wavelengths 200-720 nm) TSS, Nitrate and Color as well as additional carbon parameters can be measured (COD, BOD, TOC, DOC, SAC).

The following WTW spectral sensors are optimized for municipal wastewater application:

NitraVis® 701 IQ TS	for inlet and aeration	from page 32
NitraVis® 705 IQ TS	for effluent	from page 32
NiCaVis® 705 IQ TS	for effluent	from page 32
CarboVis® 701 IQ TS	for inlet and aeration	from page 38
CarboVis® 705 IQ TS	for effluent	from page 38
CarboVis® 705 IQ TS Co	for effluent	from page 47
NiCaVis® 705 IQ TS Co	for effluent	from page 47
ColorVis 705 IQ	for effluent	from page 47

The following WTW spectral sensors are designed for monitoring of surface water:

NiCaVis® 705 IQ SF	for e.g. rivers and lakes	from page 32
NiCaVis® 705 IQ SF Co	for e.g. rivers and lakes	from page 47
NiCaVis® 705 IQ NI SF	for e.g. rivers and lakes	from page 32
ColorVis 705 IQ	for e.g. rivers and lakes	from page 47



Analyzer for Turbidity

Turb PLUS 2000 Series



For Turbidity Monitoring in Drinking Water

For many drinking water treatment plants, turbidity is the most important parameter. With the Turb PLUS 2000, turbidity can be monitored according to DIN EN ISO 7027 or US EPA 180.1.

The devices with integrated ultrasonic cleaning can be used in sedimentation, filtration, disinfection and in the plant outlet.

- High accuracy of $\pm 2\%$ of reading or ± 0.02 NTU below 40 NTU
- Ultrasonic Cleaning System
- ISO and EPA compliant
- Resolution down to 0.0001 NTU
- 20 mA Current and RS 485 (Modbus RTU)
- Can be integrated into existing IQ SENSOR NET via MIQ/IC2

Turb PLUS 2020

white light,
without ultrasonic cleaning



Turb PLUS 2120

infrared light,
without ultrasonic cleaning

Turb PLUS 2120 Set

infrared light, with ultrasonic cleaning and additional bubble trap



Turb 2120

Ordering Information

Model	Description	Order No.
Turb PLUS 2020	Turbidity analyzer with white light (US EPA 180.1)	600026
Turb PLUS 2120	Turbidity analyzer with infrared light (ISO EN DIN 7027)	600036
Turb PLUS 2120 Set	Turb PLUS 2120 including external bubble trap	600037
BC-Turb/DW	External bubble trap	600041
Kal Kit Turb/DW	Calibration standard set (0.02, 10, 1000 NTU, cleaning tissues, designation rings)	600052
Kal Kit Turb PLUS 2000	Calibration standard set (0.02, 10, 100 NTU, cleaning tissues, designation rings)	600054
Kal Kit Turb 2110/DW	Calibration standard set (0.02, 1, 10 NTU, cleaning tissues, designation rings)	600056



For technical data please
see datasheet D7.06

Alternatives and accessories
see brochure "Product
Details" and website

Pre-mounted panels for
turbidity measurement
see from page 67

Analyzer for chlorine see
from page 49

Nitrogen

Nutrient Parameter: Ammonium, Nitrate, Nitrite



Ammonium

Nitrogen is found in a large variety of compounds and forms, it is considered to be the ultimate “quick-change artist”. In municipal wastewater it is mainly encountered as a waste product in the form of urea, which is already partly converted to ammonium nitrogen by ammonification.

Fields of application:

- Municipal wastewater (treatment plant)
 - Inlet
 - Biological Cleaning
 - Outlet
- Centrate water
- Deammonification (Anammox)
- Surface waters

In the aeration basin, the initial step of nitrification consists of oxidizing the ammonium present in wastewater via nitrite to nitrate, for which oxygen is required. In the denitrification, nitrate is degraded to nitrogen gas under anaerobic conditions.

For fish, ammonium is already toxic in very small concentrations. Hence, water bodies with an ammonium concentration of 1 mg/l are not suitable for fish. Therefore, the discharge values, which have to be met by treatment plants, have to be very low.

Nitrate

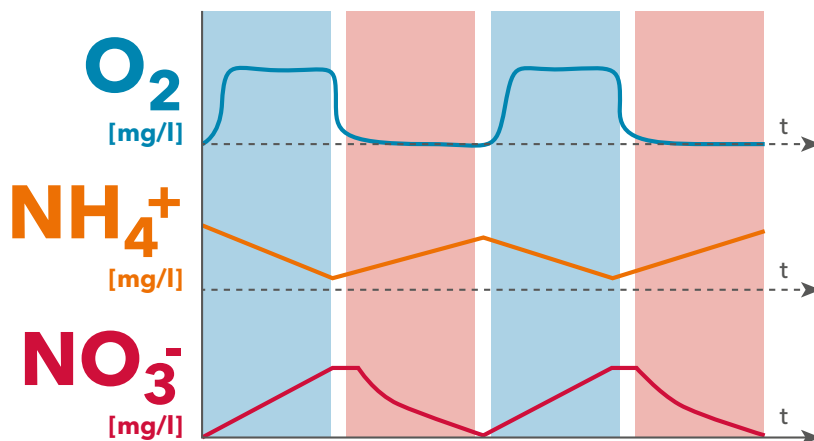
Nitrate is produced from ammonium in the nitrification process. To monitor and control this process and the subsequent denitrification (reduction of nitrate) in a wastewater treatment plant, nitrate is often measured among other parameters. As nitrification also takes place in soils and groundwater, whereby groundwater is the main source for drinking water in many countries, it often contains nitrate. The nitrate threshold value for drinking water in Europe is 50 mg/l.

As nitrate is used directly as a nutrient source for plant organisms, it is used as fertilizer in agriculture. High amounts of nitrates in fertilizers are often transferred into surface water and groundwater leading to eutrophication and therefore higher algae growth, as well as increasing nitrate content in drinking water.

In general, nitrate is harmless to people. In the human body nitrate may however be transformed into nitrite, which can be dangerous to health.

Nitrite

Nitrite occurs in considerably smaller amounts within wastewater treatment plants and soils. It is an intermediate product and oxidized very quickly into



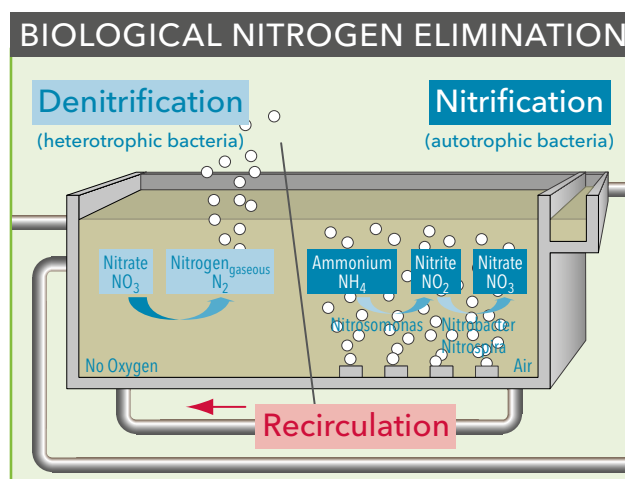
Example: intermittent nitrification/denitrification

nitrate. Nevertheless, in newer cleaning processes of wastewater treatment plants (e.g. Anammox), nitrite is produced intentionally and therefore becomes measurable.

Nitrite is a fish poison and harmful to humans. Besides circulatory disturbances and a lack of oxygen supply, in the human body nitrite is classified as potentially carcinogenic. Due to this, monitoring is crucial for health and ecological reasons.

NO_x

NO_x is a sum parameter of nitrate (NO_3) and nitrite (NO_2).



ISE Sensors

The reliable and robust ISE sensors are measuring NH_4 and NO_3 continuously and in real-time without delays. The sensors increase process transparency and allow a dynamic and efficient control of nitrification and denitrification. The accuracy of the measurement is dependent on the measured medium. For compensation of this effect a matrix adjustment is necessary. You can benefit from our intuitive operation, which makes the adjustment as easy as possible! Our cross compensation enables the correction of several measured values with only one compensation electrode.



VARiON®Plus 700 IQ



- As easy as measuring pH
- Up to 18 month lifetime of electrodes
- Calibration-free, long stability
- No chemicals used



D2.07, D2.08, D2.09

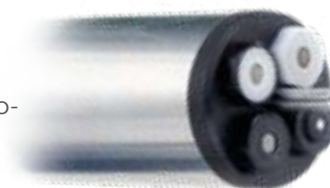
Digital Sensors

To be connected to the digital, modular, and expandable IQ SENSOR NET.



VARiON®Plus 700 IQ

Ion selective measurement of ammonium and nitrate, free of reagents with automatic compensation of potassium/chloride



AmmoLyt®Plus 700 IQ

Ammonium can be measured directly in the medium without sample preparation or sample transfer. Measurement of centrate and other process waters up to 2,000 mg/l $\text{NH}_4\text{-N}$



NitraLyt®Plus 700 IQ

Nitrogen elimination - transparent, process optimized, economical. Nitrate can be measured directly in the medium - optimized for regulation purposes



Ordering Information

Model	Description	Order No.
VARiON®Plus 700 IQ	Digital sensor for the ion selective measurement of ammonium and nitrate, without electrodes	107040
AmmoLyt®Plus 700 IQ	Digital sensor for ion selective measurement of ammonium	107070
NitraLyt®Plus 700 IQ	Digital sensor for the ion selective measurement of nitrate	107080



For technical data please see datasheets D2.07, D2.08 and D2.09

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Spectral nitrate/nitrite sensors see from page 32

Electrodes

The electrodes for the digital ISE sensors convince with reliable measurements.

Reference electrode VARiON® Ref

for mounting into sensors VARiON®Plus 700 IQ,
NitraLyt®Plus 700 IQ, AmmoLyt®Plus 700 IQ

Ammonium electrode VARiON®Plus NH₄

for mounting into sensors VARiON®Plus 700 IQ and
AmmoLyt®Plus 700 IQ,
measuring range: 0.1 - 2,000 mg/l NH₄-N

Potassium electrode VARiON®Plus K

for mounting into sensors VARiON®Plus 700 IQ and
AmmoLyt®Plus 700 IQ,
measuring range: 1 - 1,000 mg/l K⁺

Nitrate electrode VARiON®Plus NO₃

for mounting into sensors VARiON®Plus 700 IQ and
NitraLyt®Plus 700 IQ,
measuring range: 0.1 - 1,000 mg/l NO₃-N

Chloride electrode VARiON®Plus Cl⁻

for mounting into sensors VARiON®Plus 700 IQ and
NitraLyt®Plus 700 IQ,
measuring range: 1 - 1,000 mg/l Cl⁻

Ordering Information

Model	Description	Order No.
VARiON® Ref	Reference electrode for mounting into sensors VARiON®Plus 700 IQ/NitraLyt®Plus 700 IQ/ AmmoLyt®Plus 700 IQ	107042
VARiON®Plus NH₄	Ammonium electrode for VARiON®Plus 700 IQ and AmmoLyt®Plus 700 IQ/AmmoLyt®	107044
VARiON®Plus NO₃	Nitrate electrode for VARiON®Plus 700 IQ and NitraLyt®Plus 700 IQ/ NitraLyt®	107045
VARiON®Plus K	Potassium electrode for VARiON®Plus 700 IQ and for AmmoLyt®Plus 700 IQ	107046
VARiON®Plus Cl	Chloride electrode for VARiON®Plus 700 IQ and for NitraLyt®Plus 700 IQ	107047



Sets and accessories see
brochure "Product Details"
and website

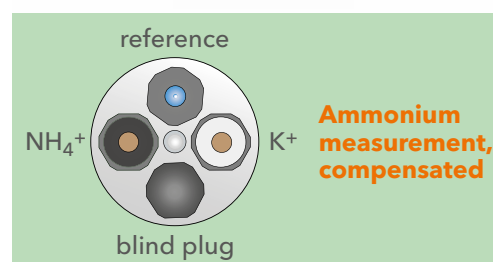
Information about
IQ SENSOR NET system see
from page 50

Spectral nitrate/nitrite
sensors see from
page 32

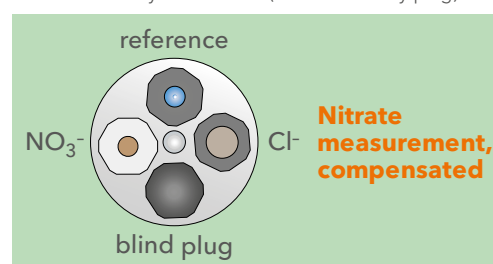
Ammonium analyzer see
from page 34

1 Year
Warranty

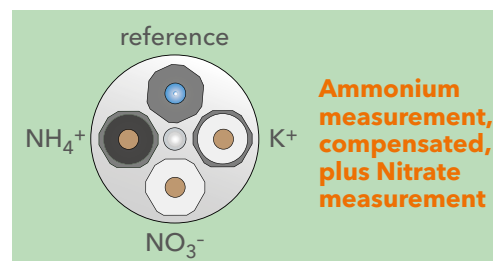
IQ
SENSOR NET



(Possible) configuration of VARiON®Plus 700 IQ
for ammonium measurement
or AmmoLyt®Plus 700 IQ (without dummy plug)



(Possible) configuration of VARiON®Plus 700 IQ
for nitrate measurement
or NitraLyt®Plus 700 IQ (without dummy plug)



(Possible) configuration of VARiON®Plus 700 IQ
for ammonium measurement dynamically compensated
plus nitrate measurement
(manual compensation possible)

UV-VIS and UV Spectral Sensors



UV-VIS spectral sensors represent a precise measuring technique with long-term stability and provide continuous recording of the selected parameters NO_3 and NO_2 in measuring cycles within minute range. The disturbance variables for optical measuring, such as turbidity/suspended solids, are eliminated by spectral recording. Thanks to integrated ultrasonic cleaning, a very long maintenance-free operation is possible.



Spectral sensor with multifunctional slide and Shock-Absorption-Rings



- Low maintenance due to integrated ultrasonic cleaning
- Measuring NO_2 , NO_3 and more parameters
- No use of chemicals nor consumables



TD D2.10, D2.14, D2.26, D2.27

Ordering Information

Model	Description	Order No.
NitraVis® 701 IQ	Spectral nitrate probe for the measurement in inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481044
NitraVis® 705 IQ	Like NitraVis® 701 IQ, but for measuring in the outlet	481046
NitraVis® 701 IQ TS	Spectral nitrate and suspended solids probe for measuring in the inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481045
NitraVis® 705 IQ TS	Like NitraVis® 701 IQ TS, but for measuring in the outlet	481047
NitraVis® 701 IQ NI	Spectral nitrate and nitrite probe for measuring in the inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481056
NitraVis® 705 IQ NI	Like NitraVis® 705 IQ NI, but for measuring in the drain/outlet	481057
NiCaVis® 705 IQ	Spectral UV-VIS probe for measuring nitrate, COD_{tot} , COD_{diss} , TOC, BOD, DOC, SAC_{tot} , SAC_{diss} , and UVT_{254} in the drain/outlet with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481052
NiCaVis® 705 IQ TS	Like NiCaVis® 705 IQ, but with TS	481053
NiCaVis® 705 IQ TS Co	like NiCaVis® 705 IQ TS, but with Color	481066
NiCaVis® 701 IQ NI	Spectral UV sensor for the measurement of nitrite, nitrate, COD_{tot} , COD_{diss} , TOC, BOD, DOC, SAC_{tot} , SAC_{diss} , UVT_{254} in the inlet and in the aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481054
NiCaVis® 705 IQ NI	Like NiCaVis® 701 IQ NI, but for the measurement in the drain/outlet	481055
UV 701 IQ NOx	Optical nitrate (NOx) sensor to measure higher concentration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481034
UV 705 IQ NOx	Like UV 701 IQ NOx, but to measure low concentrations	481035
NiCaVis® 705 IQ SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, COD, TOC, BOD, DOC, SAC, UVT_{254} and TS in surface water bodies with integrated ultrasonic cleaning.	481058
NiCaVis® 705 IQ SF Co	like NiCaVis® 705 IQ SF, but with Color	481060
NiCaVis® 705 IQ NI SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, Nitrite, COD, TOC, BOD, DOC, SAC, UVT_{254} and TS in surface water bodies with integrated ultrasonic cleaning.	481059



For technical data please see datasheets D2.10 to D2.14 and D2.26

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

CarboVis® spectral sensors for determination of carbon parameters see page 38

Parameter \ Sensoren	NitraVis® 701 IQ	NitraVis® 705 IQ	NitraVis® 701 IQ TS	NitraVis® 705 IQ TS	NitraVis® 701 IQ NI	NitraVis® 705 IQ NI	NiCaVis® 705 IQ	NiCaVis® 705 IQ TS	NiCaVis® 705 IQ TS Co	NiCaVis® 701 IQ NI	NiCaVis® 705 IQ NI	UV 701 IQ NOx	UV 705 IQ NOx	NiCaVis® 705 IQ SF	NiCaVis® 705 IQ SF Co	NiCaVis® 705 IQ NI SF	CarboVis® 701 IQ	CarboVis® 705 IQ	CarboVis® 701 IQ TS	CarboVis® 705 IQ TS	CarboVis® 705 IQ TS Co	UV 701 IQ SAC	UV 705 IQ SAC	ColorVis 705 IQ
Usable with System 2020 3G and 282/284	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Parameter																								
TSS (optical)																								
Color (optical)																								
Nitrate (optical/spectral)																								
Nitrite (optical/spectral)																								
NO _x (optical/spectral)†																								
COD (optical/spectral)																								
BOD (optical/spectral)																								
TOC (optical/spectral)																								
DOC (optical/spectral)																								
SAC ₂₅₄ (optical/spectral)																								
UVT ₂₅₄ (optical/spectral)																								

* Gap size for inlet and outlet depends on concentrations

† Nitrite and Nitrate are included in the measured value

Analyzers

The wet chemical analyzer **Alyza IQ NH₄** provides precise results due to its revolutionary MultiPort Valve. Further on, the instrument requires extremely low amounts of liquids..

Ammonium measurement with Alyza IQ NH₄ (Indophenol method acc. to DIN 38 406) for wastewater plant effluent and river monitoring.



- Minimized reagent consumption and waste
- Extremely low maintenance
- No service contract required
- High accuracy at low measuring ranges



Alyza IQ NH₄ one-channel version with open measuring unit and visible photometer

Ammonium Analyzer Alyza IQ NH₄

For integration into the digital, modular and expandable IQ SENSOR NET

Alyza IQ NH₄-110

1-channel version with 2 measuring ranges; without pump

Alyza IQ NH₄-111

1-channel version with 2 measuring ranges; with 1 pump

Alyza IQ NH₄-112

2-channel version with 2 measuring ranges; with 2 pumps

Ordering Information

Model	Description	Orderno.
Alyza IQ NH4-110	Ammonium analyzer Alyza IQ NH4 for the IQ Sensor Net, Measurement range 1 and 2, 1-channel w/o pump. Scope of delivery: Ammonium analyzer for indoor and outdoor use, spare parts for the first year, pre-installed 2 m SNCIQ and power cable (please order controller and reagents separately).	825010
Alyza IQ NH4-111	Ammonium analyzer Alyza IQ NH4 for the IQ Sensor Net, Measurement range 1 and 2, 1-channel with pump. Scope of delivery: Ammonium analyzer for indoor and outdoor use, spare parts for the first year, pre-installed 2 m SNCIQ and power cable (please order controller and reagents separately).	825011
Alyza IQ NH4-112	Ammonium analyzer Alyza IQ NH4 for the IQ Sensor Net, Measurement range 1 and, 2-channel with two pumps. Scope of delivery: Ammonium analyzer for indoor and outdoor use, spare parts for the first year, pre-installed 2 m SNCIQ and power cable (please order controller and reagents separately).	825012



For technical data please see datasheet D2.24

Reagents and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Further analyzer see from page 63



Carbon

Carbon parameters:
COD, BOD, TOC, DOC, SAC, UVT



see also <https://www.xylemanalytics.com/en/parameters/chemical-oxygen-demand-cod>

and <https://www.xylemanalytics.com/en/parameters/biochemical-oxygen-demand-bod>

To measure the organic load of water, the parameters TOC, DOC, COD or BOD are used. The differences in these parameters show that these measurements are not identical and that the measured values therefore can not be the same.

Very often, SAC is used as a surrogate parameter. With the same sensor also UV transmission (UVT) can be measured and used as control parameter for disinfection plants.

Fields of application:

- Municipal wastewater (treatment plant)
 - Inlet
 - Biological Cleaning
 - Outlet
- Centrate water
- Micropollutant removal
- Surface waters
- Disinfection plants

COD

Chemical Oxygen Demand – contains all substances that can be dissolved by chemical oxidation. It is at the same time the conventional parameter for the calculation of wastewater charges.

BOD

Biochemical Oxygen Demand – contains only the compounds that can be oxidated microbiologically.

TOC

Total Organic Carbon – a measure for the total organically bound carbon.

DOC

Dissolved Organic Carbon – dissolved organic share of TOC.

SAC

The SAC (spectral absorption coefficient) is a parameter that can be determined relatively easily. Many organic compounds have characteristic UV absorption spectrums. The intensity of the light attenuation can, therefore, be correlated with the organic load.

This correlation is significant in measuring media with low variations of composition concerning color, solids and their optical characteristics. Wastewater, however, contains many substances with completely different optical characteristics. For each substance, a different correlation factor concerning the carbon content applies.

UVT

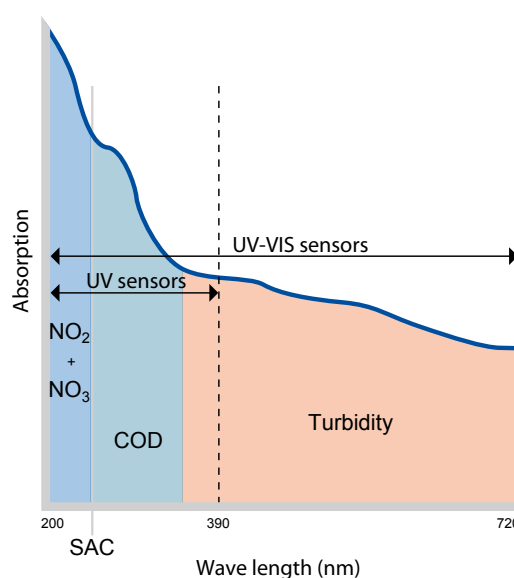
Additionally, UV transmission can be measured with the SAC sensor at 254 nm. UVT is particularly used to control disinfection plants.

Depending on the requirements, the turbidity can be compensated (UVT_{dis}) or not (UVT_{tot}).

Spectral Online Sensors

The CarboVis® and NiCaVis® sensors measure the total spectrum range from ultraviolet to long wave visible light (200–720 nm; UV-VIS sensors) or in the ultraviolet range (200–390 nm; UV sensors). The measured values are determined from the high information content of the spectral data. The calculation is based on methods and characteristics that were achieved from a multitude of measurements and longtime analyses. The user can, therefore, select algorithms that are adapted to the measuring site (inlet, biological tank, outlet) having a high correlation with the basic parameter COD.

The spectral procedure has an additional advantage: the turbidity of the test sample, which affects optical measurements, is optimally compensated over a wide wavelength range. Moreover, the spectral measurement provides an optimal compensation of the influence of existing nitrate and nitrite for the COD measurement.



Example spectrum of UV-VIS sensor

UV-VIS and UV Spectral Sensors



The chemical-free spectral measurement allows a precise determination of the COD, nitrate, nitrite and total suspended solids.

Due to the built-in ultrasonic cleaning system, a very long maintenance-free operation is possible. Accumulation of dirt and biofilm formation is gently but very effectively prevented in this manner.

High-tech materials such as titanium and peek ensure an easy use in almost all and even corrosive media.



Spectral sensor with multifunctional slide and Shock-Absorption-Rings



- Low maintenance due to integrated ultrasonic cleaning
- Measurement of COD, BOD and many more
- No reagents, no consumables



D2.11, D2.13, D2.16, D2.15, D2.26

Ordering Information

Model	Description	Order No.
CarboVis® 701 IQ	Spectral UV-VIS probe to measure COD _{tot} , COD _{diss} , TOC, BOD, DOC, SAC _{tot} , SAC _{diss} , and UVT ₂₅₄ in the inlet and the aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481048
CarboVis® 705 IQ	Like CarboVis® 701 IQ, but for the measurement in the drain	481050
CarboVis® 701 IQ TS	Spectral UV-VIS probe to measure COD _{tot} , COD _{diss} , TOC, BOD, DOC, SAC _{tot} , SAC _{diss} , UVT ₂₅₄ and suspended solids in the infeed and the stimulation with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481049
CarboVis® 705 IQ TS	Like CarboVis® 701 IQ TS, but for the measurement in the drain	481051
CarboVis® 705 IQ TS Co	Like CarboVis® 705 IQ TS, but with Color	481065
NiCaVis® 705 IQ	Spectral UV-VIS probe for measuring nitrate, COD _{tot} , COD _{diss} , TOC, BOD, DOC, SAC _{tot} , SAC _{diss} , and UVT ₂₅₄ in the drain/outlet with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481052
NiCaVis® 705 IQ TS	Like NiCaVis® 705 IQ, but with TS	481053
NiCaVis® 705 IQ TS Co	Like NiCaVis® 705 IQ TS, but with Color	481066
NiCaVis® 701 IQ NI	Spectral UV sensor for the measurement of nitrite, nitrate, COD _{tot} , COD _{diss} , TOC, BOD, DOC, SAC _{tot} , SAC _{diss} , UVT ₂₅₄ in the inlet and in the aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481054
NiCaVis® 705 IQ NI	Like NiCaVis® 701 IQ NI, but for the measurement in the drain/outlet	481055
UV 701 IQ SAC	Optical SAC and UVT sensor (254 nm) to measure higher concentrations with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481036
UV 705 IQ SAC	Like UV 701 IQ SAC, but to measure lower concentrations	481038
NiCaVis® 705 IQ SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, COD, TOC, BOD, DOC, SAC, UVT ₂₅₄ and TS in surface water bodies with integrated ultrasonic cleaning.	481058
NiCaVis® 705 IQ SF Co	Like NiCaVis® 705 IQ SF, but with Color	481060
NiCaVis® 705 IQ NI SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, Nitrite, COD, TOC, BOD, DOC, SAC, UVT ₂₅₄ and TS in surface water bodies with integrated ultrasonic cleaning.	481059



For technical data please see datasheets D2.11, D2.13, D2.15, D2.16 and D2.26

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Spectral sensors for nitrogen see from page 32

Parameter Sensoren		NitraVis® 701 IQ	NitraVis® 705 IQ	NitraVis® 701 IQ TS	NitraVis® 705 IQ TS	NitraVis® 701 IQ NI	NitraVis® 705 IQ NI	NiCaVis® 705 IQ	NiCaVis® 705 IQ TS	NiCaVis® 705 IQ TS Co	NiCaVis® 701 IQ NI	NiCaVis® 705 IQ NI	UV 701 IQ NOx	UV 705 IQ NOx	NiCaVis® 705 IQ SF	NiCaVis® 705 IQ SF Co	NiCaVis® 705 IQ NI SF	CarboVis® 701 IQ	CarboVis® 705 IQ	CarboVis® 701 IQ TS	CarboVis® 705 IQ TS	CarboVis® 705 IQ TS Co	UV 701 IQ SAC	UV 705 IQ SAC	ColorVis 705 IQ
Usable with System 2020 3G and 282/284		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Parameter																									
TSS (optical)																									
Color (optical)																									
Nitrate (optical/spectral)																									
Nitrite (optical/spectral)																									
NOx (optical/spectral)†																									
COD (optical/spectral)																									
BOD (optical/spectral)																									
TOC (optical/spectral)																									
DOC (optical/spectral)																									
SAC ₂₅₄ (optical/spectral)																									
UVT ₂₅₄ (optical/spectral)																									

* Gap size for inlet and outlet depends on concentrations

† Nitrite and Nitrate are included in the measured value

Phosphate

Precipitation Dosing and Outlet Monitoring

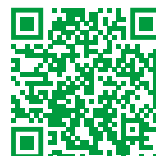


Phosphorus compounds – in particular ortho-phosphate PO_4^{3-} – are considered to be the limiting nutrients in most stagnant and flowing waters. An increase in their concentration caused by higher input (wastewater, soil erosion etc.) results directly in increasing eutrophication of the water with known effects such as increased growth of algae, oxygen depletion and even anoxia in the deeper regions, etc.. Hence, the elimination of phosphorus on wastewater treatment plants is very important.

Fields of application:

- Municipal wastewater (wwtp)
 - Precipitation control
 - Effluent monitoring
- Surface water

see also <https://www.xylemanalytics.com/en/parameters/phosphate>



Analyzer

The wet chemical analyzer **Alyza IQ PO₄** provides precise results due to its revolutionary MultiPort Valve. Further on, the instrument requires extremely low amounts of liquids.

Precipitation control and outlet monitoring with the orthophosphate measurement of the Alyza IQ PO₄ (molybdate vanadate method or yellow method). It is connectable to IQ SENSOR NET Systems 2020 and 282/284 and provides 10 W to the IQ SENSOR NET.

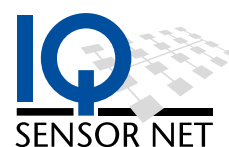


- Minimized reagent consumption and waste
- Extremely low maintenance
- High accuracy at low measuring ranges



Orthophosphate Analyzer Alyza IQ PO₄

To be connected to the digital, modular, and expandable IQ SENSOR NET.



Alyza IQ PO₄ one channel version with open measuring unit and visible photometer



Alyza IQ PO₄ two channel version with covered measuring unit

Alyza IQ PO₄-111

1-channel version for measuring range 1

Alyza IQ PO₄-121

1-channel version for measuring range 2

Alyza IQ PO₄-112

2-channel version for measuring range 1

Alyza IQ PO₄-122

2-channel version for measuring range 2

Ordering Information

Model	Description	Order No.
Alyza IQ PO₄-111	PO ₄ analyzer, 1-channel, with MR 1; incl. 2 m SNCIQ cable, reagent sets need to be ordered separately	825511
Alyza IQ PO₄-112	as above, but 2-channel	825512
Alyza IQ PO₄-121	PO ₄ analyzer, 1-channel, with MR 2; incl. 2 m SNCIQ cable, reagent sets need to be ordered separately	825521
Alyza IQ PO₄-122	as above, but 2-channel	825522



For technical data please see datasheet D2.25

Reagents and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Further analyzer see from page 63

Sludge Level Measurement

Objective, Reliable, Low Maintenance



The sludge level is the boundary of settled sludge to the projecting turbid or clear water, wherein the location of the sludge level is defined as the distance to the water surface (sludge level depth), or as distance from the tank bottom (sludge level).

The sludge level plays primarily a role in the area of wastewater treatment (pre-sedimentation, thickener and post-sedimentation), water treatment and also in the process analysis. The sensor can be used in clear, turbid and heavily polluted liquids with a high content of solids.

Fields of application:

- Municipal and industrial wastewater
 - Optimization / control of the (primary) sludge extraction
 - The management of the return sludge
 - Monitoring of the settling behavior



see also <https://www.xylenanalytics.com/en/parameters/sludge-level>

Digital IQ Sensor to Determine the Sludge Level



Digital ultrasonic sensor IFL 700 IQ



- Applicable for different tank designs
- Very easy commissioning
- Maintenance-free cleaning system
- Detailed presentation of sludge profile



IFL 700 IQ

The IFL 700 IQ has a cleaning system of high quality materials such as titanium (shaft, sealed several times) and Grivory (scraper). Because of the technical design, this system is maintenance free. An annual replacement of seals or the scraper is not required. The cleaning cycle can be set individually in the system. The necessary cleaning frequency is automatically adjusted by the sensor.

Ordering Information

Model	Description	Order No.
IFL 700 IQ	Digital ultrasonic sensor with automatic cleaning to measure the sludge level	481200



For technical data please
see datasheet D2.17

Alternatives and accessories
see brochure "Product
Details" and website

Information about
IQ SENSOR NET system see
from page 50

Radio module see
page 56

Color

Continuous. APHA Hazen 2120.
DIN EN ISO 7887



see also <https://www.xylymanalytics.com/en/parameters/chemical-oxygen-demand-cod>

and <https://www.xylymanalytics.com/en/parameters/biochemical-oxygen-demand-bod>



Color has always been an important parameter for water quality, and in the last years the demand for continuous color measurement has been constantly growing. The new WTW color sensors for the IQ SENSOR NET measure according to the standards DIN EN ISO 7887:2011, procedure C and APHA 2120 2018 (Hazen), procedure C.

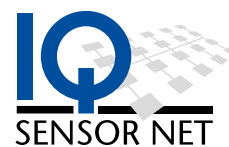
Both are laboratory measurement methods. DIN EN ISO 7887:2011, procedure C prescribes a wavelength of 410 nm, while APHA 2120 2018 (Hazen), procedure C allows the wavelength to be freely selected. For this method, the WTW sensors offer the wavelengths of 340, 350, 390, 445, 455 and 465 nm.

Fields of application:

- Municipal wastewater (treatment plant)
 - Inlet
 - Biological Cleaning
 - Outlet
- Centrate water
- Micropollutant removal
- Surface waters
- Disinfection plants

Hier gab es keinen englischen Text;
meine Übersetzung

UV-VIS and UV Spectral Sensors



The chemical-free spectral measurement allows a precise determination of the COD, nitrate, nitrite and total suspended solids.

Due to the built-in ultrasonic cleaning system, a very long maintenance-free operation is possible. Accumulation of dirt and biofilm formation is gently but very effectively prevented in this manner.

High-tech materials such as titanium and PEEK ensure an easy use in almost all and even corrosive media.



Spectral sensor with multifunctional slide and Shock-Absorption-Rings



- Low maintenance due to integrated ultrasonic cleaning
- Measurement of COD, BOD and many more
- No reagents, no consumables



Ordering Information

Model	Description	Order No.
ColorVis 705 IQ	Spectral UV-VIS sensor to measure Color in wastewater, incl. integrated ultrasonic cleaning	481067
CarboVis® 705 IQ TS Co	Like ColorVis 705, including Carbons and Total Suspended Solids	481065
NiCaVis® 705 IQ TS Co	Like ColorVis 705, including Nitrate, Carbons and Total Suspended Solids	481066
NiCaVis® 705 IQ SF Co	Like NiCaVis® 705 IQ TS Co, without TSS, for Surface waters	481060



For technical data please see datasheets D2.26 and D2.27

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Chlorine

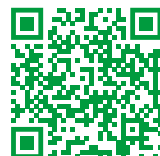
Free and Total Chlorine



Due to its chemical properties and its high reactivity, chlorine is very well suited for the disinfection of water and to avoid contamination with bacteria and pathogens. Chlorine in water occurs balanced depending on pH; at neutral pH mainly as hypochlorous acid (HClO). Hypochlorous acid is a strong oxidizing agent: its disinfecting effect is based on the irreversible aggregation of protein of viruses and bacteria – similar to the effect of heat exposure. When the pH value increases, the balance in the water moves to hypochlorite (ClO^-), which reduces the disinfecting effect.

Fields of application:

- Drinking Water Monitoring
- Pools & Thermal Baths
- Disinfection



see also <https://www.xylemanalytics.com/en/parameters/chlorine>

Analog Sensors

For free and total chlorine

The electrochemical chlorine sensors are developed for measurements in pools and drinking water. Directly connectable to the controller CI 298.



FCML 412 N



- Environmentally friendly - no use of chemicals
- Reliable - protection from contamination through a membrane
- Accurate - pH compensation of the measuring results



D7.01

FCML 412 N

for measurement of free chlorine

TCML N

for measurement of total chlorine

Ordering Information

Model	Description	Order No.
FCML 412 N	Chlorine electrode according to electrochemical principle, suitable for measurements of free chlorine in drinking water and pools. Measuring range: 0-2 mg/l, pH range 4-9, independent from pH value.	201187
TCML N	Chlorine electrode according to electrochemical principle, suitable for measurements of total chlorine in drinking water and pools. Measuring range: 0-2 mg/l.	201192



For technical data please see datasheet D7.01

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 66

Analog pH Electrodes see from page 16

Analyzer

Chlorine 3017M

Continuous and precise measurement of free and total chlorine according to the DPD method (ISO method 7393-2 and US EPA method 334.0).



Chlorine 3000



- High accuracy of ± 0.03 mg/l or $\pm 5\%$
- > 30 days unattended runtime
- Can be integrated into existing IQ SENSOR NET via MIQ/IC2



D7.05

Ordering Information

Model	Description	Order No.
Chlorine 3107M	Online analyzer for photometric measurement of free and total chlorine, according to colorimetric DPD Method (ISO & US EPA); outputs (selectable): 4 to 20 mA or RS 485 Modbus; range: 0-5 mg/l; sample inlet device not included;	860151



For technical data please see datasheet D7.05

Alternatives and accessories see brochure "Product Details" and website

Premounted panels for chlorine measurement see from page 66

Analyzer for turbidity measurement see from page 63

IQ SENSOR NET

Digital. Modular. Flexible. Secure



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		83	Data sheets

see also <https://www.xylenalytics.com/en/landingpages/iq-sensor-net>



Fields of Application and Product Overview

IQ SENSOR NET - the system for wastewater treatment plants and more applications

The digital and modular IQ SENSOR NET provides many unique advantages. Since 2001 our customers have enjoyed making the most out of the IQ SENSOR NET modular design. It enables you to easily expand the network with new members. This provides great flexibility and peace of mind that you are completely safe for all wastewater monitoring requirements in the future.

- Integrated overvoltage protection of all components (sensors, modules, cables)
- Reduce cost of installation with universal sensor connection and 2 wired cables rather than multiple power and output cables
- Intuitive design to operate and expand



At the beginning of your planning, make your decision between 3 systems:

	Network System 2020		Measuring Location System 282/284		Single Parameter Measuring Point System 281
	MIQ/TC 2020 3G	MIQ/MC3	DIQ/S 284	DIQ/S 282	DIQ/S 281
Connectable sensors	20	20	4	2	1
Displayable parameters	20	20	20	20	1
USB interface	✓	✓	✓	✓	✓
Ethernet interface	✓	✓	✓	✓	
System access via IQ WEB CONNECT	✓	✓	✓	✓	
Field bus connection	✓	✓	✓	✓	
Data memory	✓	✓	✓	✓	✓
IQ sensors with universal sensor connection	✓	✓	✓	✓	✓
MIQ modules	✓	✓	✓	✓	
DIQ modules			✓	✓	✓
Wireless communication	✓	✓	✓	✓	
Redundant controller	✓	✓			
Max. number of displays	3	3	1	1	1
Cable length	3 km	3 km	250 m	250 m	250 m
Oxygen <i>sensors see from 11</i>	●	●	●	●	●
pH/ORP <i>probes see from 15</i>	●	●	●	●	●
Conductivity <i>cells see from 19</i>	●	●	●	●	●
Turbidity <i>sensors see from 25</i>	●	●	●	●	●
Suspended solids <i>sensors see from 24</i>	●	●	●	●	
Nitrogen <i>probes see from 30</i>	●	●	●	●	
Carbon <i>probes see from 38</i>	●	●	●	●	
SAC/UVT <i>probes see from 38</i>	●	●	●	●	
Phosphate <i>analyzer see from 41</i>	●	●	●	●	
Sludge level <i>probes see from 43</i>	●	●	●	●	
	MIQ/TC 2020 3G	MIQ/MC3	DIQ/S 284	DIQ/S 282	DIQ/S 281
see page	54	57	58	58	60



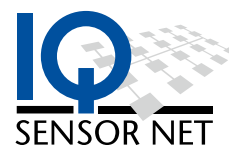
Visual System overview
see cover of this catalog.

All parameters (tabular
design) see cover of this
catalog.

System details (tabular
design) see cover of this
catalog.

Analog systems from
64.
ATEX from 68.

IQ Systems



1) IQ Sensor Network:

System 2020 3G

- For up to 20 digital IQ sensors in any order
- Measuring network for large plants, BackUp controller function for higher operational safety
- Ethernet/LAN interface and integrated webserver for easy network connection
- Fast and easy software update and saving of log-book data, measured values and configurations for additional safety on a USB stick
- Up to 3 portable and clear displays even in direct sun light

2) Outstanding among the compact:

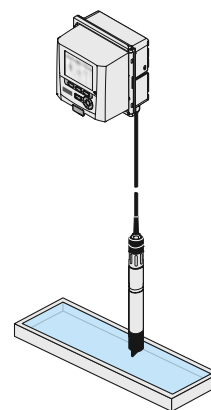
System 282/284

- Multi-channel controller for up to 4 IQ sensors provides easy and low-cost expansion
- Up to 20 parameters can be visualized at the same time
- Perfectly suited to replace or add a single measuring point
- Simple Data transfer and download with USB stick at every controller
- Optional: Ethernet and RS 485 interface for network connection and fieldbus communication

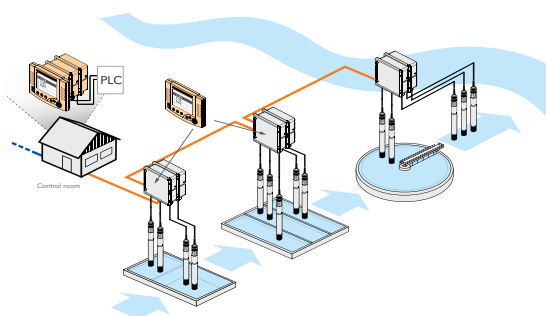
3) The single parameter measuring point:

System 281

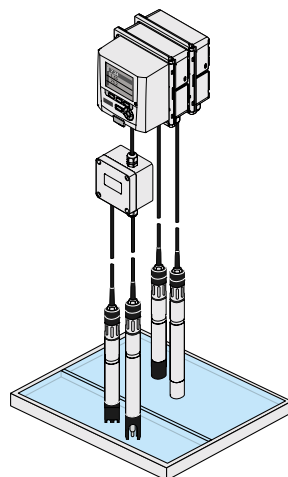
- Low-cost entrance into the digital measuring technique
- For the parameters pH/ORP, Cond, D.O. and Turb
- Stable, robust and reliable measuring technique



IQ System 281 with FDO® 700 IQ F



Product descriptions of single components see 54



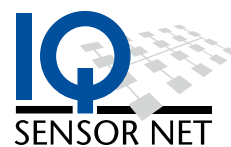
IQ System 284 with 4 connected IQ sensors
(6 x mA, 6 x Relays, Ethernet interface for remote control as option)

Product descriptions of single components see 58

Product descriptions of single components see 60

Visual overview of systems see cover of this catalog.

IQ Sensors



One connection for all IQ sensors - via the universal SACIQ sensor cable

The standard version of high grade stainless steel is suitable for process and industry. All media contacting components of the seawater versions are made of titanium and plastic and are therefore extremely resistant to corrosion.

For the following parameters WTW offers IQ sensors:

Oxygen (D.O.)	from 12
pH/ORP	from 15
Conductivity	from 19
Turbidity	from 24
Suspended Solids	from 25
Nitrogen: NH_4 , NO_3 , NO_2 , NO_x	from 30
Carbon: COD/TOC/DOC/BOD	from 38
SAC/UVT	from 38
Sludge Level	from 42



IQ Analyzer

Alyza IQ - the wet-chemistry revolution is now

The Alyza IQ convinces with extremely low reagent and waste consumption and an easy handling. It can be connected to Systems 2020 and 282/284.

WTW offers IQ analyzers for the following parameters:

Orthophosphate	from 41
Ammonium	from 34



IQ SENSOR NET System 2020

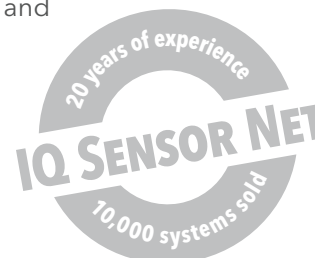
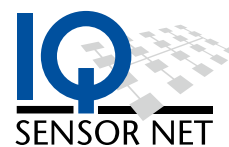
A flexible system - reliable results

The IQ SENSOR NET is of modular design and grows with your demands.

Application areas and system concept

The IQ SENSOR NET is a network for analytical measurements. It is in worldwide operation since 2001, constantly evolving to meet customer needs. It is used for inlet and outlet monitoring, as well as for controlling the activated sludge process.

Due to its modular design, the system can be expanded any time by adding further modules and sensors in any order.



The basic equipment



- Large display with user-friendly buttons in all weather conditions
- Feature enhancements by addition of specific modules
- Low installation costs by stackmounting without cable

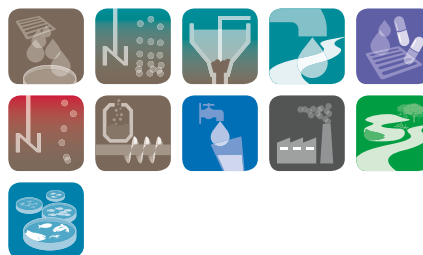


Terminal/Controller MIQ/TC 2020 3G

Terminal/Controller for the IQ SENSOR NET System 2020, portable operating unit with large display, robust buttons and USB interface; connectible to every MIQ module.



USB interface of Terminal/Controller MIQ/TC 2020 3G



Modules for Power Supply

MIQ/PS or **MIQ/24V** for the power supply via wide range or 24 V (AC and DC). The power supply modules that operate the IQ SENSOR NET are available in two models: The wide range power supply MIQ/PS for 100–240 VAC and the low-voltage power supply MIQ/24V for 24 VAC/24 VDC.

By the ability to stack these in the IQ SENSOR NET, you can quickly and easily dock these modules onto already existing ones - anywhere in the system. Therefore, additional mounting hardware is not required.

- Individually adaptable to the energy requirement
- Up to 6 modules can be installed in one system
- Simple mounting
- Mount anywhere in the system, stacked without additional mounting hardware
- Integrated overvoltage protection ensures high operational safety in any weather



Ordering Information

Model	Description	Order No.
MIQ/TC 2020 3G	Terminal/Controller for the IQ SENSOR NET System 2020	470020
MIQ/PS	Power supply module for voltage supply with wide range power supply	480004
MIQ/24V	Power supply module for voltage supply with 24 VAC or 24 VDC input voltage	480006



For technical data please see datasheets D1.01 and D1.03

Alternatives and accessories see brochure "Product Details" and website

Analog systems from 67

ATEX from 68

The Sensors and Parameters

All common parameters from inlet to outlet. The sensors can be connected with a universal cable to any module.

For the following parameters WTW offers

IQ sensors:

Oxygen (D.O.)
pH/ORP
Conductivity
Turbidity
Suspended Solids
Nitrogen: NH_4 , NO_3 , NO_2 , NO_x
Carbon: COD/TOC/DOC/BOD
SAC/UVT
Sludge Level

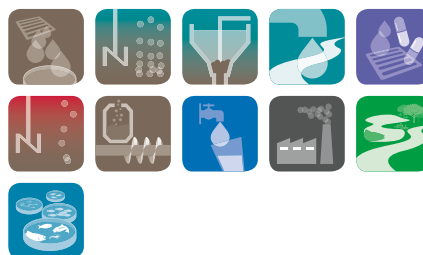
IQ analyzer:

Orthophosphate from 41
Ammonium from 34

from 12
from 17
from 19
from 24
from 25
from 30
from 38
from 38
from 43

The Modules

Expand the functions of your system by adding specific modules.



- Can be combined in any configuration thanks to the modular system - no matter where, when or how
- Simple installation - the stacking technique of the IQ SENSOR NET saves additional installation materials, work effort and time
- Integrated overvoltage protection ensures high operational safety in any weather

Modules for System Expansion

The expansion modules are required to connect the IQ sensors as well as for the branching of the system.

MIQ/JB: passive module „Junction Box“ (MIQ/JB) with four identical IQ SENSOR NET connections

MIQ/JBR: Module with active repeater function to prepare the signal for very long cable distances

MIQ/WL PS: Radio module for the wireless connection in your IQ SENSOR NET



Connections of modules for system expansion, analog outputs, analog inputs, and power supply; with at least two IQ SENSOR NET connections

Modules with Analog Outputs

The analog output modules can be combined as required, up to a max. of 48 output channels (total of current outputs and relays in the system 2020).

MIQ/R6 with 6 relays

MIQ/CR3 with 3 current outputs and 3 relays

MIQ/C6 with 6 current outputs

Module with Analog Inputs

With the module **MIQ/IC2** you will expand the system by two current inputs and you will also allow the connection of separate sensors and analyzers into the IQ SENSOR NET.



Antenna of radio module MIQ/WL PS

Modules with Digital Outputs

MIQ/3-MOD for MODBUS RTU connection

MIQ/3-PR for PROFIBUS DP connection



Connections of digital output modules MIQ/3-MOD and MIQ/3-PR incl. USB interface (left)

Other MIQ Modules

MIQ/CHV PLUS: Magnetic valve module for automatic compressed air cleaning, controlled by relays of the IQ SENSOR NET.

MIQ/EKB: To avoid trip hazards, you can also route the connecting cable of the IQ SENSOR NET underground. To extend these, you can use our ground cable terminal box MIQ/EKB.



Connections of magnetic valve module MIQ/CHV PLUS with two pressured air connectors (left)

Controller MIQ/MC3

The usage of a MIQ/MC3 controller provides reliable and direct data transfer to the PLC via the fieldbuses PROFIBUS DP, Modbus RTU (RS 485), Ethernet/IP, Modbus TCP or PROFINET (RJ 45).

By the **MIQ/MC3**, the MIQ/TC 2020 3G becomes a portable Terminal, which can be connected to any module. You also benefit from Controller BackUp function and full remote access with IQ WEB CONNECT.



Connections of Controller MIQ/MC3 with Ethernet and USB interface (left)

Terminal IQ

Additional, cost-effective display and operating unit.



Terminal IQ

Ordering Information

Model	Description	Order No.
MIQ/JB	Modul IQ/Junction Box, for system branching, for system 2020 and 282/284, 4 free IQ SENSOR NET connections	480008
MIQ/WL PS SET	2 MIQ/WL PS radio modules, preconfigured as master and slave, ready to operate	480025
MIQ/R6	Module IQ / relay 6 with 6 relay outputs (output module, analog)	480013
MIQ/CR3	Module IQ / current relay 3, with 3 power and 3 relay outputs output module (analog)	480014
MIQ/C6	Module IQ / Current 6 with 6 power outputs (output module, analog)	480015
MIQ/3-MOD	Module IQ with MODBUS RTU / RS 485 connection (output module, digital)	471026
MIQ/IC2	Module IQ / input Current 2 with 2 inputs for 0/4 - 20 mA signals (input module)	480016
MIQ/CHV PLUS	Module IQ/Cleaning Head Valve for automatic relay or IQ SENSOR NET controlled compressed air cleaning (relay and compressed air supply, external)	480018
MIQ/MC3	System 2020 controller, for up to 20 sensors, w/ automatic air pressure compensation, USB and RJ45 interface (ethernet)	471020
MIQ/MC3-MOD	Like MIQ/MC3, but including MODBUS RTU/RS 485 interface	471022
MIQ/MC3-PR	Like MIQ/MC3, but including PROFIBUS-DP/RS 485 interface	471023
Terminal IQ	Terminal without controller function for the IQ Sensor Net System 2020 (MC3 or MIQ/TC 2020 3G required)	470021



For technical data please see datasheets D1.05, D1.04, D1.06 and D1.02

Alternatives and accessories see brochure "Product Details" and website

DIQ modules for the system 282/284 from 59

Analog systems from 67

IQ SENSOR NET System 282/284



for small and mid-sized wastewater treatment plants

Controller for small and mid-sized wastewater treatment plants including USB-interface and internal data logger – up to 4 sensors, all parameters, available anytime.

The Controllers



DIQ/S 282-CR3



- Up to 4 sensors connectable at once
- USB interface and data logger
- Available anytime via internet



DIQ/S 282

Controller **for up to two sensors**, available in five different versions: with three current outputs, with PROFIBUS interface, with MODBUS interface, with Ethernet interface for remote control or with Ethernet interface including protocols PROFINET, Modbus TCP and Ethernet/IP. Every version is also available with 24 V AC/DC supply.

DIQ/S 284

Controller **for up to four sensors**, available in five different versions: with six current outputs, with PROFIBUS interface, with MODBUS interface, with Ethernet interface for remote control or with Ethernet interface including protocols PROFINET, Modbus TCP and Ethernet/IP. Every version is also available with 24 V AC/DC supply.

Ordering Information

Model	Description	Order No.
DIQ/S 282-CR3	Controller for up to 2 IQ sensors, with 3 Relays, with 3 mA-outputs, 100 ... 240 VAC	472110
DIQ/S 284-CR6	Controller for up to 4 IQ sensors, with 6 Relays, with 6 mA-outputs, 100 ... 240 VAC	472130

Version with field bus protocols and digital interfaces see data sheets D1.07 and D1.08.

QRs prüfen



For technical data please see datasheets D1.07 and D1.08

Alternatives and accessories see brochure "Product Details" and website

IQ SENSOR NET System 2020 see 54

Analog systems from Seite 64

The Sensors and Parameters

All common parameters from inlet to outlet. The sensors can be connected with a universal cable to any module.

For the following parameters WTW offers

IQ sensors:

Oxygen (D.O.)
pH/ORP
Conductivity
Turbidity
Suspended Solids

from 12
from 15
from 19
from 24
from 25

Nitrogen: NH_4 , NO_3 , NO_2 , NO_x
Carbon: COD/TOC/DOC/BOD
SAC/UVT
Sludge Level

from 30
from 38
from 38
from 43

IQ analyzer:

Orthophosphate
Ammonium

from 41
from 34

The Modules

Modules for the flexible expansion of digital IQ SENSOR NET systems 181 and 282/284 by additional measuring points or functions – compact design



DIQ/JB



- Simple installation – electrical connection and mounting can be done with terminal strips and simple screws
- The flexible system expansion allows you to upgrade at a later date
- Its compact design saves space and cost



DIQ/JB

to connect a second or remote IQ sensor

DIQ/CHV

for the automatic relay-controlled compressed air cleaning in the system 181 and 282/284

MIQ/...

All MIQ modules can be used with the system 282/284 (except: MIQ/MC3(-...) and MIQ/3-...) (see from 56):

MIQ/PS
MIQ/24V
MIQ/JB
MIQ/JBR

MIQ/WL PS SET
MIQ/R6
MIQ/CR3
MIQ/C6

MIQ/IC2
MIQ/CHV PLUS
MIQ/EKB

Ordering Information

Model	Description	Order No.
DIQ/JB	Dual IQ/Junction Box	472005
DIQ/CHV	Dual IQ/Cleaning Head Valve	472007



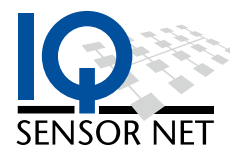
For technical data please see datasheet D1.10

Alternatives and accessories see brochure "Product Details" and website

IQ SENSOR NET System 281 60

Analog systems from 67

IQ SENSOR NET System 281



Digital and easy

For pH, dissolved oxygen, turbidity or conductivity

Great technology at low price

Get decades of experience from WTW and use the established technology. With the excellent cost-performance ratio you can save time, work and money!

1 Controller. 1 Sensor.

Get started into the digital world and stay sustainable with the state-of-the-art technique. No preamplifier, reliable data transfer, automatic sensor recognition!

The Controller



DIQ/S 281



- Cost advantage – one controller, one sensor
- Digital – for reliable data transfer
- WTW quality – proven, robust, durable
- HART and Modbus RTU versions available



DIQ/S 181

The digital controller DIQ/S 181 for pH/ORP, D.O., Turbidity or Conductivity enables a sensor change at any time; cable length of up to 250 m.

Ordering Information

Model	Description	Order No.
DIQ/S 281-CR2	Dual IQ/System 281, Universal monitor for the connection of 1 digital IQ sensor (pH/ORP, D.O., conductivity or turbidity), with 2 analog outputs (0/4-20 mA) and 2 relays, 100 ... 240 VAC	472103
DIQ/S 281-CR2/24V	Like the DIQ/S 281, but for 24 V AC/ DC voltage supply	472104
DIQ/S 281-MOD	Dual IQ/System 281, Universal monitor for the connection of 1 digital IQ sensor with MODBUS connection, 3 x Relays	472105
DIQ/S 281-HART	Universal monitor for the connection of 1 digital IQ sensor with HART connection	472106



For technical data please see datasheet D1.09

Alternatives and accessories see brochure "Product Details" and website

Analog systems from 64



Controllers and sensors for explosive area see 68

The Sensors and Parameters

Cost-effective and reliable measurement of pH/ORP, oxygen, conductivity or turbidity.

for pH/ORP measurement

SensoLyt® 700 IQ see 15

SensoLyt® electrodes see 15

for Dissolved Oxygen measurement

TriOxmatic® 700 IQ see 12

FDO® 700 IQ see 11

FDO® 701 IQ see 10

for Conductivity measurement

TetraCon® 700 IQ see 20

for Turbidity measurement

VisoTurb® 700 IQ see 24

for Suspended Solids measurement

ViSolid® 700 IQ see 25

The Modules

Modules for flexible extensions of the digital IQ SENSOR NET Systems 281 and 282/284 with additional measuring points or functions – compact shape.

see 59

Analyzer

On-line Measuring



In the wastewater treatment industry, there has been an increased need for on-line measuring analyzers justifying their market presence next to less expensive in-situ sensor systems. Especially when it comes to high-precision water analyses, for example in the monitoring of the discharge in sewage treatment plants requiring automatic calibrations and/or adjustments as well as standard DIN methods for analysis, analyzers are necessary.

Fields of application:

- Wastewater Treatment Plant
 - Precipitation control
 - Wastewater treatment plant effluent monitoring
- Surface Water

Alyza IQ Series

The new wet-chemical **Alyza IQ** delivers precise results thanks to the revolutionary MultiPort Valve and requires only extremely small quantities of reagent and sample.



Alyza IQ PO₄ two-channel version with covered measuring unit



- Minimized reagent consumption and waste
- Extremely low maintenance effort
- Service contract optional - it's your choice
- High accuracy at low measuring ranges

IP 67
IP 54



2 Year
Warranty



D2.24, D2.25

Alyza IQ PO₄

for the measurement of orthophosphate
see from page 41

Alyza IQ NH₄

for the measurement of ammonium
see from page 34

Further Analyzers



Turb 2120



Chlorine 3000

Turb PLUS 2000 Series

for the monitoring of turbidity in drinking water
see from page 63

Chlorine 3017 M

for the measurement of chlorine in drinking water
see from page 49

Analog Monitors

pH/ORP, Conductivity, D.O. or Chlorine
in numerous applications



The analog monitor series 298 for pH, conductivity, oxygen as well as for the chlorine measurement offers an enormously high operational reliability based on their galvanically isolated outputs. The clear menu structure along with the easy to read LCD display ensures a maximum operating and user friendliness.

The specially coated drinking water panels are pre-assembled and ready-to-operate. The sensors for free or total chlorine and the sensor combinations in case of a multi-parameter panel are freely selectable. Additional options such as analog/digital Outputs or flow monitoring are dependent on the selected panel.

Fields of application:

- Drinking Water Monitoring
- Swimming pools & Thermal Baths
- Textile manufacturing & dyeing processes
- Pure & ultrapure water
- Electroplating
- Landfills & Leachates
- Paper & Pulp Industry
- Fishfarming/Aquaculture
- Wastewater Treatment Facilities

Series 298 Single-parameter Field Monitor

Analog transmitter to directly connect analog pH/ORP electrodes, chlorine electrodes, conductivity cells and oxygen sensors with an outstanding price/performance ratio for a versatile application.



pH 298



- User-friendly and effective thanks to easy operation
- Safe operation due to the galvanically isolated outputs



pH 298

for low-impedance pH measurement, automatic temperature compensation with NTC, Pt100 or Pt1000

analog pH electrodes see from page 16

LF 298

suitable for numerous conductivity measuring cells due to different measuring ranges and cell constants

analog conductivity measuring cells see from page 21

Oxi 298

with compressed air compensation and complete sensor monitoring

analog D.O. sensors see from page 13

CI 298

to measure free or total chlorine

analog chlorine electrodes see from page 49

Ordering Information

Model	Description	Order No.
pH 298 NTC	Analog controller to measure pH/ORP, 230V and NTC	191230
pH 298 Pt100	Analog controller to measure pH/ORP, 230V and Pt100	191232
pH 298 Pt1000	Analog controller to measure pH/ORP, 230V and Pt1000	191234
Oxi 298 NTC	Analog controller to measure oxygen, 230V and NTC	291230
Oxi 298 Pt1000	Analog controller to measure oxygen, 230V and Pt1000	291234
LF 298 NTC	Analog controller to measure conductivity, 230V and NTC	391230
LF 298 Pt1000	Analog controller to measure conductivity, 230V and Pt1000	391234
CI 298 Pt1000	Analog controller to measure chlorine, 230V and Pt1000	801254

24V versions available upon request



For technical data please see datasheet D3.01

Alternatives and accessories see brochure "Product Details" and website

Analog sensor technology see parameter chapters starting from page 13



EX monitors see from page 69

Panels with Analog Monitors

Single-parameter System CI 298/P

Pre-mounted on specially coated panel to measure free or total chlorine

Monitors

CI 298 with integrated data memory, 2 current outputs, 2 relays and Modbus in robust aluminium housing



- Sanitary and well-structured
- Environmentally friendly - no use of chemicals
- Integrated PID control

Electrode with flow cell

Order FCML 412 N or TCML N electrode (see page 49) separately; electrodes and flow cell match perfectly



D3.01, D7.01,
D7.03

Flow control monitoring (optional)

To continuously monitor the upstream flow of the electrode; the flow rate is visualized on the display as a signal and can be transmitted via Modbus

Dosing valve

for optimum flow adjustments

Pressure reducer

0 ... 16 bar with integrated temperature sensor



CI 298/P

Ordering Information

Model	Description	Order No.
CI 298/P - 230 VAC	Ready to operate measuring panel to measure free or total chlorine, analog monitor 2 current outputs and MODBUS interface, with automatic temperature compensation (Pt1000), 230 VAC	801260
CI 298/P Flow - 230 VAC	Like above, but with FlowControl to monitor the flow volume	801261



For technical data please
see datasheets D3.01,
D7.01, D7.03

Configuration of alternatives
and accessories brochure
"Product Details"

Analog sensor technology
see parameter chapters
starting from page 13



EX monitors see
from page 69

MULTILINE 1000 Multi-parameter System

With up to 16 individually configurable measuring channels, the terminal MULTILINE 1000 is a very flexible measuring system for drinking water analysis. The system is pre-configured on a wall mounting panel and ready to use. Simply connect and start measuring: Drinking water measuring panel comes with a flow system, pressure reducer, dosing ball valve, completely pre-assembled cable and with a water-repellent panel. Connections with DN10 and optionally:

pH measurement

(SenTix® ML 70 *see page 17*)



ORP measurement

(SenTix® ML ORP *see page 17*)

Chlorine measurements

amperometric;

free chlorine - low pH dependancy (pH 4-9) (FCML 412 N *see page 49*) or total chlorine (TCML N *see page 49*)

- Multi-parameter system for measurement of pH/ORP, D.O. conductivity, turbidity, free or total chlorine
- Intuitive menu navigation
- Excellent price-performance ratio
- No chemical consumables needed - environmentally friendly



D7.01, D7.02,
D7.03 D7.04

Turbidity measurement

with white light, without ultrasonic cleaning (Turb 2000),
with white light and ultrasonic cleaning (Turb 2020);
with IR light, without ultrasonic cleaning (Turb 2100),
with IR light and ultrasonic cleaning (Turb 2120) *see page 27*

Conductivity measurement

(LR ML *see page 21*)

Flow Measurement

(with pre-mounted impeller)



Drinking water panel with basic equipment and all options (orange)

Ordering Information

Model	Description	Order No.
MULTILINE 1000 230VAC	Multi-parameter monitor to connect up to any 16 sensors, power supply 230 VAC	480200
MULTILINE 1000 115VAC	Like above, but with 115 VAC	480201
Drinking water panel	ready-to-use panel to measure pH, ORP, Cond, Chlorine and Turbidity (Turb 2000); X: with or without flow; yyyy: coding dependent on parameter selection; details see price list or drinking water flyer	8X-yyyyy



For technical data please
see datasheets D7.01 to
D7.04

Configuration of alternatives
and accessories brochure
"Product Details"

Analog sensor technology
see parameter chapters
starting from page 13

Analyzer see from
page 62

ATEX Instrumentation

For explosive areas



For measurements in explosive atmospheres (EX area), WTW offers the complete EX measuring equipment with sensors, EX-compliant accessories, EX-transmitter, isolated amplifier and certificates.

EX pH/ORP Armatures and Combination Electrodes

see page 16

EX Conductivity Measuring Cells

see page 20

Fields of application:

- Zone 1 IIB
- Zone 1 IIC
- Inlet
- Channels
- Pumping station



see also www.xylemanalytics.com/en/products/process-controllers-and-sensors/atex-controller-and-sensor

EX monitors

The EX compliant monitor accepts the EX versions of the proven pH and conductivity sensors SensoLyt® and TetraCon®. Besides a clear display with color backlight, the monitor is equipped with 1 or 2 current outputs. Additionally, the monitor convinces with its operational capability in the temperature range of -20 °C ... 65 °C.



- EX certified
- Color backlighting
- For high ambient temperatures



EX monitor for pH

for pH measurements

analog pH electrodes see page 20

EX monitor for Cond

for conductivity measurements

analog conductivity measuring cells see page 20

Ordering Information

Model	Description	Order No.
EX monitor pH-0	pH transmitter with 1 analog current output	109444EX
EX monitor pH-1	pH transmitter with 2 analog current outputs	109445EX
EX monitor LF-0	Conductivity transmitter with 1 analog current output	300944EX
EX monitor LF-1	Conductivity transmitter with 2 analog current outputs	300945EX



For technical data please see datasheet D3.01

Alternatives and accessories see brochure "Product Details" and website

Isolated amplifier see below

Analog monitors see from page 64

Isolated amplifier

The isolated amplifier supplies the EX compliant monitor with auxiliary voltage and transfers the measured value. It can be connected directly to the PLC or as 24V version to the MIQ/IC2 of the IQ SENSOR NET.



- Maximum safety
- Secure separation and isolation of input, output and auxiliary power



Ordering Information

Model	Description	Order No.
Isolated amplifier	Isolated amplifier to power the EX-transmitter in an intrinsically safe way, power supply 90 ... 253V, explosion protection II (1) G [Ex ia Ga] IIC.	109446EX
Isolated amplifier Opt. 336	Same, but with supporting power supply 24 VAC/DC	109447EX



For technical data please see datasheet D3.01

Alternatives and accessories see brochure "Product Details" and website

EX monitors see above

Analog monitors see from page 64

Samplers

Portable or for wall mounting



Sampling in wastewater treatment plants or process technology is of crucial importance to guarantee comparability and comply with legal and operational requirements. The first work step to determine chemical, physical or biological parameters is the sampling process - no matter if portable or wall mounted.

Fields of application:

- Sewage Treatment
- Municipal Sewerage Systems
- Water Protection Control

see also www.xylymanalytics.com/en/products/process-controllers-and-sensors/samplers



Portable samplers

Mobile sampling in good hands. The lightweight design and the compact housing of the **PB-M** ensure a unique carrying comfort. The modern operating structure and vacuum pump system allow a carefree sampling process.

The portable sampler is perfect for sampling at the inlets and outlets of small to medium sized municipal waste water

treatment plants, outdoor facilities, as well as for the punctual and regulatory supervision. Moreover, the long-term sampling of surface waters is supported by the "sleep mode" induced high battery run time.



PB-M



- Time, volume, event proportional or manual sampling
- Vacuum pump system
- Low weight
- Clear operating structure and easy programming



Ordering Information

Model	Description	Order No.
PB-M-S/1	Version with 1 x 13 l collection container (PE)	503250
PB-M-L/R24	Version with 24 x 1 l sample bottles (PE)	503280
LG/65/PB-M	Battery charger IP 65 for PB-M	503371



For technical data please see datasheet D5.01

Alternatives and accessories see brochure "Product Details" and website

Sampler for wall mounting

With its large and easily changeable collection containers, the **PB-W** is ideal for simple applications. The compact and lightweight housing assures fast mounting. Let's get ready for standardized sampling.



PB-W



- Quickly changeable collection containers
- Clear operating structure and simple programming
- Standard-compliant sampling



Ordering Information

Model	Description	Order No.
PB-W/230V	Compact sampler 230 V (50/60 Hz) for wall mounting	503200
PB-W/115V	Compact sampler 115 V (50/60 Hz) for wall mounting	503201



For technical data please see datasheet D5.03

Alternatives and accessories see brochure "Product Details" and website

hier ebenso

Accessories

IQ SENSOR NET and further Process Instrumentation



For the IQ SENSOR NET, WTW offers a wide range of mounting accessories. From channel over tank to pipe installation - from wall over rail to floor mounting. Besides ready-to-go sets, we also provide accessories as single scopes to enable any kind of individual demand for sensor and controller/module mounting.

Further mounting equipment for drinking water and other analog sensors are also available.

Fields of application:

- | | |
|-------------|-------------|
| • Mounting: | • Mounting: |
| • Channel | • Wall |
| • Basin | • Handrail |
| • Pipe | • Floor |

see also www.xylymanalytics.com/en/products/accessories



Accessories for the IQ SENSOR NET System



Sensor Mounting

Extensions and holders

Controller/Module Mounting

Sunshields and mounting kits

Cable

Sensor and connection cables

Ready-to-go Sets

To mount up to 3 sensors including controller/module



Sensor holder EH/U 170
with SACIQ-7,0

Sensor holder EH2/U 170
with 2 x SACIQ-7,0

Sun shield SSH/IQ

Ordering Information

Model	Description	Order No.
Sensor Mounting: Extensions and holders		
UA 55	Universal extension assembly (incl. handle and set of seals) for sensors 650, 690 and 70X (IQ), length: 317 mm (12.48 in)	109260
UA 130	Universal extension assembly (incl. handle and set of seals) for sensors 650, 690 and 70X (IQ), length: 1067 mm (42.01 in)	109261
EH/U 170	Sensor holder for 1 Sensor 650, 690 and 70X (IQ) to a swing mounting assembly	109320
EH2/U 170	Sensor holder for 2 Sensors 650, 690 and 70X (IQ) to a swing mounting assembly	109323
EH/W 170	Sensor holder for 1 Sensor 650, 690 and 70X (IQ) for direct wall mounting of UA armatures	109274
Controller/Module Mounting: Sun shields and mounting kits		
SD/K 170	Sun shield for outdoor installation of junction boxes or an IQ SENSOR NET module and monitors	109284
MR/SD 170	Mounting kit for attaching sun shields to pipes	109286
SSH/IQ	Sun shield for mounting of IQ SENSOR NET modules and monitors	109295
PMS/IQ	Kit for panel mounting of IQ SENSOR NET modules and monitors	480048
THS/IQ	Kit for top hat rail mounting of IQ SENSOR NET modules and monitors	480050
ADA/D-SUB	D-SUB connection for Profibus and Modbus connections of IQ SENSOR NET modules and monitors	902888
Sensor and connection cables		
SACIQ-1,5	Cable to connect an IQ sensor, 1.5 m length	480040
SACIQ-7,0	Cable to connect an IQ sensor, 7 m length	480042
SACIQ-15,0	Cable to connect an IQ sensor, 15 m length	480044
SACIQ-20,0 SW	Cable to connect an IQ sensor, 20 m length, seawater application	480045
SNCIQ-50	Connection cable for the IQ SENSOR NET, per meter	480046V
SNCIQ-100	Connection cable for the IQ SENSOR NET, 100 m	480068
Ready-to-go Sets to mount up to 3 sensors including controller/module		
IN/SET1	Installation set for 1 Sensor 650, 690 and 70X (IQ), incl. mounting stand, sensor holder, sun shield	109304
IN/SET2	Installation set for 2 Sensors 650, 690 and 70X (IQ), incl. mounting stand, sensor holder, sun shield	109305
IN/SET3	Installation set for 3 Sensors 650, 690 and 70X (IQ), incl. mounting stand, sensor holder, sun shield	109306



further accessories and
alternatives see brochure
"Product Details" and
website

Information about
IQ SENSOR NET system see
from page 50

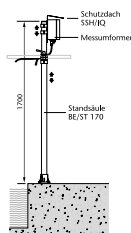
Sensors see from
page 11



Accessories for
EX area see brochure
"Product
Details"

Mounting Stands

From wall over rail to floor mounting



BE/ST 170

Floaters

For fluctuating water levels



Float S 200

Fixtures

For pendulum and swing holders, without stands



Swivel fixture BE/R 170-D

Chain and Shackle

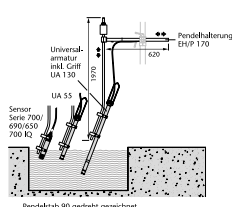
For individual solutions



CH/SO

Swing, Pendulum and Clamp Holders

To mount sensors and holders



EH/P 170

Mounting Equipment for 60 mm Sensors

For spectral and sludge level sensors



Holding Device
VIS Set/EH

Cleaning Accessories

Cleaning Air Box (Pressured air cleaning) and spare parts



Cleaning head CH

Junction Boxes

To connect analog sensors to the IQ SENSOR NET



KI/pH-MIQ/S

Ordering Information

Model	Description	Order No.
BE/ST 170	Vario floor mounting stand, incl. universal joint fixture and brackets for sun shield	109280
BE/ST 170-R	Vario pipe mounting stand, incl. universal joint fixture and brackets for sun shield	109281
BE/ST 170-M	Vario wall mounting stand, incl. universal joint fixture and brackets for sun shield	109283
S 200	Float for mounting sensor if water level fluctuates	108540
BE/M 170	Masonry fixture installation of swing or pendulum mounting assembly directly on the basin edge or on top of a wall	109276
BE/R 170-D	Swivel/pivot clamp fixture for mounting of a swing or pendulum mounting assembly directly to basin railing	109279
S/CH	Shackle for chain fitting	505123
CH/SO	Chain per meter	505124
EH/F 170-1,5	Swing mounting assembly, incl. chain, boom: 1.5 m/4.9 ft	109272
EH/F 170-2,5	Swing mounting assembly, incl. chain, boom: 2.5 m/8.1 ft	109273
EH/W 172	Wall mounting for 60 mm sensors	109361
EH/WB	Sensor carrier for 60 mm sensors	109362
Cleaning Air Box - 230 VAC	Air compressor for pressured air cleaning of sensors, 230V	480019
CH	Cleaning head to air pressure clean 40 mm sensors, incl. 15 air pressure tubes	900107
KI/pH-MIQ/S	Connection box for high impedance pH/ORP electrodes to IQ SENSOR NET	505544
KI/LF-0,4/MIQ	Connection box for conductivity cells with NTC to IQ SENSOR NET, cell constant: 0.475 cm ⁻¹	505572



further accessories and alternatives see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

60 mm Sensors:
Spectral – page 28
Sludge – page 42



Accessories for EX area see brochure "Product Details"

Retractable Armatures

For pipe installation, enables sensor removal during operation



Retractable armature

Flow Cells

For measurements in the bypass



VIS FT-1

Flow Assemblys

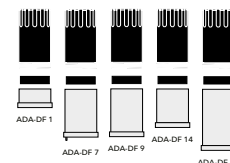
For pipe installation, without sensor removal during operation



EBST 700-DU/ND

Adapters

Needed for usage of flow cells and vessels



Ordering Information

Model	Description	Order No.
WA 700/10	Retractable armature for measurements in pipelines, 40 mm sensors, removal during operation, 10 bar	480100
WA 700/2	Retractable armature for measurements in pipelines, 40 mm sensors, removal during operation, 2 bar	480102
ESS-WA 700/VA	Stainless steel (1.4571) weld-in socket for retractable armatures	480106
ADA-WA 1	Adapter for retractable armatures for pH/ORP, conductivity, D.O., turbidity and TSS	480108
ADA-DW 2	Adapter for retractable armatures for TriOxmatic® 690/70X and TetraCon® 700	480110
D 700/N	Flow cell for multi-parameter measurements (D.O., pH/ORP, conductivity, T)	203745
VIS FT-1	Flow cell for spectral UV and UV/VIS sensors	480080
EBST 700-DU/5N	Flow assembly for measurements in PVC pipelines, for sensors 650, 690, 70X (IQ)	203753
ESS 700 VA/N	Weld-in socket, for measurements in Stainless steel (1.4571) pipelines, for use with sensors 650, 690, 70X (IQ)	203755
ADA-DF 1	Adapter for flow cell for measuring of pH/ORP, conductivity and D.O.	203761
ADA-DF 7	Adapter for flow cell for measuring of turbidity	203773
ADA-DF 9	Adapter for flow cell for measuring of pH/ORP, D.O., conductivity, turbidity and suspended solids	203777



further accessories and alternatives see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 50

Analog Sensors see from page 13



Accessories for EX area see brochure "Product Details"

Accessories for further Process Instrumentation

Drinking Water Flow Cells

For pH/ORP, conductivity or chlorine

Mounting equipment for Analog Sensors

For pH process electrodes and conductivity measuring cells

Ordering Information

Model	Description	Order No.
D-CL	Flow cell for chlorine sensors for drinking water	201150
D 222/3	Flow cell for pH, conductivity and ORP sensors for drinking water	401995
MZ WIS 40 ST 44	Weld-in socket fitting (straight), stainless steel (1.4404), for installation of CHEMtrac 830 M	108533
CHEMtrac 830 M	Manual retractable housing, stainless steel (1.4404), changing without process interruption; for pH electrodes	109237
ADA-G 1"	V4A-stainless steel (1.4571) muffle for analogue Conductivity measuring cells	303202
EST-LRD	V4A-stainless steel (1.4571) weld-in socket for installation of LRD 01 or LRD 325	303209



further accessories and alternatives see brochure "Product Details" and website

Conductivity measurements see from page 18

pH/ORP measurements see from page 14

Chlorine measurements see from page 48

WTW – IQ SENSOR NET Highlights



2001	IQ SENSOR NET	the multi-parameter measuring system offers unlimited possibilities for online measurements
	VisoTurb® and ViSolid®	turbidity and TSS sensors with their revolutionary ultrasonic cleaning system give "low-maintenance" a completely new meaning
	Sensolyt® 700 IQ	digital pH Sensor
2002	AmmoLyt® 700 IQ	enables reliable Online measurement of Ammonium directly in the process
	TetraCon® 700 IQ	digital 4 electrodes sensor
2003	NitraLyt® 700 IQ	is a perfect supplementary nutrient parameter (Nitrate) for Online measurement
2004	NitraVis®, CarboVis® and NiCaVis®	spectral "in-situ" Online sensors for Nitrate , Carbon and TSS measurement for wastewater control
2005	System 182	compact 2 channel transmitter
2006	VARiON® 700 IQ	ammonium and nitrate multisensor with automatic compensation of interference ions
	MIQ/Blue PS	module for radio connection
2007	FDO® 700 IQ	optical D.O. sensor
2008	MIQ/TC 2020 XT	terminal/controller with USB and dual-processor function
	System 182 XT-4	perfect for up to 4 sensors
2012	UV-VIS sensors - Next generation	CarboVis®, NitraVis® and NiCaVis® sensors with the optical design , integrated ultrasonic cleaning technology and high-tech materials
	IFL 700 IQ	interface level measurement for sludge management
2013	P 700 IQ	PO4 analyzer
2014	DIQ/S 181	controller for 1 sensor
	MIQ/MC3	controller with PROFINET
2015	MIQ/WL PS	module for radio transmission
2016	DIQ/S 282/284	system for up to 4 sensors and remote access via IQ WEB CONNECT
2017	MIQ/TC 2020 3G	Terminal with colored display
2019 2020	Alyza IQ	new generation of wet chemical analyzers for NH₄ and PO₄
2021	System 281 Terminal IQ Color Sensors	Modern controller for one single sensor Cost-effective display and operation unit For continuous color measurement



www.xylemanalytics.com

News around the clock

Our new website is designed in the Xylem colors and summarized under the web address www.xylemanalytics.com. This website brings together several Xylem Analytics key lab & field brands: WTW, SI Analytics and Bellingham + Stanley. We are presenting you a broader product range with additional brands as well as service and information about the application of our products. Directly request a quote for your required products. We are adding and optimizing its content continuously.



New products

Take a look: Here you can find new products, developments, innovative measurement and analysis instruments, helpful accessories, useful system extensions, special sets, and much more.

Applications

On our website you will find the solution to your measurement tasks in research, analysis and quality control – and additionally many application.

Downloads

Are you looking for an operating manual, application report, or do you need a certificate? Everything is provided for you in our download area.



WTW – Laboratory and Field Instrumentation

The product portfolio includes products for multi-parameter measurement, pH, ORP, ion-selective, oxygen, conductivity, BOD and depletion measurement, as well as meters for photometry, turbidity measurement and colony counts.

Particularly interesting for the analysis and monitoring of wastewater (in municipal wastewater treatment plants) and the perfect complement to WTW's process instrumentation:

Are you interested?

Please order the new WTW catalog "Lab & Field Instrumentation"!



photoLab[®] SERIES



- OptRF – the revolutionary optical reagent free measurement of COD, nitrate and nitrite
- Photometric tasks for routine to special applications from water to wine
- PC-driven color measurement for quality control - from CIE to Gardner

OptRF – faster as the fastest digestion

The photoLab[®] 7000 series



OxiTop[®]



More than just BOD

OxiTop[®]-IDS for all applications of respirometric measurements

Regardless whether aerobic or anaerobic examinations, because of its versatility the OxiTop[®]-IDS is suited for both. All heads can be used independently from any meter for normal BOD measurements between one and seven days.

The new measuring head OxiTop[®]-i

Respirometric BOD secure, easy, convenient: direct input of sample volume, display of the curve at the head and call-up of interim values.



Portable Meters

The digital MultiLine® IDS series and the proven analog ProfiLine family

There are meters for digital and for conventional sensors. All of them are equipped with a closed, easy to clean silicone keyboard that can easily be operated while wearing gloves.

The **MultiLine® IDS** series are digital multi-parameter meters for pH, ORP, dissolved oxygen, conductivity and turbidity. They have a color graphic display, a large memory, two USB inputs, up to three universal sensor inputs and support GLP compliant measurements through automatic documentation.

Furthermore, the digital portable meters are ready for wireless communication between meter and sensor.

The **ProfiLine** portable meters work with analog sensors. They are available as single or multi-parameter meters for simultaneous measurement of two parameters. Basic models are designed for routine measurement without data logging functions, but there are also meters available with memory and USB interfaces for data transfer to laptop or PC.



- Robust and water-proof
- Single and multi parameter instruments available
- Up to 3 parameters simultaneously
- IDS wireless ready
- Also available as a set with various sensors



SI Analytics – Process Electrodes



We offer a wide range of electrodes especially for the challenges in industrial processes (e.g. pharma, cosmetics and detergents) as well as food and beverage productions:

Our electrodes are customized to the requirements of your applications and are known for their quality, reliability and long durability. We fulfill this demand by manufacturing our electrodes with the greatest precision and a great measure of care following the most modern manufacturing methods in Germany. Every single electrode must meet the strict quality guidelines of our final inspection.

Are you interested? Please order your copy of the SI Analytics catalog „Process Equipment“!



27.00

Are you interested in
Level Measurement or
further Application?



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Xylem is a leading global water technology company committed to developing innovative technology solutions to the world's water and critical infrastructure challenges.

To learn more about all of Xylem's brands, visit www.xyleminc.com/en-us/brands/

Xylem Analytics

Capabilities of Proven Brands

Xylem's analytics business is an expanding family of long-established, leading brands for quantitative and qualitative analysis of samples. Our commitment to our customers is to provide them with the best tools available to solve their measurement challenges in processes, in the field, the laboratory or wherever they may be.

While serving a wide range of industries including agriculture, energy, source water, wastewater, drinking water, groundwater, R&D, ocean monitoring, food & beverage, life sciences and more, we have an extended depth of product offerings and applications expertise in four key industries **Wastewater**, **Ocean/Coastal**, **Surface Water** and **Food & Beverage**.



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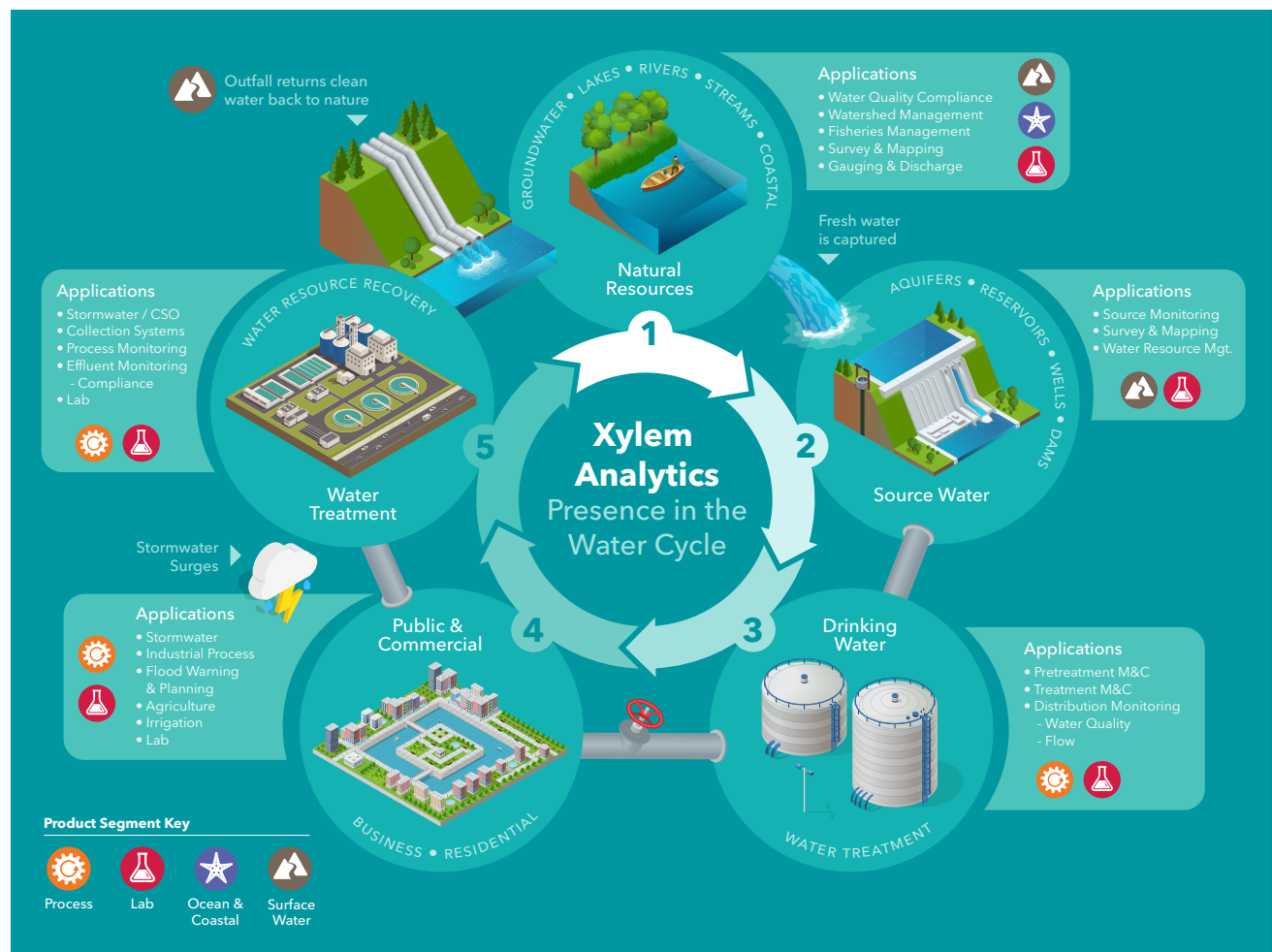
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O+Analytical

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see also www.xylemanalytics.com/en/company/about-us



Xylem Analytics Germany Sales GmbH & Co. KG, WTW
 Am Achalaich 11 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@xylem.com

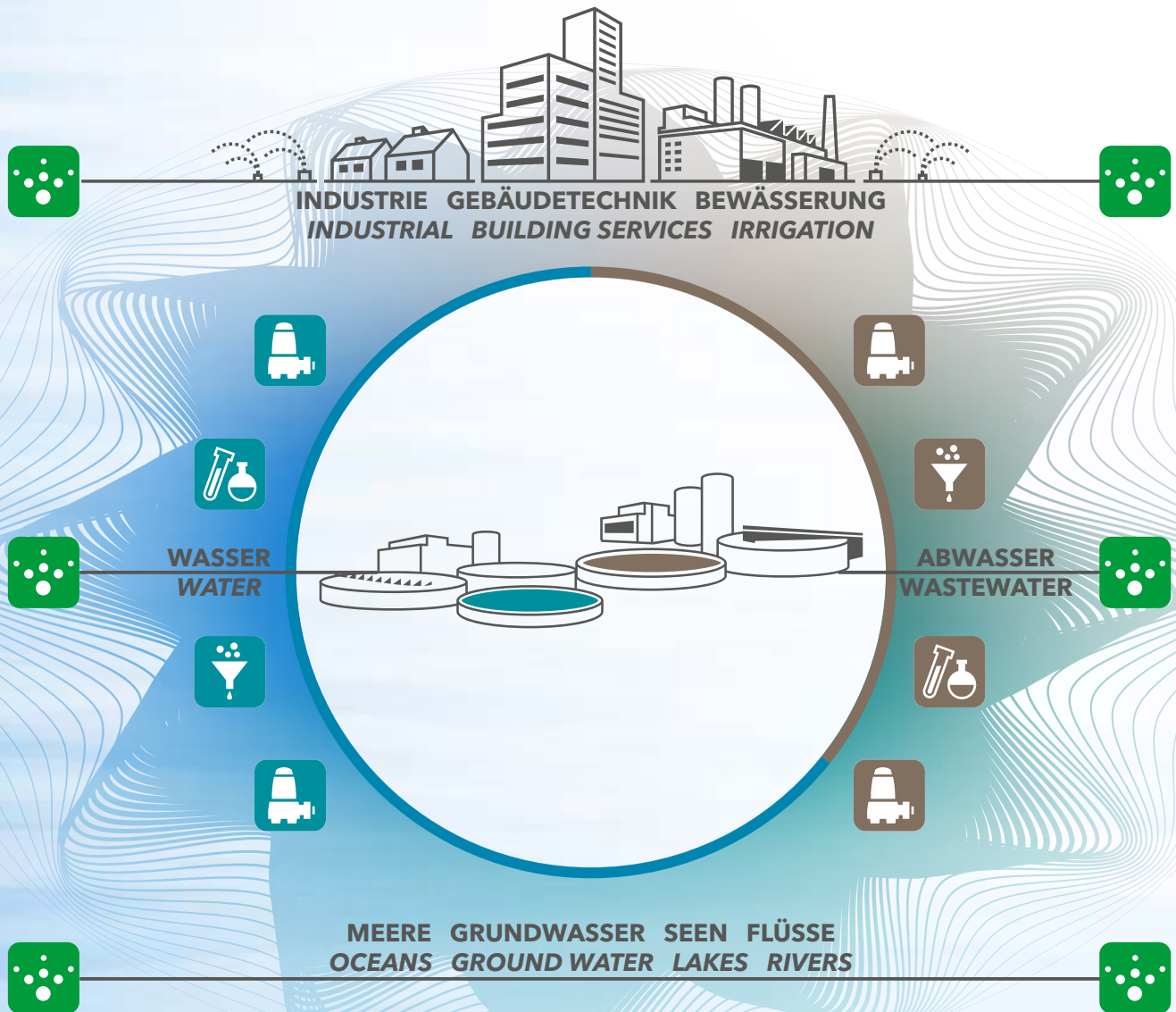
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Water Cycle

Xylem provides the right solutions

Xylem offers intelligent and innovative system solutions for all water challenges. With our premium brands we are focusing on water and wastewater for **Transport, Treatment, Analyzing and Monitoring**. Let's solve water together. Xylem has the answers for your needs, your requirements and your questions.

Talk to us!



INDUSTRIAL:

Processing water for heating, cooling, cleaning, circulating and mixing to industrial facilities. Key markets include: oil and gas, mining, food and beverage, pulp and paper; aquaculture; marine; car washes.

COMMERCIAL:

Water supply and HVAC heating and cooling systems to commercial properties, including apartment buildings, retail stores, hospitals and hotels.



Transport
Transport



Transport
Transport

Water & Wastewater Transport

Xylem pump systems draw water from sources and transport it to treatment plants.

Xylem pumps move water from treatment plants to storage facilities, and on through the distribution system to consumers and end users.

Once clean water has served human needs, Xylem pumps transport wastewater to treatment stations.



Behandlung
Treat



Behandlung
Treat

Water & Wastewater Treatment

Xylem filtration and disinfection technologies clean and purify water before it enters the system.

Xylem biological, filtration and disinfection treatment equipment removes contaminants from wastewater before it is reused (e.g., for irrigation, industrial cooling, recharging groundwater aquifers) or returned to the environment.



Analyse
Analyze



Analyse
Analyze

Analysis & Measurement Instrumentation

Xylem analytical systems test and ensure water quality.

Xylem analytical systems measure water quality and monitor the environment.



Netzwerk
Network



RESIDENTIAL:

Water supply and HVAC heating and cooling systems to homes.

AGRICULTURE:

Irrigation to farms, golf courses and turf applications.



Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Am Achalaich 11 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@xylem.com

www.xylemanalytics.com
Info.WTW@xylem.com

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302316	18			NitraVis® 701 IQ NI	30		
302316EX	18			NitraVis® 701 IQ TS	30		
302500	17			NitraVis® 705 IQ	30		
302501	17			NitraVis® 705 IQ NI	30		
302507	17			NitraVis® 705 IQ TS	30		
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Xylem Watermark

verbessert den Zugang zu sauberem Wasser und klärt in Schulungen über Wasserprobleme auf

Unserer Mission verpflichtet. Xylem Watermark, unser Programm für unternehmerische Verantwortung und soziale Investitionen, hat eine Mission: hilfsbedürftigen Gemeinden Wasserressourcen zur Verfügung zu stellen und diese zu schützen, und die Menschen über Wasserprobleme aufzuklären. In einer Welt, in der es mehr als 650 Millionen Menschen am Zugang zu Wasser und 2,4 Milliarden Menschen an verbesserten sanitären Einrichtungen mangelt*, nutzen wir unsere Fachkompetenzen und Technologien, um etwas zu verändern.

Auf dringende Notwendigkeiten fokussiert.

Wir wollen messbare Ergebnisse in drei Bereichen schaffen:

- Schul- und Gemeindeprojekte - Durchführung von Schulungen zu sauberem Wasser, Sanitäreinrichtungen und Hygiene (WASH)
- Katastrophenhilfe - Bereitstellung von Wasser nach Notsituationen
- Verringerung des Katastrophenrisikos - Sicherung des Wassers in gefährdeten Gebieten



Einbeziehung unserer Mitarbeiter.

Wir verstärken die Ergebnisse von Watermark durch unser Mitarbeiterbeteiligungsprogramm. Freiwilligenarbeit und finanzielle Beiträge unserer Mitarbeiter fördern unsere nachhaltigen Lösungen.

Setzen Sie Ihr Zeichen.

Für weitere Informationen über Watermark besuchen Sie bitte **xylemwatermark.com**



*Quelle: UNICEF/WHO

Wichtige Hinweise

Allgemeine Informationen

1. Geräte in Sonderausführung auf Anfrage.
2. Zubehör und Ersatzteile für ältere Gerätetypen bitte gesondert anfragen.
3. Um unseren Kunden Mindermengenzuschläge zu ersparen, liefern wir Verbrauchsmaterial in praxisbewährten Mindestmengen.

Technische Änderungen

Die technischen Beschreibungen entsprechen dem derzeitigen Stand der Produkte. Änderungen aufgrund technischen Fortschritts sind möglich.

Abbildungen

Wir weisen darauf hin, dass die Abbildungen der Veranschaulichung dienen sollen. Abweichungen bezüglich der Beschreibung und der Abbildung sind deshalb möglich.

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Herausgeber



Xylem Analytics Germany Sales
GmbH & Co. KG, WTW
Am Achalaich 11
82362 Weilheim
Germany

Tel +49 881 183-0
Fax +49 881 183-420
Info.WTW@Xyleminc.com
www.xylemanalytics.com

Xylem |'zīləm|

- 1) Das Gewebe in Pflanzen, das Wasser von den Wurzeln nach oben befördert;
- 2) ein führendes globales Wassertechnologie-Unternehmen.

Wir sind ein globales Team, das ein gemeinsames Ziel eint: innovative Lösungen zu schaffen, um den Wasserbedarf unserer Welt zu decken. Im Mittelpunkt unserer Arbeit steht die Entwicklung neuer Technologien, die die Art und Weise der Wasserverwendung und die Aufbereitung sowie Wiedernutzung von Wasser in der Zukunft verbessern. Wir unterstützen Kunden aus der kommunalen Wasser- und Abwasserwirtschaft, der Industrie sowie aus der Privat- und Gewerbegebäudetechnik mit Produkten und Dienstleistungen, um Wasser und Abwasser effizient zu fördern, zu behandeln, zu analysieren, zu überwachen und der Umwelt zurückzuführen. Darüber hinaus hat Xylem sein Produktportfolio um intelligente und smarte Messtechnologien sowie Netzwerktechnologien und innovative Infrastrukturen rund um die Datenanalyse in der Wasser-, Elektrizitäts- und Gasindustrie ergänzt. In mehr als 150 Ländern verfügen wir über feste, langjährige Beziehungen zu Kunden, bei denen wir für unsere leistungsstarke Kombination aus führenden Produktmarken und Anwendungskompetenz, getragen von einer Tradition der Innovation, bekannt sind.

Weitere Informationen darüber, wie Xylem Ihnen helfen kann, finden Sie auf www.xylem.com



Bestellungen

Tel: +49 881 183-323
Fax: +49 881 183-333
Auftrag.WTW@Xylem-inc.com

Technische Information, Angebote

Tel: +49 881 183-322
Fax: +49 881 183-425
TechInfo.WTW@Xylem-inc.com

Reparatur Service

Tel: +49 881 183-325
Fax: +49 881 183-414
Service.WTW@Xylem-inc.com

Besuchen Sie unsere Webseite für weitere Kontaktinformationen



/wtw.wm



/wtwde



Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Am Achalaich 11
82362 Weilheim, Germany
Tel +49 881 1830
Fax +49 881 183-420
Info.WTW@Xylem.com
www.xylemanalytics.com

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