xylem
Let's Solve Water

Process Instrumentation

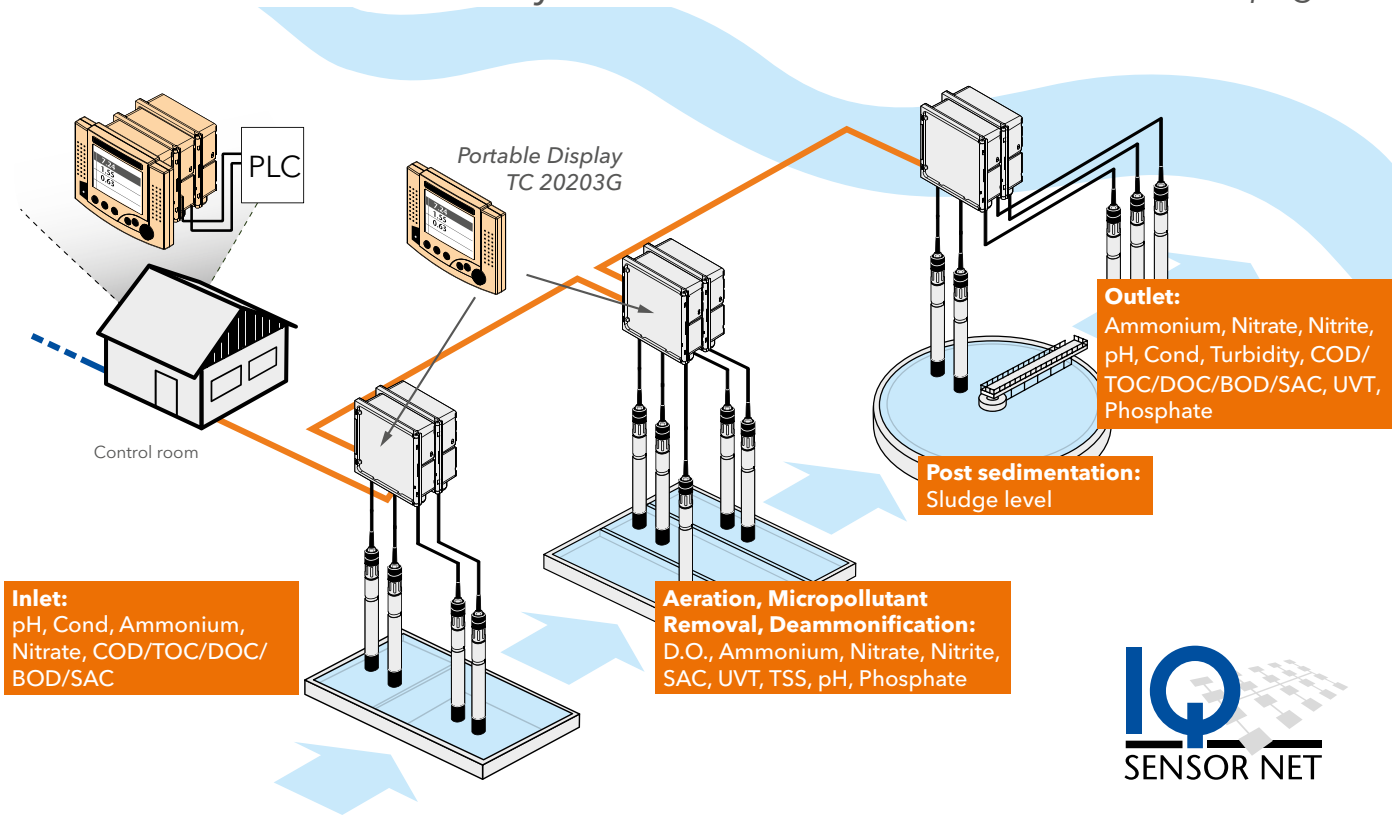
D.O. · pH/ORP · CONDUCTIVITY · TURBIDITY/TSS · NH_4/NO_3/NO_2 ·
COD/BOD/TOC/DOC/SAC/UVT · PHOSPHATE · SLUDGE LEVEL · CHLORINE

WTW
a xylem brand

IQ Sensor Net – the System for Wastewater Treatment Plants, Industrial Applications and much more

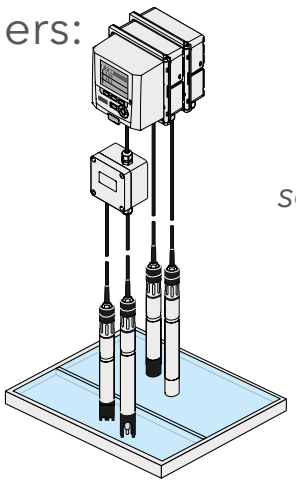
① IQ Sensor Network: System 2020

see from page 46



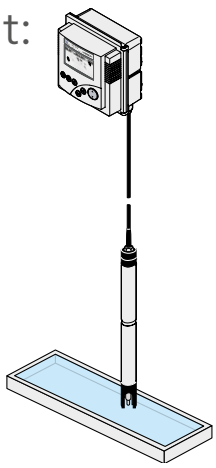
② Outstanding among the compact Controllers: System 282/284

see from page 50



③ The Single Parameter Measuring Point: System 181

see from page 52



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 9

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

- Easy and fast matrix adjustment
- Up to 2,000 mg/l NH_4
- Extremely robust electrodes
- Compensation with K and Cl

see page 28

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 30

All measurement parameters at a glance

Sensors / Parameter	TriOxmatic® 700 IQ (F)	FDO® 700/701 IQ (F)	SensoLyt® 700 IQ (F)	TetraCon® 700 IQ (F)	VisoTurb® 700 IQ (F)	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)	NiCaVis® 705 IQ (TS/SF)	NiCaVis® 701/705 IQ (NI) SF	UV 701/705 IQ SAC	UV 701/705 IQ NOx	IFL 700 IQ	Alyza IQ PO_4
see catalog page	*10*	*9*	*13*	*17*	*22*	*23*	*28*	*28*	*28*	*30*	*30*	*34*	*30*	*30*	*34*	*30*	*39*	*37*
Usable with System 2020	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 282/284	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 181*	■	■	■	■	■													
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°	**
Parameter																		
Temperature	■	■	■	■			■	■	■									
Dissolved Oxygen (electrochemical)	■																	
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 chemical)																		■

** Can only be used with respective fixed cable sensor.*
*** Power delivery: Alyza IQ PO_4 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

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/TC20203G	MIQ/MC3	MIQ/MC3-MOD	MIQ/MC3-PR	Cleaning Air Box - 230 VAC	Cleaning Air Box - 115 VAC	MIQ/CHV PLUS
see catalog page	*47*	*47*	*48*	*48*	*48*	*48*	*49*	*49*	*48*	*48*	*48*	*46*	*49*	*49*	*49*	*66*	*66*	*49*
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	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)												■						
Controller in standard IQ module without 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
Let's Solve Water

Xylem Analytics Germany Sales
GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1
82362 Weilheim
Germany

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

Contents

Parameter

Systems

IP XX IP XX

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 Ø ≥ 50 mm
2 with Ø ≥ 12 mm
3 with Ø ≥ 2.5 mm
4 with Ø ≥ 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.

CE CE

This test mark indicates that **the product complies with the applicable EU directives**.
For WTW products these are essentially:
Directive 2014/35/EU
Electrical equipment for use within particular voltage limits (low-voltage directive/product safety)
Directive 2014/30/EU
Electromagnetic compatibility (EMC directive)
Directive 2011/65/EU
Restriction Of Harzardous Substances (ROHS)
Directive 2014/53/EU
Radio Equipment Directive (RED)

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.

X Year Warranty X Year Warranty

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

TD TD

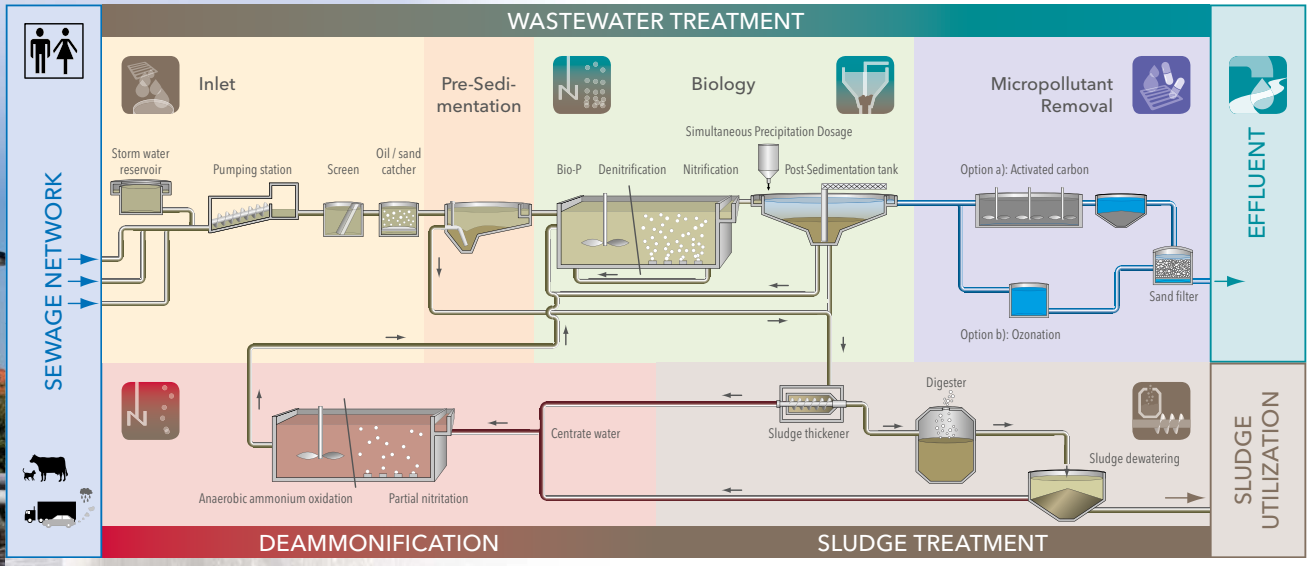
Reference to **Data sheets**
at the end of the catalog or separately available

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Typical Applications
WTW® Process Instrumentation

Wastewater (municipal wwtp)

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



Inlet	pH:	SensoLyt® 700 IQ	page 13	NH_4, NO_3:	ISE sensors	page 28
		EX measuring point	page 61	TSS, NO_3, NO_2, NO_X, COD, BOD, TOC, DOC, SAC, UVT:	Spectral sensors	page 30
	Conductivity:	TetraCon® 700 IQ	page 17			
		EX measuring point	page 61			
Biological Cleaning (Aeration)	D.O.:	FDO® 700 IQ	page 9	TSS, NO_3, NO_2, NO_X, COD, BOD, TOC, DOC, SAC, UVT:	Spectral sensors	page 30
		TriOxmatic® 700 IQ	page 10	TSS:	ViSolid® 700 IQ	page 23
	NH_4, NO_3:	ISE sensors	page 28	Orthophosphate:	Alyza IQ PO_4	page 37
Sedimentation	Sludge level:	IFL 700 IQ	page 39			
Effluent	pH:	SensoLyt® 700 IQ	page 13	TSS, NO_3, NO_2, NO_X, COD, BOD, TOC, DOC, SAC, UVT:	Spectral sensors	page 30
	Conductivity:	TetraCon® 700 IQ	page 17	Turbidity:	VisoTurb® 700 IQ	page 22
	NH_4, NO_3:	ISE sensors	page 28	Orthophosphate:	Alyza IQ PO_4	page 37
Micropollutant Removal	SAC, UVT:	UV 705 IQ SAC	page 34	NO_3, NO_2, COD, BOD, TOC, DOC, SAC, UVT:	NiCaVis® 705 IQ NI	page 30
Sludge Treatment	TSS:	ViSolid® 700 IQ	page 23	pH:	SensoLyt® 700 IQ	page 13
					EX measuring point	page 61
Deammonification (Anammox)	pH:	SensoLyt® 700 IQ	page 13	NH_4, NO_3:	ISE sensors	page 28
	D.O.:	FDO® 700 IQ	page 9	NO_3, NO_2:	NitraVis® 701 IQ NI	page 30

Typical Applications
WTW® Process Instrumentation

Drinking Water

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

pH/ORP
Monitor
pH 298 Pt 1000 (24V)
see page 57

+ Sensor
SenTix® ML 70
see page 15
SenTix® ML ORP
see page 15

Conductivity
Monitor
LF 298 Pt 1000 (24V)
see page 57

+ Sensor
LR ML
see page 19

Chlorine
Monitor
Cl 298 Pt 1000 (24V)
see page 57

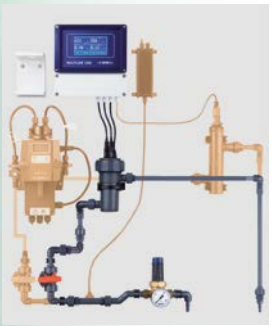
+ Sensor
FCML 412 N
see page 41
TCML N
see page 41

also available as ready to operate measuring panel Cl 298/P
see page 58

D.O.
Monitor
Oxi 298 Pt 1000 (24V)
see page 57

+ Sensor
Oxi ML 41
see page 11

Multi-parameter
Panel
MULTILINE 1000
see page 59



Chlorine
Analyzer
Chlorine 3000
see page 41

Turbidity
Analyzer
Turb 2000 Serie
see page 25

Industry

see also www.xylemanalytics.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.

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Typical Applications
WTW® Process Instrumentation

Surface Water

see also www.xylemanalytics.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).

pH:	*SensoLyt® 700 IQ*	*page 13*
Conductivity:	*TetraCon® 700 IQ*	*page 17*
D.O.:	*FDO® 700 IQ* *TriOxmatic® 700 IQ*	*page 9* *page 10*
Turbidity:	*VisoTurb® 700 IQ*	*page 22*
Nitrat (NO_3):	*NiCaVis® 705 IQ SF*	*page 30*
Nitrit (NO_2):	*NiCaVis® 705 IQ NI SF*	*page 30*
COD/BOD	*NiCaVis® 705 IQ SF*	*page 34*

Fish Farming

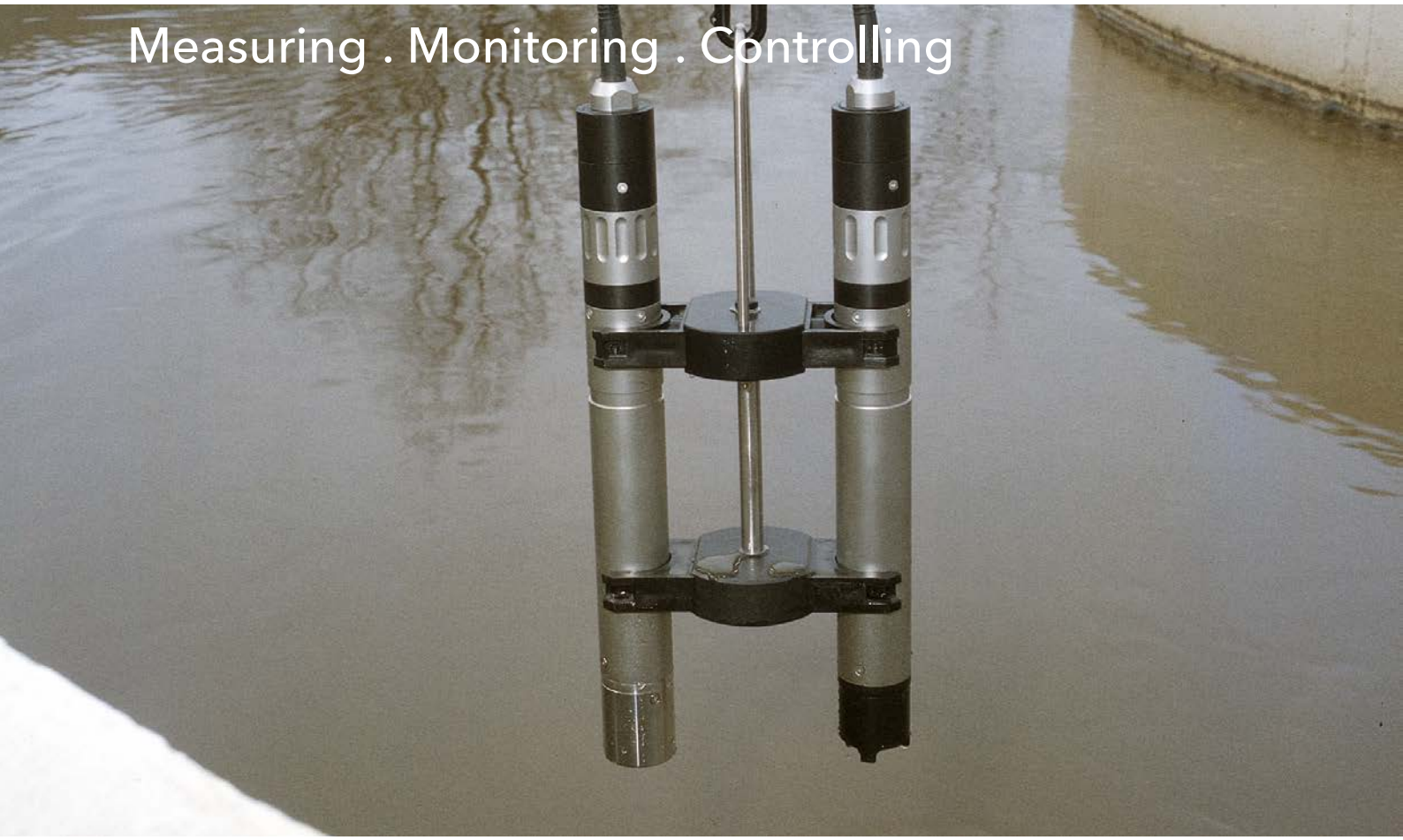
see also www.xylemanalytics.com/en/applications/aquaculture

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.

	pH (incl. T)	D.O. (incl. T)	Salinity (incl. T)	TSS/Turbidity
Fresh water	*SensoLyt® 700 IQ* *page 13*	*FDO® 700 IQ** *page 9* *TriOxmatic® 700 IQ* *page 10*	*TetraCon® 700 IQ* *page 17*	*ViSolid® 700 IQ* *page 23* *VisoTurb® 700 IQ* *page 22*
Salt water	*SensoLyt® 700 IQ SW* *page 13*	*FDO® 700 IQ SW (incl. protection head for the membrane against fish bite)* *page 9* *TriOxmatic® 700 IQ SW* *page 10*	*TetraCon® 700 IQ SW* *page 17*	*ViSolid® 700 IQ SW* *page 23* *VisoTurb® 700 IQ SW* *page 22*

** Protection head MSK FDO® against fish bite has to be ordered seperately*

D.O. Measurement



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.xylemanalytics.com/en/parameters/dissolved-oxygen-do

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

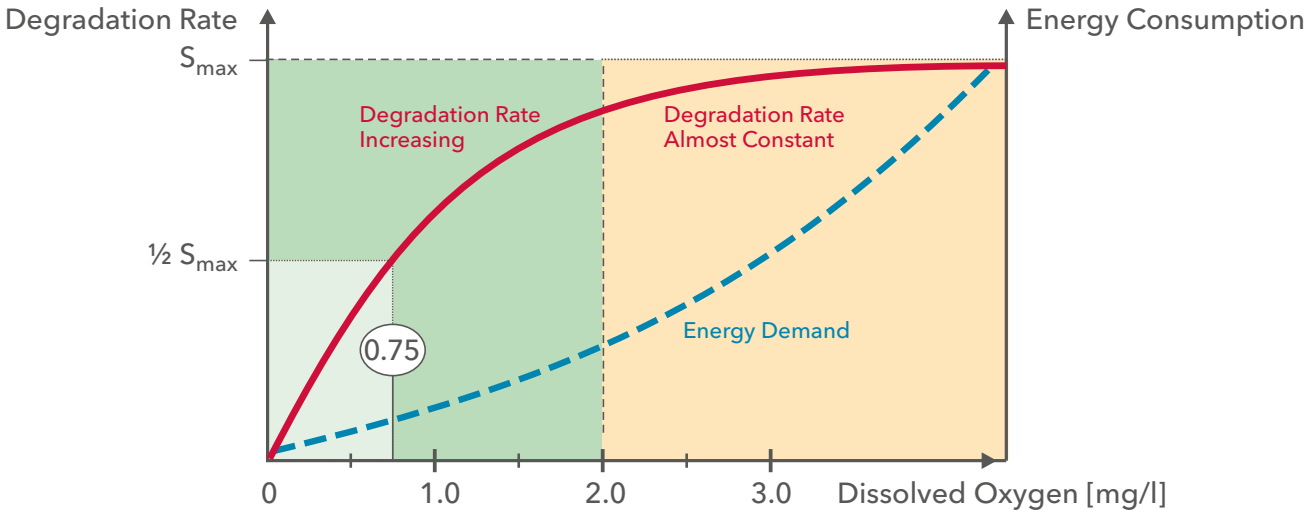
Monitoring and Control

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**.



NH_4-N degradation rate vs. D.O. concentration

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 application 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.

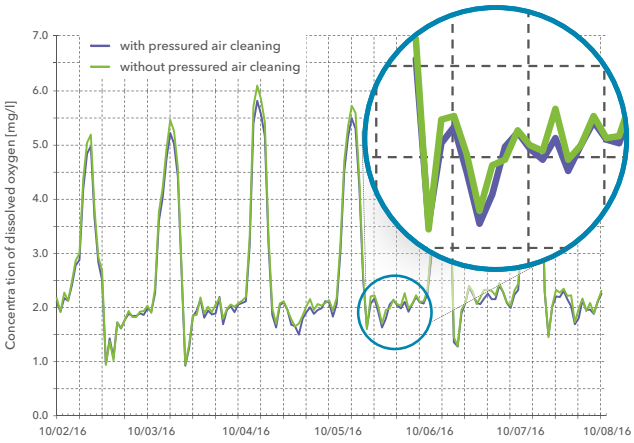
The long lifetime of the cap (3-5 years) ensures sustainable operation and minimized maintenance costs. Further, the moveable sensor mounting enables a self cleaning effect at the measuring window.

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

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.02, D2.20*



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

½ Year Warranty

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 datasheets D2.02 and D2.20

Optical FDO® D.O. sensors see from page 9

Information about IQ Sensor Net system see from page 42

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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® 700 IQ F

fixed cable model for IQ Sensor Net system 181

FDO® 701 IQ

with a faster response time

FDO® 701 IQ SW

with a faster response time, for use in corrosive media

FDO® 701 IQ F

with a faster response time, fixed cable model for IQ Sensor Net system 181

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
FDO® 700 IQ F	Optical oxygen sensor, calibration-free, for DIQ/S 181(/24V), with 10 m fixed cable for DIQ/S 181(/24V)	201656
FDO® 701 IQ F	as above, but with a faster response time	201658

For technical data please see datasheets D2.02 and D2.20

Alternatives and accessories see brochure "Product Details" and website

Information about IQ Sensor Net system see from page 42

Analog dissolved oxygen sensors see from page 11

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

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.01, D2.20, D3.02*

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® 700 IQ F

fixed cable model for IQ Sensor Net system 181

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
TriOxmatic® 700 IQ F	Electro-chemical oxygen sensor, for DIQ/S 181(/24V), with 10 m fixed cable, for DIQ/S 181(/24V)	201643

For technical data please see datasheets D2.01 and D2.20

Alternatives and accessories see brochure "Product Details" and website

Information about IQ Sensor Net system see from page 42

Optical IQ dissolved oxygen sensors see from page 9

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog

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

analog TriOxmatic® sensor

TriOxmatic® 690

suitable for pure measuring tasks in wastewater/water

TriOxmatic® 701

increased resolution for the residual oxygen in the denitrification

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 56

Optical IQ dissolved oxygen sensors see from page 9

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

IP 64 · CE · ½ Year Warranty · TD *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 56

Optical IQ dissolved oxygen sensors see from page 9

pH/ORP Measurement

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.xylemanalytics.com/en/parameters/ph-and-orp-redox

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.03, D2.21, 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 181.

SensoLyt® 700 IQ

for the IQ Sensor Net

SensoLyt® 700 IQ SW

for use in corrosive media

SensoLyt® 700 IQ F

fixed cable model for IQ Sensor Net system 181

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
SensoLyt® 700 IQ F	Like the SensoLyt® 700 IQ, but can be connected to DIQ/S 181(/24 V), with 10 m fixed cable	109177

For technical data please see datasheet D2.03 and D2.21

Alternatives and accessories see brochure "Product Details" and website

Information about IQ Sensor Net system see from page 42

Analog pH/ORP fitting see from page 14

Analog

To be operated with analog transmitters.

SensoLyt® 650

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.

Ordering Information

Model	Description	Order No.
SensoLyt® 650-7	pH/ORP armature with high-impedance signal transmission and integrated temperatur sensor, cale 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 56

Controllers / isolated amplifier for EX area see from page 60

Combination Electrodes

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

SensoLyt® SEA-HP

SensoLyt® EC

½ Year Warranty

Armed Versions

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

Electrode without armor

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

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® SE	Like model SEA, but unamored, 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 56

SensoLyt® armature see page 13

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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.

PL 81-225pHT VP

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

IP 67 | CE | ½ Year Warranty | TD *D3.05*

Ordering Information

Model	Description	Order No.
PL 80-120pH	pH electrode with S8 plug head, measuring range 0 ... 14 pH	109233
PL 80-225pH	as above, but can be installed in CHEMTrac 830 M retractable armature	109234
PL 81-225pHT VP	as above, but with VP plug head	109236
PL 82-225pHT VP	as above	109239
PL 89-225Pt	ORP electrode with S8 plug head, measuring range ±2000 mV, can be installed in CHEMTrac 830 M retractable armature	109235

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 14

Analog monitors see from page 56

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

IP 68 | CE | ½ Year Warranty | TD *D7.04*

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 56

Analog pH electrodes see from page 14

Conductivity Measurement

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.xylemanalytics.com/en/parameters/conductivity-and-salinity

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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. Furter on, the 4 electrode cell is very resistant against contamination and provides a fast temperature compensation by its integrated temperature senor. 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

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.04, D2.22, 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 181.

TetraCon® 700 IQ

for the IQ Sensor Net

TetraCon® 700 IQ SW

for use in corrosive media

TetraCon® 700 IQ F

fixed cable model for IQ Sensor Net system 181

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 TertaCon® 700 IQ, but as a sea water model	302501
TetraCon® 700 IQ F	Like TertaCon® 700 IQ, but can be connected to DIQ/S 181(/24V), with 10 m fixed cable	302507

For technical data please see datasheet D2.04 and D2.22

Alternatives and accessories see brochure "Product Details" and website

Information about IQ Sensor Net system see from page 42

Analog sonductivity 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

TetraCon® DU/T

IP 65

flow measuring cell for standard industrial applications

LRD 325

for installation in pipes

Ordering Information

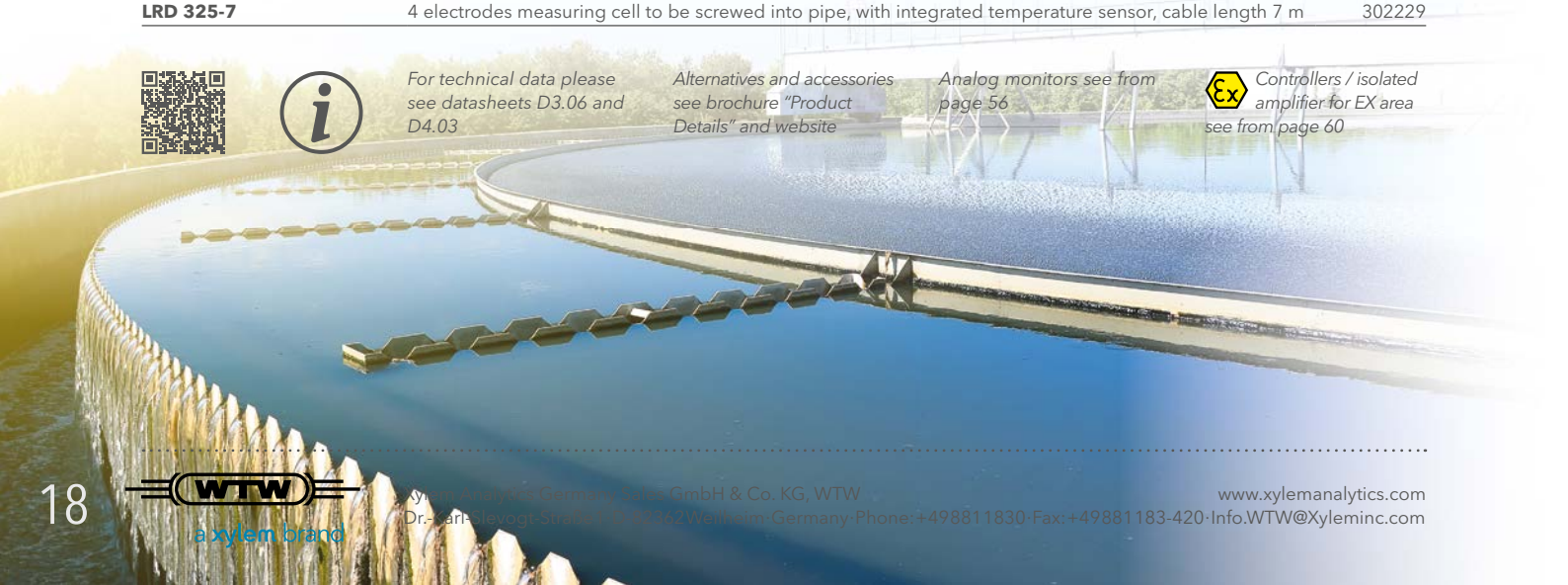
Model	Description	Order No.
TetraCon® 700-7	Universal 4 electrode conductivity cell especially for wastewater treatment plants, 7 m (23 ft) cable	302316
TetraCon® 700-7 EX	Analog 4 electrodes conductivity measuring cell with integrated temperature sensor and 7 m cable with open wires	302316EX
TetraCon® 325	4 electrodes measuring cell, with integrated temperature sensor, cell constant K=0.475 cm^{-1}, cable length 1.5m	301960
TetraCon® DU/T	4 electrodes flow measuring cell, with integrated temperature sensor, cell constant: K=0.0778 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 56

Controllers / isolated amplifier for EX area see from page 60



WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

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

IP 68 | CE | 2 Year Warranty | TD D3.06

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

IP 64

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 56

Digital conductivity measuring cells see from page 17

Turbidity / Suspended Solids

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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. Threrefore of course a "multi-point" user calibration is possible. This can also be done with the mandatory required gravimetric determination of total suspended solids.

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

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 working ultrasonic cleaning system shows no adverse effect.

see also https://www.xylemanalytics.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
- Extremly low maintenance
- Highly accurate factory calibration
- High operational safety (SensorCheck function)

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.05, D2.23*

Digital

To be connected to the digital, modular, and expandable IQ Sensor Net as well as to the single parameter controller 181.

VisoTurb® 700 IQ

for the IQ Sensor Net

VisoTurb® 700 IQ SW

for use in corrosive media

VisoTurb® 700 IQ F

fixed cable model for IQ Sensor Net system 181

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
VisoTurb® 700 IQ F	Like VisoTurb®700 IQ, but to be connected to DIQ/S 181(/24 V), with fixed cable	600007

For technical data please see datasheets D2.05 and D2.23

Alternatives and accessories see brochure "Product Details" and website

Information about IQ Sensor Net system see from page 42

Sensors for suspended solids measurement see from page 23

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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
- Extremly low maintenance
- Highly accurate factory calibration
- High operational safety (SensorCheck function)

IP 68 | CE | ETL | 2 Year Warranty | TD D2.06

Digital

To be connected to the digital, modular, and expandable IQ Sensor Net.

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 42

UV-VIS spectral sensors for TSS measurement see from page 30

UV-VIS Spectral Sensors

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

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

NitraVis® 701 IQ TS	*for inlet and aeration*	*from page 30*
NitraVis® 705 IQ TS	*for effluent*	*from page 30*
NiCaVis® 705 IQ TS	*for effluent*	*from page 30*
CarboVis® 701 IQ TS	*for inlet and aeration*	*from page 34*
CarboVis® 705 IQ TS	*for effluent*	*from page 34*

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

NiCaVis® 705 IQ SF	*for e.g. rivers and lakes*	*from page 30*

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analyzer for Turbidity

Turb 2000 Series

For Turbidity Monitoring in Drinking Water

The nephelometric turbidity measuring is offered with or without ultrasonic cleaning of the flow cuvette.

Selection between measuring according to EN ISO 7027 with infrared light or US EPA 180.1 with white light.

- Easy calibration
- Integrated bubble trap
- Automatic cleaning
- Reliable system

IP 66 | CE | ETL | 1 Year Warranty | TD D7.02

Turb 2000

white light,
without ultrasonic cleaning

Turb 2020

white light,
with ultrasonic cleaning

Turb 2100

infrared light,
without ultrasonic cleaning

Turb 2120

infrared light,
with ultrasonic cleaning

Turb 2120

Turb 2110

infrared light, without ultrasonic cleaning, low measuring range

Turb 2110 Set

infrared light, without ultrasonic cleaning, low measuring range, additional bubble trap

Ordering Information

Model	Description	Order No.
TURB 2000	Online turbidity meter, with white light and integrated bubble trap; nephelometric measurement specified according to US EPA 180.1, 110-240 VAC	600020
TURB 2020	Like TURB 2000, but with ultrasonic cleaning	600025
TURB 2100	Like TURB 2000, but with infrared light; specified according to EN ISO 7027	600030
TURB 2120	Like TURB 2000, but with infrared light and ultrasonic cleaning; specified according to EN ISO 7027	600035
TURB 2110	Like TURB 2000, but with infrared light; specified according to EN ISO 7027; Measuring range 0–10 FNU/NTU (± 2% / 0,02 NTU) only when using Kal Kit Turb 2110/DW; with integrated cuvette and hoses.	600033
TURB 2110 Set	Turb 2110 as set with: additional Bubble trap; standards in reusable cuvettes	600032

For technical data please see datasheet D7.02

Alternatives and accessories see brochure "Product Details" and website

Pre-mounted panels für turbidity measurement see from page 58

Analyzer for chlorine see from page 41

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.

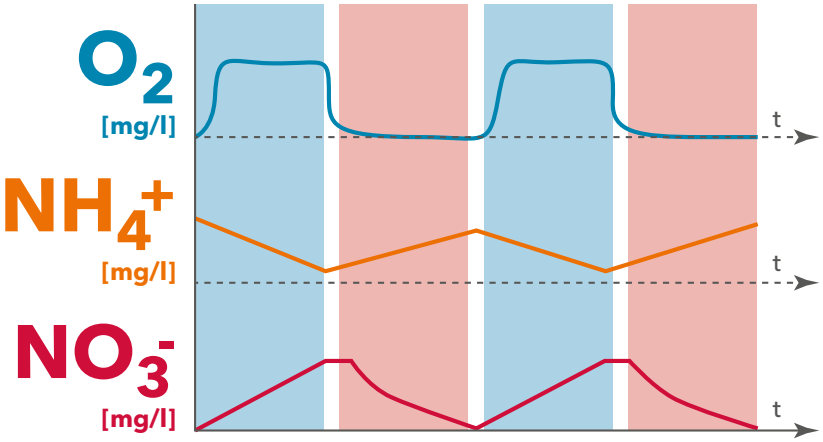
Fields of application:

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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.



Example: intermittent nitrification/denitrification

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 transfered 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.

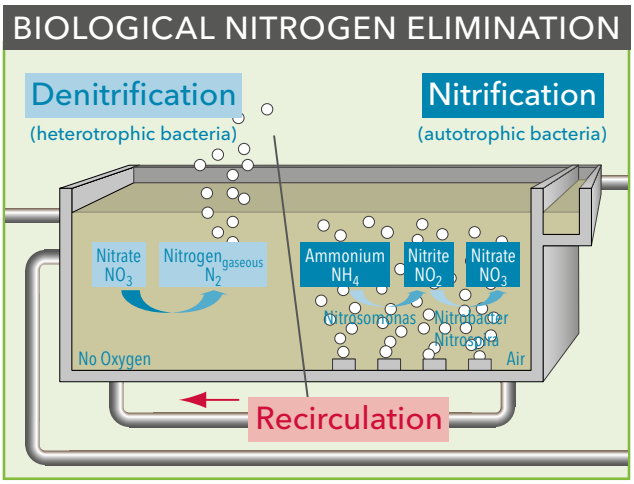
Nitrite

Nitrite occurs in considerably smaller amounts within wastewater treatment plants and soils. It is an intermediate product and oxidized very quickly into nitrate. Nevertheless, in newer cleaning processes of wastewater treatment plants (e.g. Anammox), nitrite is produced intentionally and therefore becomes measureable.

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

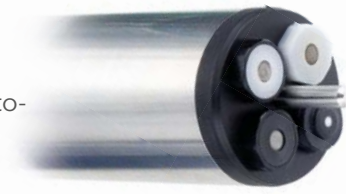
IP 68 | CE | 2 Year Warranty | TD *D2.07, D2.08, D2.09*

Digital Sensors

To be connected to the digital, modular, and expandable IQ Sensor Net.

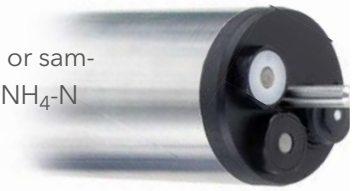
VARiON®*Plus* 700 IQ

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 NH_4-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 42

Spectral nitrate/nitrite sensors see from page 30

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Electrodes

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

1 Year Warranty

IQ SENSOR NET

Reference electrode VARiON® Ref

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

Ammonium electrode VARiON®*Plus* NH_4

for mounting into sensors VARiON®*Plus* 700 IQ and AmmoLyt®*Plus* 700 IQ,
measuring range: 0.1 - 2,000 mg/l NH_4-N

Potassium electrode VARiON®*Plus* K

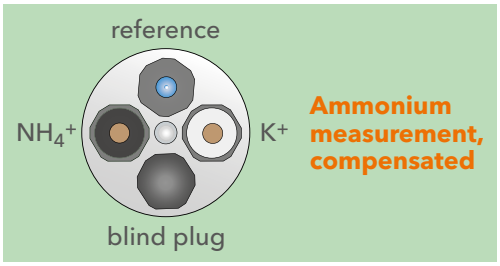
for mounting into sensors VARiON®*Plus* 700 IQ and AmmoLyt®*Plus* 700 IQ,
measuring range: 1 - 1,000 mg/l K^+

Nitrate electrode VARiON®*Plus* NO_3

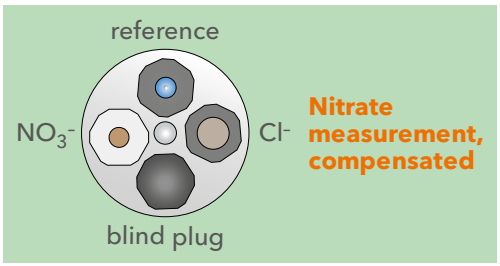
for mounting into sensors VARiON®*Plus* 700 IQ and NitraLyt®*Plus* 700 IQ,
measuring range: 0.1 - 1,000 mg/l NO_3-N

Chloride electrode VARiON®*Plus* Cl^-

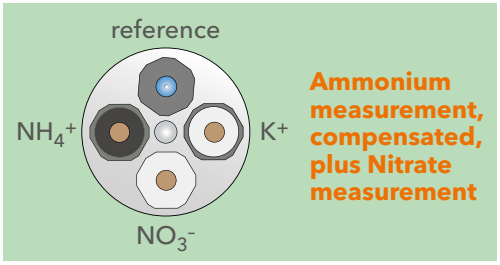
for mounting into sensors VARiON®*Plus* 700 IQ and NitraLyt®*Plus* 700 IQ,
measuring range: 1 - 1,000 mg/l Cl^-



(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 (manuel compensation possible)

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* NH_4	Ammonium electrode for VARiON®*Plus* 700 IQ and AmmoLyt®*Plus* 700 IQ/AmmoLyt®	107044
VARiON®*Plus* NO_3	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 42

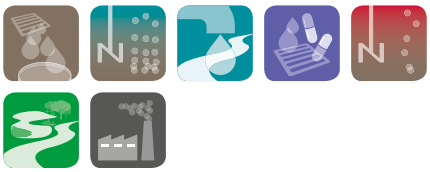
Spectral nitrate/nitrite sensors see from page 30

Ammonium analyzer see from page 64

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

IP 68 | CE | ETL | 2 Year Warranty | TD *D2.10, D2.14, D2.26*

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® 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 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 42

CarboVis® spectral sensors for determination of carbon parameters see page 34

WTW GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany, Phone: +49 881 183-0, Fax: +49 881 183-420, info.WTW@xyleminc.com
www.xylemanalytics.com

Sensors / Parameter	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® 701 IQ NI	NiCaVis® 705 IQ NI	UV 701 IQ NOx	UV 705 IQ NOx	NiCaVis® 705 IQ SF	NiCaVis® 705 IQ NI SF	CarboVis® 701 IQ	CarboVis® 705 IQ	CarboVis® 701 IQ TS	CarboVis® 705 IQ TS	UV 701 IQ SAC	UV 705 IQ SAC
Usable with System 2020 3G	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 282 / 284	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Parameter																				
TSS (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

Carbon

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

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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 characteristical 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.

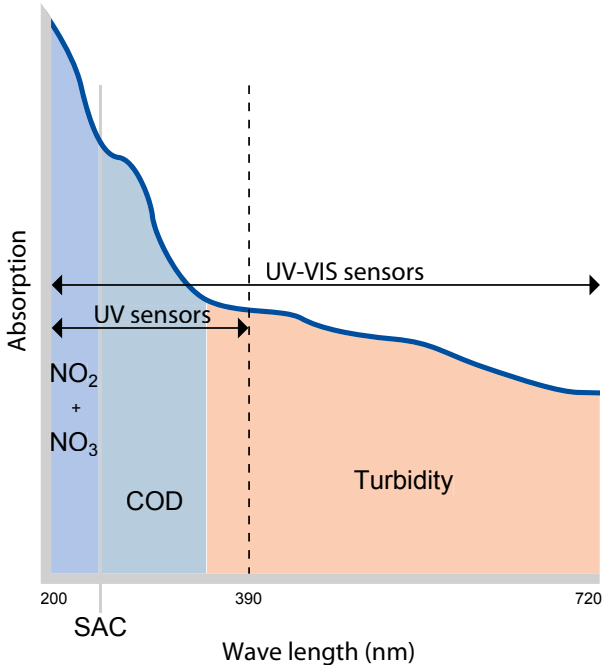
UVT

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

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 consumabels

IP 68 | 2 Year Warranty | TD *D2.11, D2.13, D2.15, D2.16, 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
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® 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 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 42

Spectral sensors for nitrogen see from page 30

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany, Phone +49 881 183-0, Fax +49 881 183-420, Info.WTW@Xyleminc.com
www.xylemanalytics.com

Sensors / Parameter	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® 701 IQ NI	NiCaVis® 705 IQ NI	UV 701 IQ NOx	UV 705 IQ NOx	NiCaVis® 705 IQ SF	NiCaVis® 705 IQ NI SF	CarboVis® 701 IQ	CarboVis® 705 IQ	CarboVis® 701 IQ TS	CarboVis® 705 IQ TS	UV 701 IQ SAC	UV 705 IQ SAC
Usable with System 2020 3G	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Usable with System 282/284	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Parameter																				
TSS (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

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analyzer

The new wet chemical **Alyza IQ PO_4** provides precise results due to its revolutionary MultiPort Valve. Further on, the instrument requires exremly low amounts of liquids.

Precipitation control and outlet monitoring with the orthophosphate measurement of the Alyza IQ PO_4 (molybdate vandate 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

IP 67 IP 54 · 2 Year Warranty · TD *D2.25*

Orthophosphate Analyzer Alyza IQ PO_4

To be connected to the digital, modular, and expandable IQ Sensor Net.

Alyza IQ PO_4 one channel version with open measuring unit and visible photometer

Alyza IQ PO_4 two channel version with covered measuring unit

Alyza IQ PO_4-111

1-channel version for measuring range 1

Alyza IQ PO_4-121

1-channel version for measuring range 2

Alyza IQ PO_4-112

2-channel version for measuring range 1

Alyza IQ PO_4-122

2-channel version for measuring range 2

Ordering Information

Model	Description	Order No.
Alyza IQ PO_4-111	PO_4 analyzer, 1-channel, with MR 1; incl. 2 m SNCIQ cable, reagent sets need to be ordered separately	825511
Alyza IQ PO_4-112	as above, but 2-channel	825512
Alyza IQ PO_4-121	PO_4 analyzer, 1-channel, with MR 2; incl. 2 m SNCIQ cable, reagent sets need to be ordered separately	825521
Alyza IQ PO_4-122	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 42

Further analyzer see from page 54

Sludge Level Measurement

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.xylemanalytics.com/en/parameters/sludge-level

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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

IP 68 | 2 Year Warranty | TD D2.17

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.

IFL 701 IQ

This version is recommended for an operation with no air bubbles or contamination.

Ordering Information

Model	Description	Order No.
IFL 700 IQ	Digital ultrasonic sensor with automatic cleaning to measure the sludge level	481200
IFL 701 IQ	Digital ultrasonic sensor to measure the sludge level	481201

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 42

Radio module see page 48

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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 Cl 298.

FCML 412 N

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

IP 64 | CE | ½ Year Warranty | TD *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 56

Analog pH Electrodes see from page 14

Analyzer

Chlorine 3000

With large measuring range and high resolutions for free and total chlorine with DPD method according to US EPA.

Chlorine 3000

- Low use of reagents
- 30 days of maintenance-free operation
- Very good price-performance ratio

IP 66 | CE | ETL | 1 Year Warranty | TD *D7.02*

Ordering Information

Model	Description	Order No.
Chlorine 3000	Online analyzer for photometric measurement of free and total chlorine, according to colorimetric DPD Method (US EPA); 2 user selectable alarms; outputs (selectively): current mA or RS 485 Modbus; range: 0-10 mg/l	860150

For technical data please see datasheet D7.02

Alternatives and accessories see brochure "Product Details" and website

Premounted panels for chlorine measurement see from page 58

Analyzer for turbidity measurement see from page 25

IQ Sensor Net

Digital. Modular. Flexible. Secure

IQ SENSOR NET

Content

see also https://www.xylemanalytics.com/en/landingpages/iq-sensor-net

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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:

✓ ● yes	Network **System 2020**		Measuring Location **System 282/284**		Single Parameter Measuring Point **System 181**
	MIQ/TC 2020 3G	MIQ/MC3	DIQ/S 284	DIQ/S 282	DIQ/S 181
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	✓	✓	✓	✓	
IQ fixed cable sensors					✓
MIQ modules	✓	✓	✓	✓	
DIQ modules			✓	✓	✓
Wireless communication	✓	✓	✓	✓	
Redundant controller	✓	✓			
Max. number of displays	3	3	1	1	
Oxygen *sensors see from page 8*	●	●	●	●	●
pH/ORP *probes see from page 13*	●	●	●	●	●
Conductivity *cells see from page 17*	●	●	●	●	●
Turbidity *sensors see from page 22*	●	●	●	●	●
Suspended solids *sensors see from page 23*	●	●	●	●	
Nitrogen *probes see from page 28*	●	●	●	●	
Carbon *probes see from page 34*	●	●	●	●	
SAC/UVT *probes see from page 34*	●	●	●	●	
Phosphate *analyzer see from page 37*	●	●	●	●	
Sludge level *probes see from page 39*	●	●	●	●	
	MIQ/TC 2020 3G	MIQ/MC3	DIQ/S 284	DIQ/S 282	DIQ/S 181
see page	*46*	*49*	*50*	*50*	*52*

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.

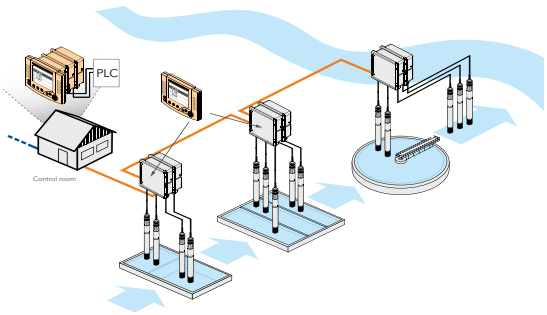
Analog systems from page 56.
ATEX from page 60.

IQ Systems

1) IQ Sensor Network:

System 2020 3G

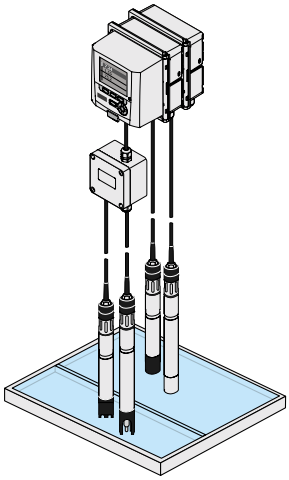
- For up to 20 digital IQ sensors in any order
- Measuring network for large plants, BackUp controller function for higher operational safety
- Ethernet/LAN interface and integrated webserver for easy network connection
- Fast and easy software update and saving of logbook data, measured values and configurations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



Product descriptions of single components see page 46

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

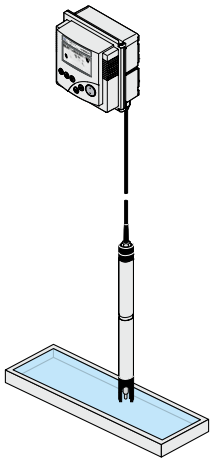


IQ System 284 with 4 connected IQ sensors (6 x mA, 6 x Relays, Ethernet interface for remote control as option)

Product descriptions of single components see page 50

3) The single parameter measuring point: System 181

- Low-cost entrance into the digital measuring technique
- Suitable fixed cable sensors for the parameters pH/ORP, Cond, D.O. and Turb
- Stable, robust and reliable measuring technique



IQ System 181 with FDO® 700 IQ F

Product descriptions of single components see page 52

Visual overview of systems see cover of this catalog.

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensors

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

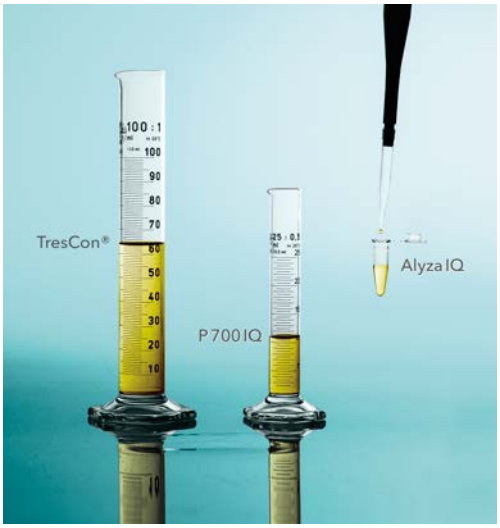
The standard version of high grade stainless steel is suitable for process and industry. All media contacting components of the seawater versions are made of titanium and plastic and are therefore extremely resistant to corrosion.

For the following parameters WTW offers IQ sensors:

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.



For the following parameter WTW offers IQ analyzer:

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

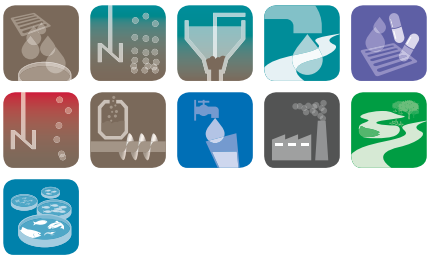
The IQ Sensor Net is a network for analytical measurements. It is in worldwide operation since 2001, constantly evolving to meet customer needs. It is used for inlet and outlet monitoring, as well as for controlling the activated sludge process.

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

20 years of experience
IQ SENSOR NET
10,000 systems sold

The basic equipment

Terminal/Controller MIQ/TC 2020 3G



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

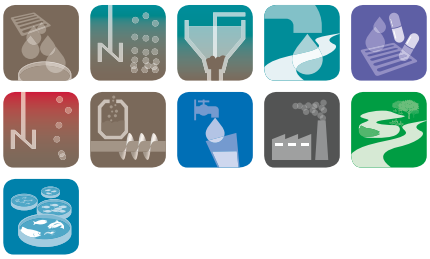
IP 66 CE 3 Year Warranty TD D1.01

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com



- 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

IP 66 IP 67 | CE | ETL | 3 Year Warranty | TD D1.03

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.

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 page 56

ATEX from page 60

The Sensors and Parameters

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

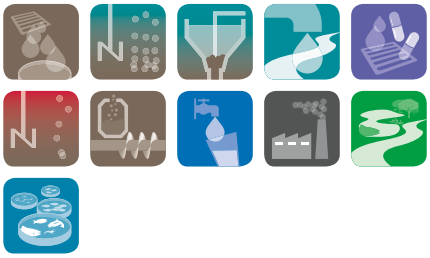
For the following parameters WTW offers

IQ sensors:

IQ analyzer:

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

IP 66 IP 67 | CE | ETL | 3 Year Warranty | TD *D1.02, D1.04, D1.05, D1.06*

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

Antenna of radio module MIQ/WL PS

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.

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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: In order 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 additional usage of a MIQ/MC3 controller provides several functionalities. This is in particular the 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 installing the MIQ/MC3, the MIQ/TC 2020 3G becomes a portable Terminal, which can be connected to any module. The MIQ/MC3 ensures operation of the IQ Sensor Net. In case of damage, the portable terminal takes control of the system (Controller BackUp function). Finally, the MIQ/MC3 provides full access from remote with the integrated web server IQ Web Connect – read measuring values, change settings, secure data. All this is possible by connecting the IQ Sensor Net into a local network or the Internet.

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

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	Controller of the system 2020, for up to 20 sensors, with 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

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 page 51

Analog systems from page 56

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

IP 67 | 3 Year Warranty | *D1.07, D1.08*

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.

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 page 46

Analog systems from page 56

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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:

IQ analyzer:

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

IP 66 | CE | 3 Year Warranty | TD *D1.10*

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 page 48)*:

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 181 page 52

Analog systems from page 56

IQ Sensor Net System 181

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 181

- Cost adavantage – one controller, one sensor
- Digital – for reliable data transfer
- WTW quality – proven, robust, durable

IP 67 CE 3 Year Warranty TD *D1.09*

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 lenght of up to 250 m.

Ordering Information

Model	Description	Order No.
DIQ/S 181	Dual IQ/System 181	472100

For technical data please see datasheet D1.09

Alternatives and accessories see brochure "Product Details" and website

Analog systems from page 56

Controllers and sensors for explosive area see page 60

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

The Sensors and Parameters

Cost-effective and reliable – measure pH/ORP, D.O., Conductivity or Turbidity with the fixed cable IQ sensors of System 181.

for pH/ORP measurement

SensoLyt® 700 IQ F *see page 13*

SensoLyt® electrodes *see page 14*

for Dissolved Oxygen measurement

TriOxmatic® 700 IQ F *see page 10*

FDO® 700 IQ F *see page 9*

FDO® 701 IQ F *see page 9*

for Conductivity measurement

TetraCon® 700 IQ F *see page 17*

for Turbidity measurement

VisoTurb® 700 IQ F *see page 22*

The Modules

Modules for flexible extensions of the digital IQ Sensor Net Systems 181 and 282/284 with additional measuring points or functions – compact shape.

see page 51

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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.

IQ SENSOR NET

Alyza IQ PO_4 two-channel version with covered measuring unit

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

IP 67 IP 54 | 2 Jahre Garantie | TD D2.25

Alyza IQ PO_4

for the measurement of othophosphate
see from ppage 37

Further Analyzers

Turb 2120

Chlorine 3000

Turb 2000 Series

for the monitoring of turbidity in drinking water
see from page 25

Chlorine 3000

for the measurement of chlorine in drinking water
see from page 41

Analog Monitors

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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

IP 65 CE 3 Year Warranty TD *D3.01*

pH 298

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

analog pH electrodes see from page 15

LF 298

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

analog conductivity measuring cells see from page 18

Oxi 298

with compressed air compensation and complete sensor monitoring

analog D.O. sensors see from page 11

Cl 298

to measure free or total chlorine

analog chlorine electrodes see from page 41

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
Cl 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 11

EX monitors see from page 61

Panels with Analog Monitors

Single-parameter System Cl 298/P

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

Monitors

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

Electrode with flow cell

Order FCML 412 N or TCML N electrode (*see page 41*) separately; electrodes and flow cell match perfectly

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

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

D3.01, D7.01, D7.03

Cl 298/P

Ordering Information

Model	Description	Order No.
Cl 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
Cl 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 11

EX monitors see from page 61

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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 14*)

ORP measurement

(SenTix® ML ORP *see page 14*)

Chlorine measurements

amperometric;
free chlorine – low pH dependancy (pH 4–9) (FCML 412 N *see page-page 41*) or total chlorine (TCML N *see page 41*)

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 25*

Conductivity measurement

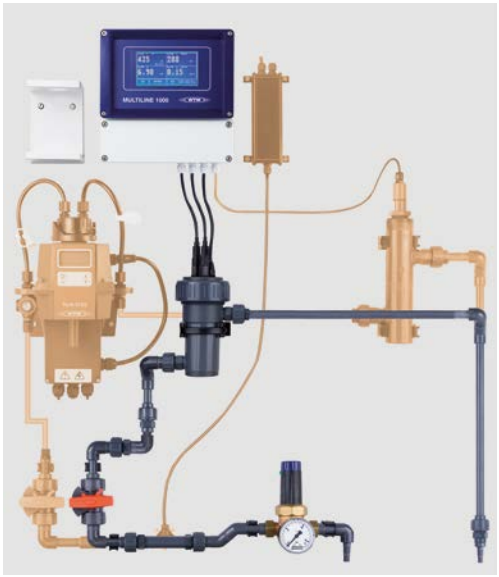
(LR ML *see page 19*)

Flow Measurement

(with pre-mounted impeller)

- 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



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; yyyyy: 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 11

Analyzer see from page 54

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 14*

EX Conductivity Measuring Cells *see page 18*

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

EX monitors Stratos Pro A 201 X

The EX compliant monitor Stratos Pro 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.

Stratos Pro A 201 X

- EX certified
- Color backlighting
- For high ambient temperatures

IP 67 | CE | 2 Year Warranty | TD D4.01

StratosProA201xpH

for pH measurements

analog pH electrodes see page 14

StratosProA201xCond

for conductivity measurements

analog conductivity measuring cells see page 18

Ordering Information

Model	Description	Order No.
StratosProA201xpH-0	pH transmitter with 1 analog current output	109444EX
StratosProA201xpH-1	pH transmitter with 2 analog current outputs	109445EX
StratosProA201xCond-0	Conductivity transmitter with 1 analog current output	300944EX
StratosProA201xCond-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 56

Isolated amplifier WG 21 A7

The isolated amplifier supplies the EX compliant monitor Stratos Pro 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.

WG 21 A7

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

IP 40 IP 20 | CE | 3 Year Warranty | TD D4.02

Ordering Information

Model	Description	Order No.
WG21A7	Isolated amplifier to power the EX-transmitter StratosPro in an intrinsically safe way, power supply 90 ... 253V, explosion protection II (1) G [Ex ia Ga] IIC.	109446EX
WG 21 A7 Opt. 336	Like WG21 A7, 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 56

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.xylemanalytics.com/en/products/process-controllers-and-sensors/samplers

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Portable samplers

The portable sampling in good hands. The lightweight design of the **PB-M** and the handy housing guarantee a unique comfort. A carefree sampling process is assured by a modern operation and the highly accurate vacuum pump.

The portable sampler **PB 25 S** with a peristaltic pump system and an integrated battery is available for fractionated samples to 12 x 1 l or 24 x 0.5 l with a rotary distributor. The PB 25 S convinces with a compact housing and a possibility for small dosing volumes.

PB-M

PB 25 S

- Time, volume, event proportional or manual
- Vacuum or peristaltic pump system
- Low weight

IP 66 IP 65 CE 2 Year Warranty TD *D5.01, D5.02*

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
PB 25 S	Version with 12 x 1 l sample bottles (PE)	000103
PB 25 S/24	Version with 24 x 0.5 l sample bottles (PE)	000105

For technical data please see datasheet D5.01, D5.02

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

IP 65 CE 2 Year Warranty TD *D5.03*

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

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

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

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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	Connection cable for the IQ Sensor Net, per meter	480046
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

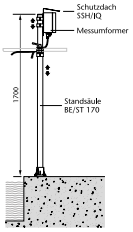
Information about IQ Sensor Net system see from page 42

Sensors see from page 8

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 pendelum and swing holders, without stands

Swivel fixture BE/R 170-D

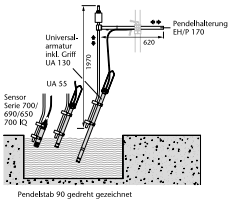
Chain and Shackle

For individual solutions

CH/SO

Swing, Pendelum 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	Masonary 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 42

60 mm Sensors: Spectral – page 30 Sludge – page 39

Accessories for EX area see *brochure "Product Details"*

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Rectractable Armatures

For pipe installation, enables sensor removal during operation

Retractable armature

Flow Cells

For measurements in the bypass

VIS FT-1

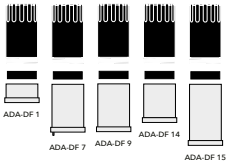
Flow Assemblys

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
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 42

Analog Sensors see from page 11

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

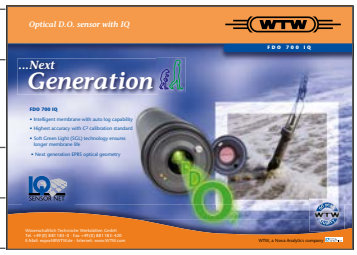
Conductivity measurements see from page 16

pH/ORP measurements see from page 12

Chlorine measurements see from page 40

WTW – IQ Sensor Net Highlights

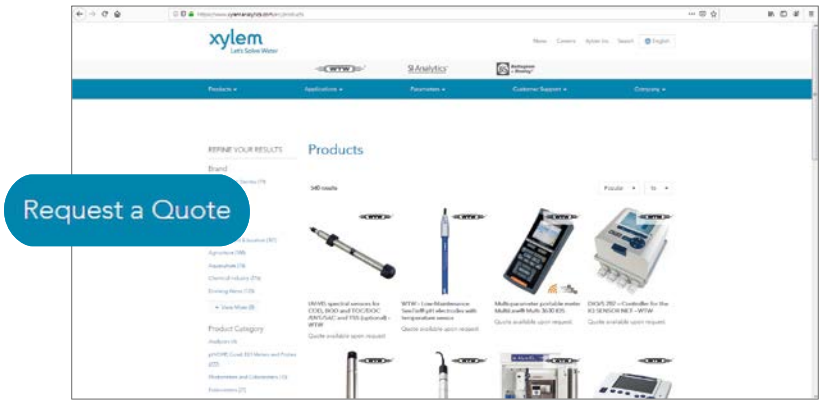
2001	**IQ Sensor Net**	the multi-parameter measuring system offers unlimited possibilities for online measurements
	VisoTurb® and **ViSolid®**	turbidity and solid sensors with their revolutionary ultrasonic cleaning system give "low-maintenance" a completely new meaning
	SensoLyt® 700 IQ	digital pH Sensor
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 NH_4 and PO_4

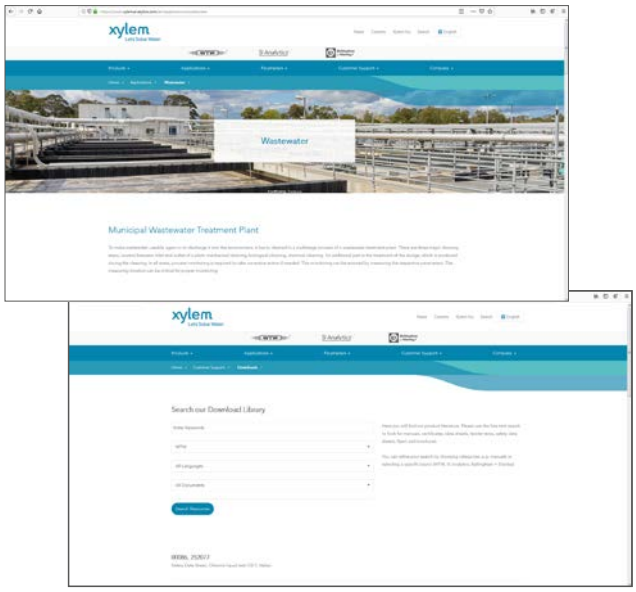


WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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

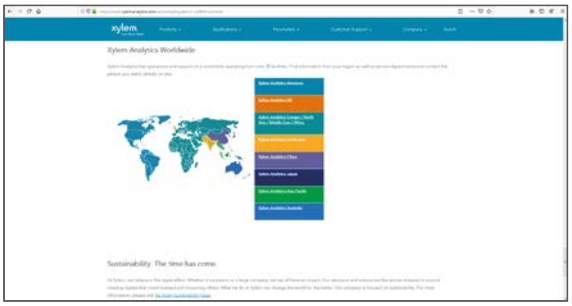
Take a look: Here you can find new products, developments, innovative measurement and analysis instruments, helpful accessories, useful system extensions, special sets, and much more.

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.

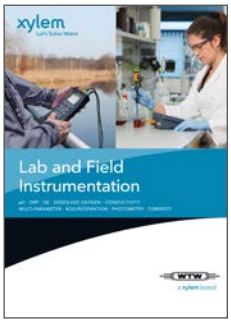


WTW – Laboratory and Field Instrumentation

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.

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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 interfacecs for data transfer to laptop or PC.

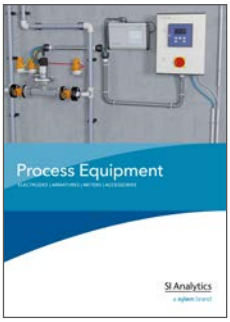
- Robust and water-proof
- Single and multi parameter instruments available
- Up to 3 parameters simultaneously
- IDS wireless ready
- Also available as a set with various sensors

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"!



Are you interested in Level Measurement or further Application?

We're here to help:

+49 881 1830

Info.WTW@Xyleminc.com

Our Brands

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/

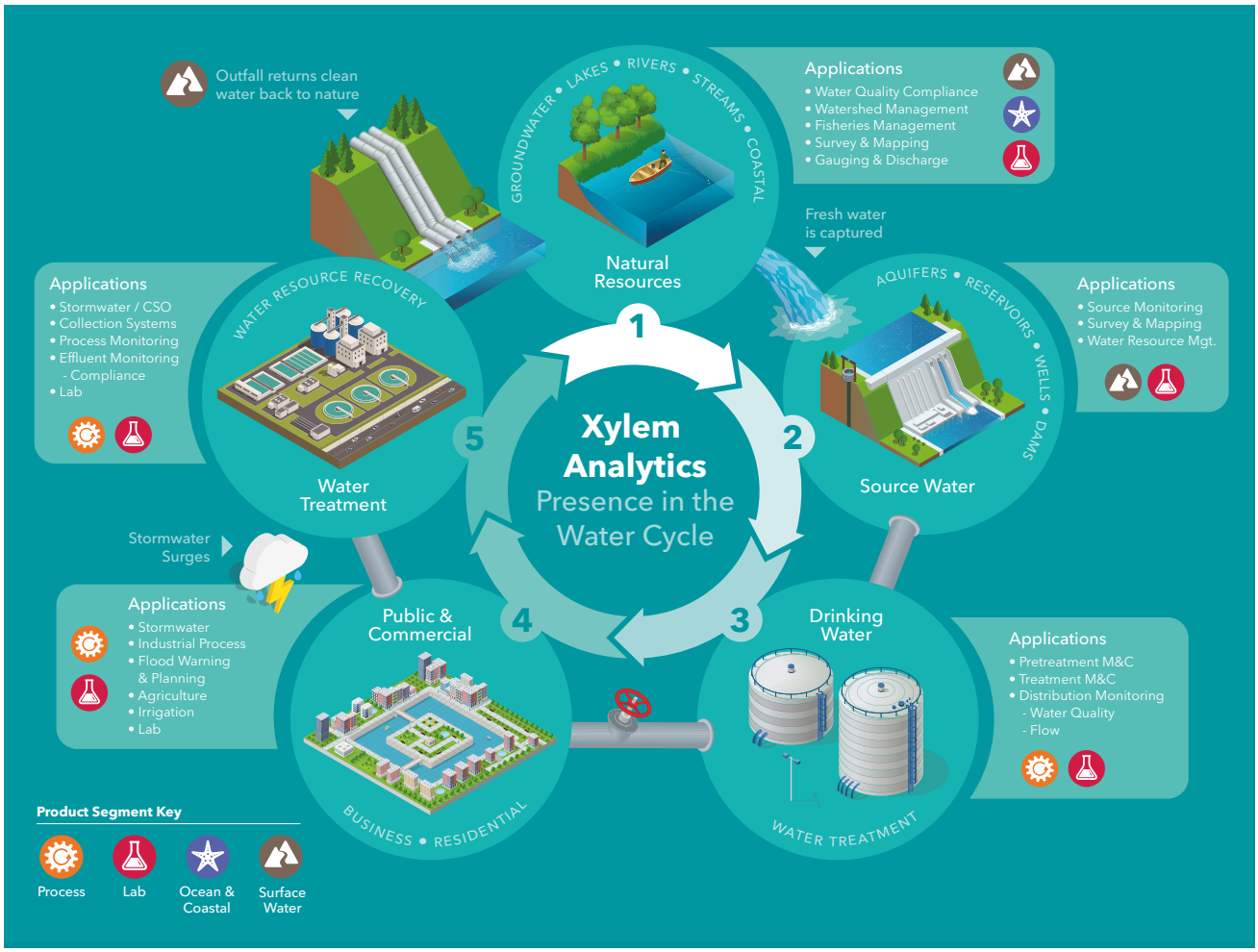
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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.

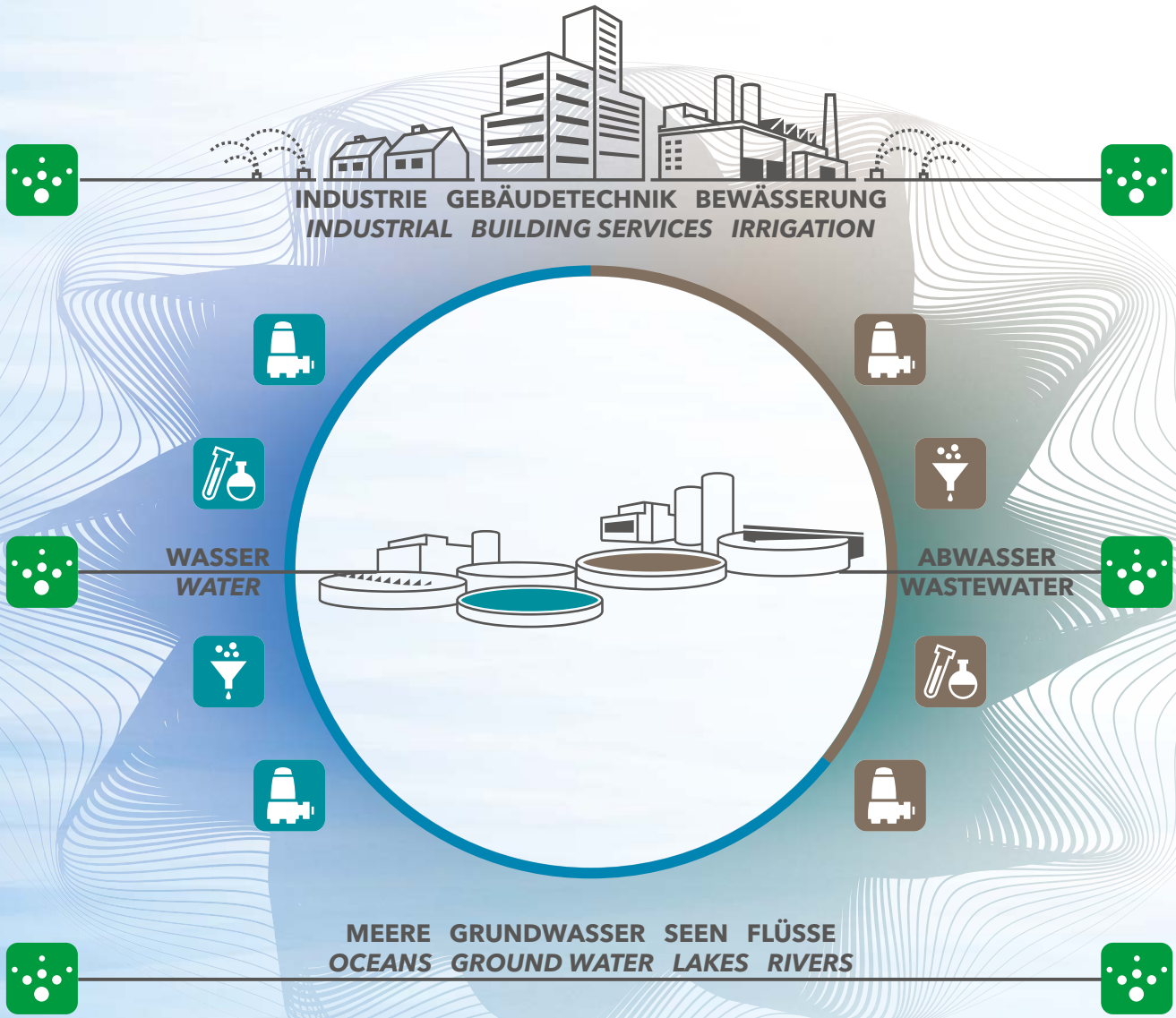
While serving a wide range of industries including agriculture, energy, source water, wastewater, drinking water, groundwater, R&D, ocean monitoring, food & beverage, life sciences and more, we have an extended depth of product offerings and applications expertise in four key industries **Wastewater**,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



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

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.

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

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.

LOWARA godwin FLYGT

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.

LEOPOLD WEDECO SANITAIRE FLYGT

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.

WTW mjk YSI SonTek

Netzwerk
Network

sensus pure visenti

emnet VALOR WATER ANALYTICS FLYGT

RESIDENTIAL:

Water supply and HVAC heating and cooling systems to homes.

AGRICULTURE:

Irrigation to farms, golf courses and turf applications.

Index

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße1·D-82362Weilheim·Germany·Phone:+498811830·Fax:+49881183-420·Info.WTW@Xyleminc.com
www.xylemanalytics.com

Data sheets

Controller and Modules

D1.01 *IQ Sensor Net Terminal/Controller MIQ/TC 2020 3G*
D1.02 *IQ Sensor Net Controller MIQ/MC3*
D1.03 *IQ Sensor Net MIQ modules for power supply*
D1.04 *IQ Sensor Net MIQ modules for outputs, inputs and communication*
D1.05 *IQ Sensor Net MIQ modules for system expansion*
D1.06 *IQ Sensor Net MIQ module for compressed air cleaning*
D1.07 *IQ Sensor Net DIQ 282*
D1.08 *IQ Sensor Net DIQ 284*
D1.09 *IQ Sensor Net DIQ/S 181*
D1.10 *IQ Sensor Net DIQ modules*

Sensors and Analyzers

D2.01 *Digital electro-chemical IQ sensors for dissolved oxygen TriOxmatic®*
D2.02 *Digital optical IQ sensors for dissolved oxygen FDO®*
D2.03 *Digital IQ pH/ORP armatures SensoLyt®*
D2.04 *Digital IQ conductivity measuring cells TetraCon®*
D2.05 *Digital turbidity sensors VisoTurb®*
D2.06 *Digital suspended solids sensors ViSolid®*
D2.07 *Digital ISE combination sensor VARiON® for ammonium and nitrate*
D2.08 *Digital ISE sensor AmmoLyt® for ammonium*
D2.09 *Digital ISE sensor NitraLyt® for nitrate*
D2.10 *Digital optical UV VIS spectral probe NitraVis® for nitrate and suspended solids*
D2.11 *Digital optical sensors NiCaVis® for nitrate, carbon and suspended solids*
D2.12 *Digital optical UV spectral probe NitraVis® NI for nitrate and nitrite*
D2.13 *Digital optical UV spectral probe NiCaVis® NI for nitrite, nitrate and carbon*
D2.14 *Optical nitrate sensor UV 70x IQ NOx*
D2.15 *Digital optical UV-VIS spectral sensors CarboVis®*
D2.16 *Optical SAC and UVT sensor UV 70x IQ SAC*
D2.17 *Digital IQ sensor IFL 700 IQ to determine the sludge level*
D2.20 *Digital IQ fixed cable sensors for dissolved oxygen*
D2.21 *IQ fixed cable armature for digital pH/ORP measurement*
D2.22 *IQ fixed cable measuring cell for digital conductivity measurement*
D2.23 *Digital IQ fixed cable sensor for turbidity measurement*
D2.25 *Orthophosphate Analyzer Alyza IQ*
D2.26 *NiCaVis® optical sensors for surface water monitoring*

Analog Controllers and Sensors (pH/ORP, Cond, O_2)

D3.01 *Analog controllers*
D3.02 *Analog electrochemical oxygen sensors TriOxmatic®*
D3.03 *Analog pH/ORP armature SensoLyt®*
D3.04 *Analog pH/ORP electrodes (SensoLyt® series)*
D3.05 *Analog pH/ORP electrodes (ProcessLine®series)*
D3.06 *Analog conductivity measuring cells*

ATEX Devices

D4.01 *Analog controllers for EX area*
D4.02 *Isolated amplifier for EX area*
D4.03 *Analog conductivity measuring cells TetraCon® for EX area*
D4.04 *Analog pH/ORP aramture SensoLyt® for EX area*

Samplers

D5.01 *Portable Samplers PB-M*
D5.02 *Portable Samplers PB-25-S*
D5.03 *Samplers for wall mounting*

Sample preparation

D6.01 *Sample preparation system PurCon®*
D6.02 *Filtration Alyza IQ*

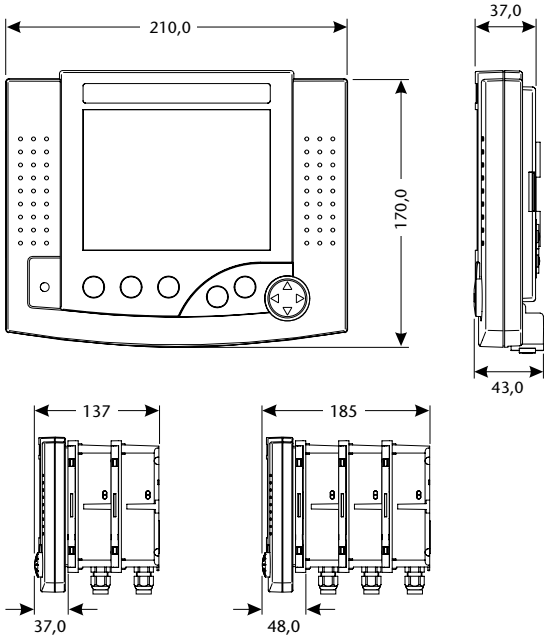
Drinking Water

D7.01 *Analog chlorine sensors*
D7.02 *Drinking Water Analyzer*
D7.03 *Drinking water panels*
D7.04 *Drinking water sensors*

IQ Sensor Net Terminal/Controller MIQ/TC 2020 3G

The heart of every IQ Sensor Net system 2020 – multi-parameter system for up to 20 sensors with USB interface, remote maintenance and remote communication

We would like to inform you about the application range on our website



Technical Data

Model	**Terminal-/Controller MIQ/TC 2020 3G**
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules
USB interface	USB-A (host)
Display	Graphic display; resolution: 320 x 240 pixel; visible area: 4.49 x 3.39 in. (114 x 86 mm), black/white, backlit
Control Functions/Function Keys	5 operating keys: 3 master keys for functions: Measurement (M), calibration (C), set/system settings (S), 2 keys for: confirmation/switching menu O.K. (OK), Escape (ESC) 4-directional button for rapid selection of software functions and input of alphanumeric values
Datalogger	Data memory for up to 525,600 data sets
Electric Supply	Directly via the IQ Sensor Net when coupled to MIQ module
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C) Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	ASA (Acrylonitrile-Styrene-Acryloesterpolymer)
Protection Rating	IP 66 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	8.27 x 6.69 x 1.57 in. (210 x 170 x 40 mm)
Weight	Approx. 1.98 pounds (0.9 kg)
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component
Connection Characteristics	Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)
Warranty	3 years for defects of quality

Model	Description	Order No.
MIQ/TC 2020 3G	Module IQ terminal/controller, configurable as a controller (fixed installation) or as a terminal with redundant controller function for system 2020, with USB interface, can be coupled to any IQ Sensor Net module	470020
MIQ/TC 2020 3G-CR3	Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/CR3 combined output module with 3 analog outputs (0/4-20 mA) and 3 relay outputs, MIQ/PS wide range power supply	470022
MIQ/TC 2020 3G-C6	Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/C6 output module wit 6 analog outputs (0/4-20 mA), MIQ/PS wide range power supply	470024
MIQ/TC 2020 3G-EF	Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/MC3 controller with fieldbus protocols, MIQ/PS wide range power supply	470026

WTW a xylem brand

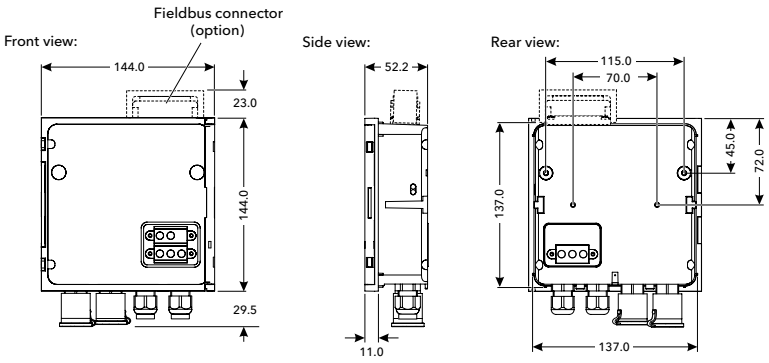
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999207US
January 2020

IQ Sensor Net Controller MIQ/MC3

The controller family with network connection via ethernet/WIFI interface for the multi-parameter system IQ Sensor Net 2020 for up to 20 sensors

We would like to inform you about the application range on our website



Technical Data

Model	Controller MIQ/MC3
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible
Cable Feeds	2 screw cable glands M 16 x 1.5
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm² Terminal area for flexible conductors: 0.2 ... 2.5 mm² accessible by opening cover
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net are available on each module and can be used as required: - for connecting sensors - as an input/output or for looping through/branching of the IQ Sensor Net cable
Other Functions	Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator)
USB interface	USB-A
Ethernet port	RJ45 socket or LSA terminal strip can be used
Datalogger	Data memory for up to 525.600 data sets
Electric Supply	Directly via the IQ Sensor Net when coupled to MIQ module
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	ASA (Acrylonitrile-Styrene-Acryloesterpolymer)
Protection Rating	IP 66 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	5.67 x 6.81 x 2.05 in. (144 x 173 x 52 mm)
Weight	Approx. 1.98 pounds (0.9 kg)
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm²; Filler cord for easy connection of shield: 0.75 mm²; pressure resistant to 10 bar
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)
Warranty	3 years for defects of quality

Model	Description	Order No.
MIQ/MC3	Controller of the system 2020, for up to 20 sensors, with automatic air pressure compensation, USB and RJ45 interface for Ethernet fieldbuses (Ethernet/IP, Modbus TCP, PROFINET)	471020
MIQ/MC3-MOD	Like MIQ/MC3, but including MODBUS RTU/RS 485 interface (D-SUB plug connection ADA/D-SUB 902888, please order separately)	471022
MIQ/MC3-PR	Like MIQ/MC3, but including PROFIBUS-DP/RS 485 interface (D-SUB plug connection ADA/D-SUB 902888, please order separately)	471023

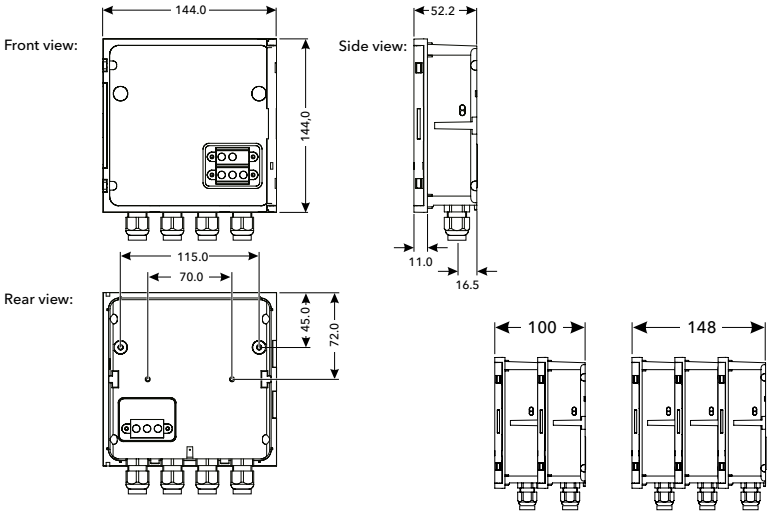
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net MIQ modules for power supply

Module to supply voltage to the system components in the IQ Sensor Net – thanks to the modular principle and simple installation this is individually customizable

We would like to inform you about the application range on our website



Technical Data

Models	MIQ module MIQ/PS	MIQ module MIQ/24V
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules	
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible	
Cable Feeds	4 screw cable glands M 16 x 1.5	
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2 accessible by opening cover	
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net are available on each module and can be used as required: - for connecting sensors - as an input/output or for looping through/branching of the IQ Sensor Net cable	
Other Functions	Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator)	
Electric Supply	Directly via the IQ Sensor Net	
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)	
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)	
Protection Rating	IP67	IP 66
	corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..	
Dimensions (W x H x D)	5.67 x 5.67 x 2.05 in. (144 x 144 x 52 mm)	
Weight	Approx. 1.1 pounds (0.5 kg)	
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE	
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A	
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component	
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; Filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar	
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)	
Warranty	3 years for defects of quality	

Model	Description	Order No.
MIQ/PS	Module IQ / power supply for voltage supply with wide range power supply for 100 – 240 VAC input voltage	480004
MIQ/24V	Module IQ / 24 V for voltage supply with 24 VAC or 24 VDC input voltage	480006

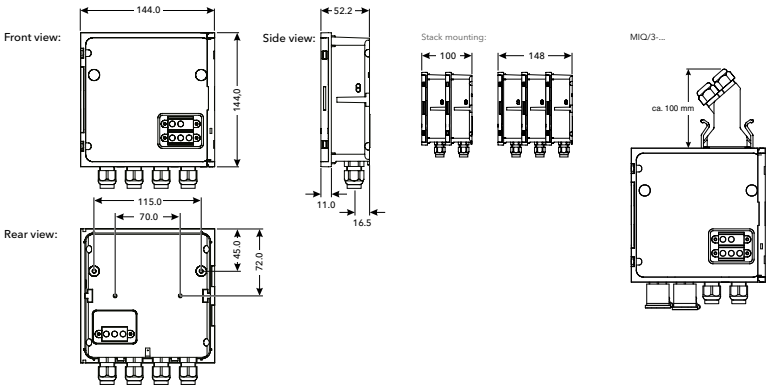
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net MIQ modules for outputs, inputs and communication

Module to transfer the measured values or with a alert/alarm function – thanks to the modular principle and simple installation this is individually customizable

We would like to inform you about the application range on our website



Technical Data

Models MIQ module	MIQ/3-MOD	MIQ/3-PR	MIQ/CR3	MIQ/C6	MIQ/R6	MIQ/IC2
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules					
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible					
Cable Feeds	3 screw cable glands M 16 x 1.5 and 1 USB		4 screw cable glands M 16 x 1.5			
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2 accessible by opening cover					
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net are available on each module and can be used as required: - for connecting sensors - as an input/output or for looping through/branching of the IQ Sensor Net cable					
Other Functions	Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator)					
Electric Supply	Directly via the IQ Sensor Net					
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)					
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)					
Protection Rating	IP 66	IP 66	IP 67	IP 66	IP 67	IP 66
	corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..					
Dimensions (W x H x D)	5.67 x 5.67 x 2.05 in. (144 x 144 x 52 mm)					
Weight	Approx. 1.1 pounds (0.5 kg)					
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE					
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A					
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component					
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; Filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar					
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)					
Warranty	3 years for defects of quality					

Model	Description	Order No.
MIQ/3-MOD	Module IQ with MODBUS RTU / RS 485 connection (output module, digital)	471026
MIQ/3-PR	Module IQ with PROFIBUS-DP connection (output module, digital)	471027
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/IC2	Module IQ / input Current 2 with 2 inputs for 0/4 - 20 mA signals (input module); every populated power input counts as an IQ sensor	480016

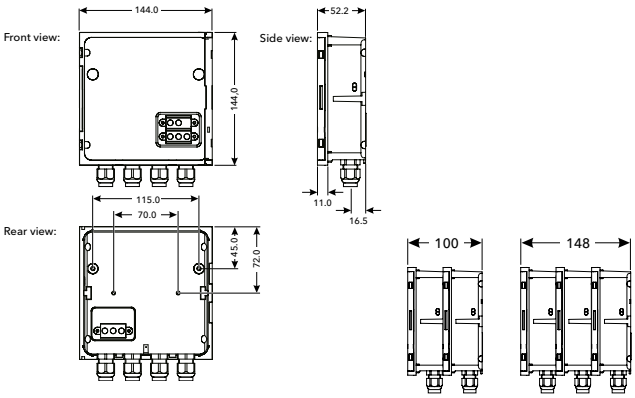
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net MIQ modules for system expansion

The IQ Sensor Net grows with its tasks - modules for individual system expansions with up to 4 IQSN connections and wireless communication

We would like to inform you about the application range on our website



Technical Data

Models	MIQ modules MIQ/JB(R)	MIQ modules MIQ/WL PS (SET)
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules	
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible	
Cable Feeds	4 screw cable glands M 16 x 1.5	
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2 accessible by opening cover	
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net are available on each module and can be used as required: - for connecting sensors - as an input/output or for looping through/branching of the IQ Sensor Net cable	
Other Functions	Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator)	
Electric Supply	Directly via the IQ Sensor Net	
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)	
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)	
Protection Rating	IP 66	IP 67
	corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..	
Dimensions (W x H x D)	5.67 x 5.67 x 2.05 in. (144 x 144 x 52 mm)	
Weight	Approx. 1.1 pounds (0.5 kg)	
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE	
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A	
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component	
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; Filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar	
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)	
Connection Medium Radio	Radio with a coverage of 109 yds (100 m)	
Connection Characteristics	Data transmission, separate power supply necessary for each island	
Warranty	3 years for defects of quality	

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/JBR	Modul IQ / Junction Box Repeater, for system branching, for system 2020 and 282/284, with active signal preparation	480010
MIQ/WL PS SET	2 MIQ/WL PS radio modules, preconfigured as master and slave, ready to operate	480025
MIQ/WL PS	1 MIQ/WL PS radio module, preconfigured as a slave to expand a radio network	480023

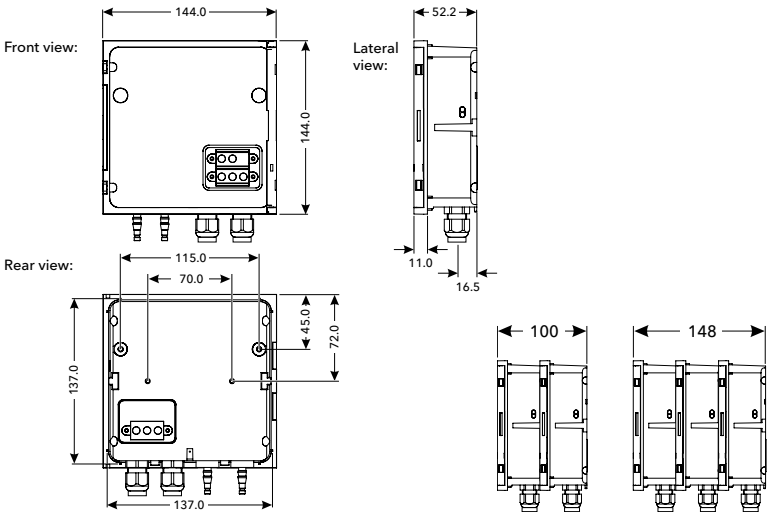
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net MIQ module for compressed air cleaning

Whether automatic or sensor triggered (for spectral sensors) – the MIQ/CHV Plus provides both, easy installation included

We would like to inform you about the application range on our website



Technical Data

Model	MIQ module MIQ/CHV Plus
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible
Cable Feeds	2 screw cable glands M 16 x 1.5 and 2 pressure hose nozzle
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2 accessible by opening cover
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net are available on each module and can be used as required: - for connecting sensors - as an input/output or for looping through/branching of the IQ Sensor Net cable
Other Functions	Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator)
Electric Supply	Directly via the IQ Sensor Net
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)
Protection Rating	IP 66 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	5.67 x 5.67 x 2.05 in. (144 x 144 x 52 mm)
Weight	Approx. 1.1 pounds (0.5 kg)
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE
Electromagnetic Compatibility	EN 61326-1, Class B; FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; Filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds)
Warranty	3 years for defects of quality

Model	Description	Order No.
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

WTW a xylem brand

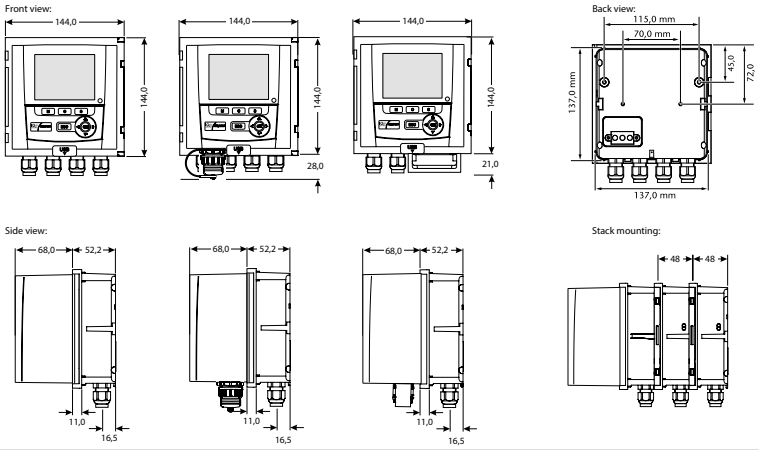
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999212US
January 2020

IQ Sensor Net DIQ 282

Controller for small and mid-sized waste-water treatment plants including USB-interface and internal data logger– up to 2 sensors, all parameters, available anytime

We would like to inform you about the application range on our website



Technical Data

Model	Controller DIQ/S 282
Max. number of sensors	2
IQ Sensor Net connections	DIQ/S 282-CR3(-E) (/24V) 1; all others 2
Outputs	3 x (0) 4 ... 20 mA, 3 x Relays, Ethernet interface for remote access, Ethernet fieldbusses PROFIBUS or Modbus RTU (options see scopes of delivery)
Display	Graphic TFT Display; Resolution: 320 x 240 pixel; backlit
Control Functions/ Function Keys	5 operating keys: measurement (M), calibration (C), set/system settings (S), 3 master keys for functions: 2 keys for: confirmation/switching menu O.K. (OK), escape (ESC) Arrow keys for rapid selection of software functions and input of alpha-numeric values (up), (down)
Electric Supply	100 … 240 VAC (50/60 Hz), 24 V AC/DC
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible
Cable Feeds	4 screw cable glands M 16 x 1.5 (expansible to M 20 if required)
Terminal Connections	Screw terminal strips; Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2; accessible by opening cover
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net for connecting sensors
USB interface	USB-A
Datalogger	Data memory for up to 525,600 data sets
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)
Protection Rating	IP 67 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	144 x 144 x 125 mm (5.67 x 5.67 x 4.92 in.)
Weight	Approx. 1,2 kg (2.6 pounds)
Certifications	CE
Electromagnetic Compatibility	EN 61326-1, Class A; FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar
Connection Characteristics	Power supply and data transmission on these wires; resistant to polarity reversal with respect to switched shield and inner conductor (no damage); comprehensive EMC shield control; Cable topology within the IQ Sensor Net system as required, e.g. in the form of a line, tree, star; total cable length max. 250 m (273 yds)
Warranty	3 years for defects of quality

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 282-PR	Like above, but with PROFIBUS-interface (RS 485), 100 … 240 VAC	472111
DIQ/S 282-MOD	Like above, but with 3 Relays, with MODBUS-interface (RS 485), 100 … 240 VAC	472112
DIQ/S 282-CR3-E	Like above, but with 3 Relays, with 3 mA-outputs, with Ethernet-interface (RJ 45) for network connection, 100 … 240 VAC	472113
DIQ/S 282-EF	Like above, but with 3 Relays, with Ethernet-interface (RJ 45) for network connection and fieldbuses (Ethernet/IP, Modbus TCP, PROFINET), 100 … 240 VAC	472114

All versions available for 24 V AC/DC

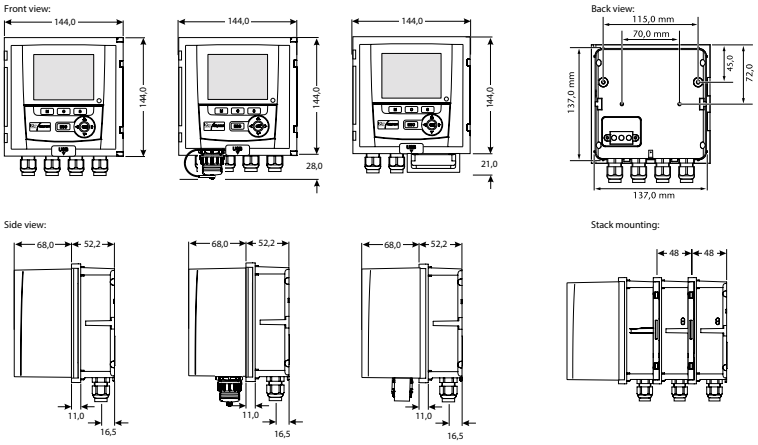
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net DIQ 284

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

We would like to inform you about the application range on our website



Technical Data

Model	Controller DIQ/S 284
Max. number of sensors	4
IQ Sensor Net connections	DIQ/S 284-CR6(-E) (/24V) 3; all others 2
Outputs	6 x (0) 4 ... 20 mA, 6 x Relays, Ethernet interface for remote access, Ethernet fieldbusses PROFIBUS or Modbus RTU (options see scopes of delivery)
Display	Graphic TFT Display; Resolution: 320 x 240 pixel; backlit
Control Functions/ Function Keys	5 operating keys: measurement (M), calibration (C), set/system settings (S), 3 master keys for functions: 2 keys for: confirmation/switching menu O.K. (OK), escape (ESC) Arrow keys for rapid selection of software functions and input of alpha-numeric values (up), (down)
Electric Supply	100 … 240 VAC (50/60 Hz), 24 V AC/DC
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible
Cable Feeds	4 screw cable glands M 16 x 1.5 (expansible to M 20 if required)
Terminal Connections	Screw terminal strips; Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2; accessible by opening cover
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net for connecting sensors
USB interface	USB-A
Datalogger	Data memory for up to 525,600 data sets
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)
Protection Rating	IP 67 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	144 x 144 x 173 mm (5.67 x 5.67 x 6.81 in.)
Weight	Approx. 1,7 kg (3.7 pounds)
Certifications	CE
Electromagnetic Compatibility	EN 61326-1, Class A; FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm^2; filler cord for easy connection of shield: 0.75 mm^2; pressure resistant to 10 bar
Connection Characteristics	Power supply and data transmission on these wires; resistant to polarity reversal with respect to switched shield and inner conductor (no damage); comprehensive EMC shield control; Cable topology within the IQ Sensor Net system as required, e.g. in the form of a line, tree, star; total cable length max. 250 m (273 yds)
Warranty	3 years for defects of quality

Model	Description	Order No.
DIQ/S 284-CR6	Controller for up to 4 IQ sensors, with 6 Relays, with 6 mA-outputs, 100 … 240 VAC	472130
DIQ/S 284-PR	Like above, but with 3 Relays, with PROFIBUS-interface (RS 485), 100 … 240 VAC	472131
DIQ/S 284-MOD	Like above, but with 3 Relays, with MODBUS-interface (RS 485), 100 … 240 VAC	472132
DIQ/S 284-CR6-E	Like above, but with 6 Relays, with 6 mA-outputs, with Ethernet-interface (RJ 45) for network connection, 100 … 240 VAC	472133
DIQ/S 284-EF	Like above, but with 3 Relays, with Ethernet-interface (RJ 45) for network connection and fieldbuses (Ethernet/IP, Modbus TCP, PROFINET), 100 … 240 VAC	472134

All versions available for 24 V AC/DC

WTW a xylem brand

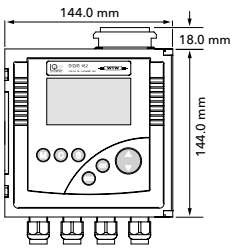
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net DIQ/S 181

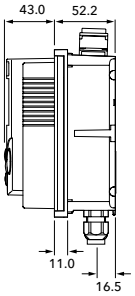
The new system 181 – the digital and cost-efficient single parameter measuring point with proven IQ Sensor Net technology and matching fixed cable sensors

We would like to inform you about the application range on our website

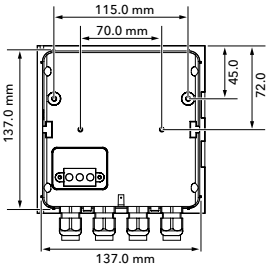
Front view:



Side view:



Back view:



Technical Data

Models	**Controller DIQ/S 181(24V)**
Display	Graphic display; resolution: 128 x 64 pixel; visible area: 72 x 40 mm (2.83 x 1.57 in.), black/white, backlit
Control Functions/ Function Keys	5 operating keys: 3 master keys for functions: measurement (M), calibration (C), set/system settings (S), 2 keys for: confirmation/switching menu O.K. (OK), escape (ESC) 2 knobs for rapid selection of software functions and input of alpha-numeric values (up), (down)
Cable Feeds	4 screw cable glands M 16 x 1.5
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm^2 Terminal area for flexible conductors: 0.2 ... 2.5 mm^2 accessible by opening cover
IQ Sensor Net Terminal Connections	Terminal connections for the IQ Sensor Net for connecting sensors
Electric Supply	100 … 240 VAC (50/60 Hz), 24 V AC/DC
Ambient Conditions	Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C)
Housing Material	PC – 20 % GF (polycarbonate with 20 % fiberglass)
Protection Rating	IP 66 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM..
Dimensions (W x H x D)	144 x 144 x 95 mm (5.67 x 5.67 x 3.74 in.)
Weight	Approx. 2.2 pounds (1 kg)
Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE
Electromagnetic Compatibility	EN 61326-1, Emission: Class B, FCC Class A
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system
Connection Characteristics	Energy- and Data transfer via two wire technique, integrated EMC shield control
Warranty	3 years for defects of quality

Model	Description	Order No.
DIQ/S 181	Dual IQ/System 181, Universal monitor for the connection of 1 digital IQ fixed cable sensor, with 2 analog outputs (0/4-20 mA) and 3 relays	472100
DIQ/S 181/24V	Like the DIQ/S 181, but for 24 V AC/ DC voltage supply	472101

WTW a xylem brand

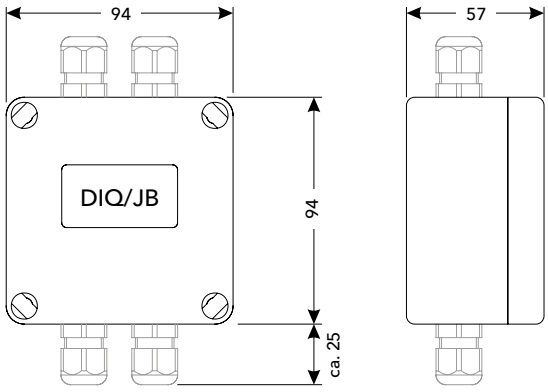
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ Sensor Net DIQ modules

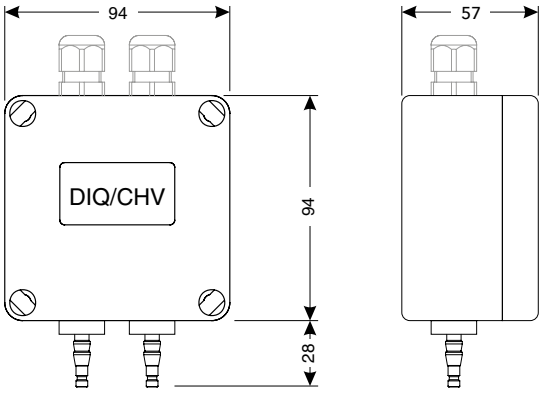
Modules for the flexible expansion of digital IQ Sensor Net systems 181 and 282/284 by additional measuring points or functions – compact design

We would like to inform you about the application range on our website

DIQ/JB



DIQ/CHV



Technical Data

Models DIQ-Modul	DIQ/JB	DIQ/CHV
Cable Feeds	3 screw cable glands M 16 x 1.5	2 screw cable glands M 16 x 1.5 and 2 pressure hose nozzle
Terminal Connections	Screw terminal strips Terminal area for solid conductors: 0.2 ... 4.0 mm² Terminal area for flexible conductors: 0.2 ... 2.5 mm² accessible by opening cover	
Housing Material	Polystyrene	
Protection Rating	IP 66	
Dimensions (W x H x D)	94 x 94 x 57 mm (3.7 x 3.7 x 2.24 in.)	
Weight	0.44 lbs (0.2 kg)	0.66 lbs (0.3 kg)
Certifications	CE	
Electromagnetic Compatibility	EN 61326-1, Emission: Class A, FCC Class A	
Integrated Overvoltage Protection	According to EN 61326-1 enhanced overvoltage protection for the entire system	
Connection Medium Cable	IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm²; Filler cord for easy connection of shield: 0.75 mm²; pressure resistant to 10 bar	
Connection Characteristics	Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 250 m/273 yds	
Warranty	3 years for defects of quality	

Model	Description	Order No.
DIQ/JB	Dual IQ/Junction Box to connect a second or remote IQ sensor in the system 181 and 282/284	472005
DIQ/CHV	Dual IQ/Cleaning Head Valve, for the automatic relay-controlled compressed air cleaning in the system 181 and 282/284	472007

WTW a xylem brand

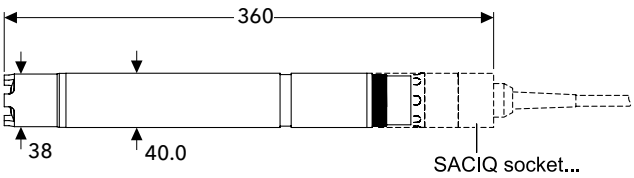
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital electro-chemical IQ sensors for dissolved oxygen TriOxmatic®

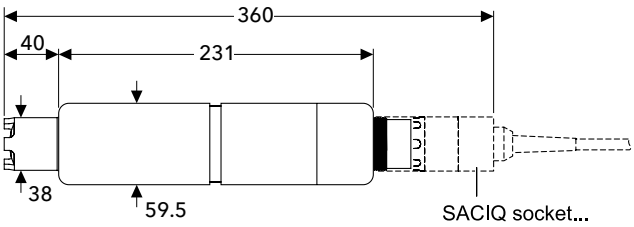
Reliable and proven digital electro-chemical oxygen sensors with 3 electrode system (ECDO) for precise and accurate measurements

We would like to inform you about the application range on our website

TriOxmatic® 700 IQ



TriOxmatic® 700 IQ SW



Technical Data

Model	TriOxmatic® 700 IQ	TriOxmatic® 700 IQ SW*	TriOxmatic® 701 IQ	TriOxmatic® 702 IQ
Measuring method	Amperometric			
Measuring range (25 °C)				
O_2 concentration	0.0 ... 60.0 mg/l		0.00 ... 20.00 mg/l 0.0 … 60.0 mg/l	0 ... 2000 µg/l 0.00 … 10.00 mg/l
O_2 saturation	0 ... 600%		0.0 … 200.0% 0 … 600%	0 … 110%
Resolution				
O_2 concentration	0.1 mg/l		0.01 mg/l 0.1 mg/l	0.001 mg/l 0.01 mg/l
O_2 saturation	1%		0.1% 1%	0.1%
Accuracy	Depending on calibration ±0.1 mg/l or 1 % (at 0.0 ... 60.0 mg/l)		Depending on calibration ±0.1 mg/l or 1 % (at 0.0 ... 20.0 mg/l)	Depending on calibration ±0.01 mg/l or 1 % (at 0.0 ... 2000 µg/l)
Response time at 25 °C	t_{90}: 180 s		t_{90}: 30 s t_{99}: 90 s	t_{90}: 30 s t_{99}: 110 s
Minimum flow rate	0.05 m/s		0.23 m/s	0.3 m/s
SensCheck	SensLeck SensReg	SensReg	SensLeck SensReg	– SensReg
Temp. measurement	Integrated NTC, 23 °F ... 140 °F (-5 °C ... +60 °C) ± 0.5 °C			
Temp. compensation	32 °F ... 140 °F (0 °C ... +60 °C)			
Pressure Resistance	10 bar (incl. sensor connection cable)			
Ambient Conditions	Operating temperature: 32 °F ... 140 °F (0 °C ... +60 °C); Storage temperature: 23 °F ... 149 °F (-5 °C ... +65 °C)			
Electrical connections	2-wire shield cable with quick fastener to sensor			
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation			
Certifications	CE, cETL, ETL			
Mechanical	Membrane head assembly, locking cap: POM Sensor body: V4A stainless steel 1.4571 Protection rating: IP 68			
Weight (without cable)	Approx. 1.46 lb (660 g)	Approx. 2.58 lb (1,170 g)	Approx. 1.46 lb (660 g)	
Warranty	2 years for defects in quality			

** SW: Sensor as sea water model (with plastic arming (POM))*

Model	Description	Order No.
TriOxmatic® 700 IQ	Universal oxygen sensor for the measurement and regulation of oxygen input in wastewater treatment plants (please order cables separately)	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

WTW a xylem brand

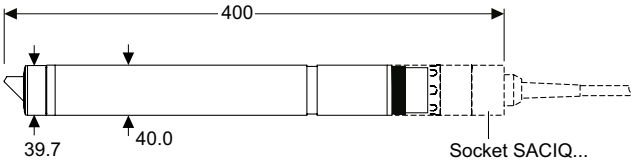
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical IQ sensors for dissolved oxygen FDO®

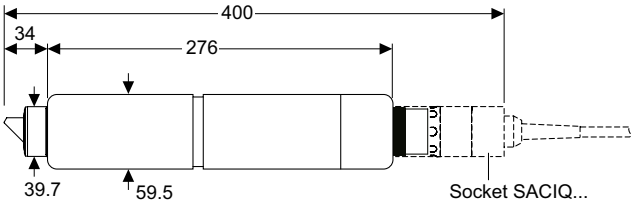
Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ SENSOR NET to regulate biological cleaning steps

We would like to inform you about the application range on our website

FDO® 700 IQ, FDO® 701 IQ



FDO® 700 IQ SW, FDO® 701 IQ SW



Technical Data

Modele	FDO® 700 IQ	FDO® 700 IQ SW*	FDO® 701 IQ	FDO® 701 IQ SW*
Measuring method	Optical			
Replacement caps	SC-FDO® 700 with a working life of 2 years with authorized use		SC-FDO® 701 with a working life of 6 months with authorized use	
Measuring range (25 °C)				
O_2 concentration	0 ... 20.00 mg/l (0 ... 20.00 ppm)			
O_2 saturation	0 ... 200.0 %			
Resolution				
O_2 concentration	0.01 mg/l (0.01 ppm)			
O_2 saturation	0.1 %			
Accuracy	< 1 mg/l (ppm): ± 0.05 mg/l (ppm) > 1mg/l (ppm): ± 0.1 mg/l (ppm)			
Response time at 25 °C	t_{90}: < 150 s t_{95}: < 200 s		t_{90}: < 60 s t_{95}: < 80 s	
Minimum flow rate	No flow required			
SensCheck	Monitoring of membrane function			
Temp. measurement	Integrated NTC, 23 °F ... 140 °F (-5 °C ... +60 °C) ± 0.5 °C			
Temp. compensation	23 °F ... 122 °F (-5 °C ... +50 °C)			
Pressure Resistance	10 bar (incl. sensor connection cable)			
Ambient Conditions	23 °F ... 122 °F (-5 °C ... +50 °C) -13 °F ... 122 °F (-25 °C ... +50 °C)		23 °F ... 104 °F (-5 °C ... +40 °C) -13 °F ... 104 °F (-25 °C ... +40 °C)	
Electrical connections	2-wire shield cable with quick fastener to sensor			
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation			
Certifications	CE, cETL, ETL			
Mechanical	Sensor cap, fixation: POM, PVC, silicone, PMMA sensor body: VA stainless steel 1.4571 protection type IP 68			
Weight (without cable)	1.98 lb (900 g)	3.31 lb (1.5 kg)	1.98 lb (900 g)	3.31 lb (1.5 kg)
Warranty	2 years for defects in quality			

** SW: Sensor as sea water model (with plastic arming (POM))*

Model	Description	Order No.
FDO® 700 IQ	Optical O_2 sensor for connection to the IQ SENSOR NET. (Please order cable separately)	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
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

WTW a xylem brand

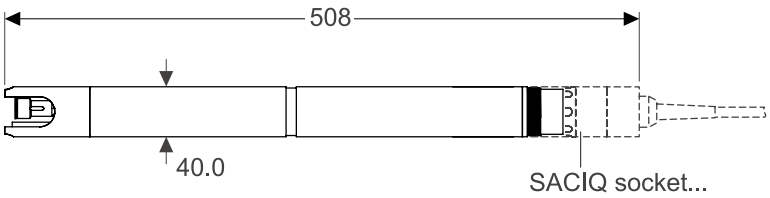
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital IQ pH/ORP armatures SensoLyt®

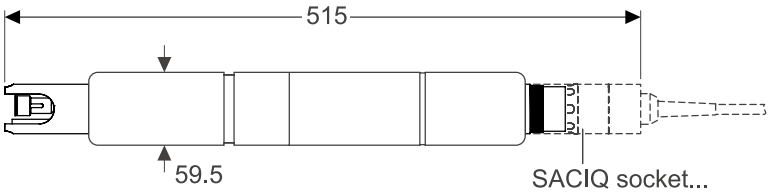
Digital pH/ORP armature with integrated preamplifier and temperature sensor as well as lightning protection to be connected to IQ SENSOR NET

We would like to inform you about the application range on our website

SensoLyt® 700 IQ



SensoLyt® 700 IQ SW



Technical Data

Model	SensoLyt® 700 IQ	SensoLyt® 700 IQ SW*
Measuring method	Potentiometric	
Measuring range	0.00 ... 14.00 pH (depending on the electrode) ±2000mV (depending on the electrode)	
Resolution	0.01 pH 1mV	
Accuracy	Depends on calibration ±0.2 pH; ±20 mV	
Integrated Preamplifier	Yes	
Sensor check funktion	Yes	
Temp. measurement	Integrated NTC, 23 ... 140 °F (-5 ... +60 °C)	
Temp. compensation	32 ... 140 °F (0 ... +60 °C)	
Pressure Resistance	10 bar	
Ambient Conditions	Operating temperature: 32 ... 140 °F (0 ... +60 °C)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE, cETL, ETL	
Mechanical	Sensor body: V4A stainless steel 1.4571 Protection cap: PVC Sensor holder: POM Protection rating: IP 68	
Weight (without cable)	Approx 2.14 lb (970 g)	Approx. 3.97 lb (1.800 g)
Warranty	2 years for defects in quality	

** SW: Sensor as sea water model (with plastic arming (POM))*

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
SensoLyt® 700 IQ/SET	SensoLyt® 700 IQ including SensoLyt® SEA pH electrode and 7 m connecting cable	109173
SensoLyt® 700 IQ/SET1	SensoLyt® 700 IQ including SensoLyt® PtA ORP electrode and 7 m connecting cable	109174

WTW a xylem brand

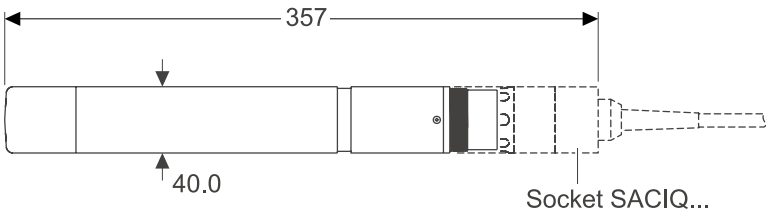
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital IQ conductivity measuring cells TetraCon®

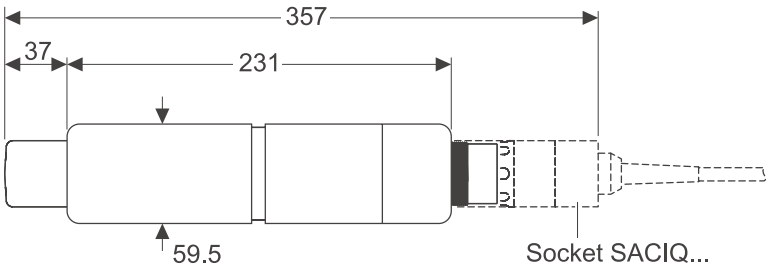
Digital 4 electrode conductivity measuring cell with flow-free operation, especially with high conductivity

We would like to inform you about the application range on our website

TetraCon® 700 IQ



TetraCon® 700 IQ SW



Technical Data

Model	TetraCon® 700 IQ	TetraCon® 700 IQ SW*
Measuring method	Conductometric (4-electrode cell)	
Measuring range	10 µS/cm - 500 mS/cm SAL: 0 … 70 TDS: 0 … 2000 mg/l	
Accuracy	± 2 % of measured value ± 1 Digit (in standard solution, 25 °C, with non-linear temp. comp. (acc. DIN 38404))	
Cell Constants	K = 0.917 cm^{-1}, ±1.5% (in free solution) K = 0.933 cm^{-1}, TetraCon® 700 IQ with EBST 700-DU/N flow assembly	K = 0.917 cm^{-1}, ± 1.5% (in free solution)
Resolution	Depending on measuring range	
Temp. measurement	-5 ... +60 °C (23 ... 140 °F); NTC	
Temp. compensation	linear: 32 ... 140 °F (0 ... +60 °C) nonlinear: +5 °C … 35 °C (acc. to DIN 38404) nonlinear: +35 °C … +60 °C (acc. to WTW procedure)	
Pressure Resistance	10 bar	
Ambient Conditions	-5 ... +60 °C (23 ... 140 °F)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE, cETL, ETL	
Mechanical	Sensor head: PVC Sensor body: V4A stainless steel 1.4571 Protection rating IP 68	
Weight (without cable)	Approx. 1.46 lb (660 g)	Approx. 2.58 lb (1,170 g)
Warranty	2 years for defects in quality	

** SW: Sensor as sea water model (with plastic arming (POM))*

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

a xylem brand

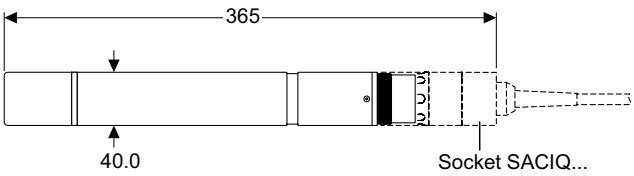
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital turbidity sensors VisoTurb®

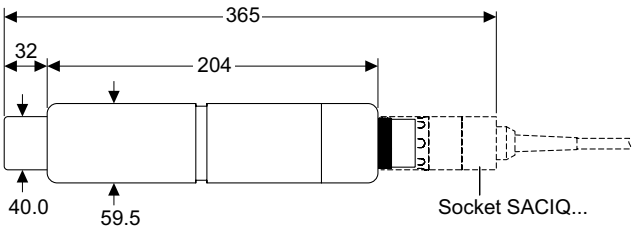
Optical turbidity sensors with nephelometric principle according to EN ISO 7027 for the in-situ use in water/wastewater incl. ultrasonic cleaning system

We would like to inform you about the application range on our website

VisoTurb® 700 IQ



VisoTurb® 700 IQ SW



Technical Data

Model	VisoTurb® 700 IQ	VisoTurb® 700 IQ SW*
Measuring method	Nephelometric principle in compliance with EN ISO 7027	
Measuring range		
FNU; NTU; TEF	0 ... 4000 FNU	
mg/l SiO_2; ppm SiO_2	0.1 ... 4000 mg/l SiO_2	
g/l TS	0.0001 ... 400 g/l TS	
Resolution		
FNU; NTU; TEF	Automatic according to measuring range 0.001 ... 1 FNU	
mg/l SiO_2; ppm SiO_2	0.001 mg/l ... 0.01 g/l	
g/l TS	0.001 mg/l … 1 g/l	
Accuracy	Process variation coefficient according to DIN 38402 part 51 <1 % (in the range up to 2000 FNU) Repeatability according to DIN ISO 5725 or DIN 1319 < 0.015 % or ≥ 0.006 FNU	
Calibration		
FNU; NTU; TEF	Factory calibration with formazine	
mg/l SiO_2; ppm SiO_2	Factory calibration with SiO_2	
g/l TS	Calibration by user, (TSS regulations in compliance with DIN 38414)	
Cleaning System	Ultrasound cleaning system	
SensCheck	Contamination detection of optical window; failure of cleaning system	
Pressure Resistance	10 bar (incl. sensor connection cable)	Maximum 2 bar
Ambient Conditions	Operating temperature: 32 ... 140 °F (0 ... 60 °C); ultrasonic cleaning system: 32 ... 104 °F (0 ... 40 °C) (overheating protection); Storage temperature: 23 ... 149 °F (-5 ... +65 °C)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE	CE
Mechanical	Measuring window: Sapphire; Sensor body: V4A stainless steel 1.4571; Protection rating: IP 68	Measuring window: Sapphire; Sensor body: Titanium, POM; Protection rating: IP 68
Weight (without cable)	Approx. 2.18 lb (900 g)	3.13 lb (1420 g)
Warranty	2 years for defects in quality	

** SW: Sensor as sea water model (with plastic arming (POM))*

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

WTW a xylem brand

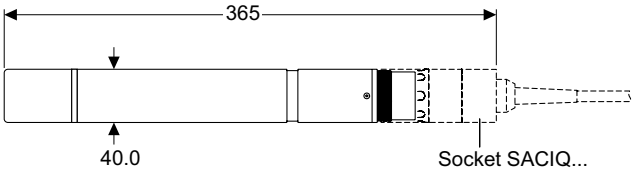
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital suspended solids sensors ViSolid®

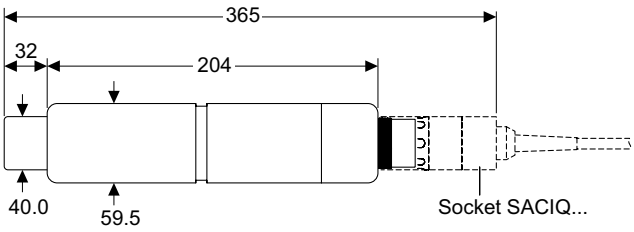
Optical sensors for the in-situ use to measure suspended solids via scattered light and direct back-scattering with ultrasonic cleaning system

We would like to inform you about the application range on our website

ViSolid® 700 IQ



ViSolid® 700 IQ SW



Technical Data

Model	ViSolid® 700 IQ	ViSolid® 700 IQ SW*
Measuring method	Procedure for measuring scattered light	
Measuring range		
g/l SiO_2	0 ... 300 g/l SiO_2	
% SiO_2	0 … 30% SiO^2	
g/l TSS	0 ... 1000 g/l TSS	
% TSS	0 … 100% TSS	
Resolution		
g/l SiO_2	Automatic according to measuring range 0.1 mg/l ... 1 g/l	
% SiO_2	Automatic according to measuring range 0.001 % ... 0.01 %	
g/l TSS	Automatic according to measuring range 0.1 mg/l ... 1 g/l	
% TSS	Automatic according to measuring range 0.001 % ... 0.1 %	
Calibration	Typical sludge characteristics stored: matrix type 1, matrix type 2 Calibration by user: adjustment via correction factor, 1-point or multi-point calibration possible	
Cleaning System	Ultrasound cleaning system	
SensCheck	Contamination detection of optical window; failure of cleaning system	
Pressure Resistance	10 bar (incl. sensor connection cable)	
Ambient Conditions	Operating temperature: 32 ... 140 °F (0 ... 60 °C); ultrasonic cleaning system: 32 ... 140 °F (0 ... 60 °C) (overheating protection); Storage temperature: 23 ... 149 °F (-5 ... +65 °C)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE	
Mechanical	Measuring window: Sapphire; Sensor body: V4A stainless steel 1.4571; Sensor head: V4A stainless steel 1.4571; Protection rating: IP 68	Measuring window: Sapphire; Sensor-body: Titanium, POM Sensor head: Titanium; Protection rating: IP 68
Weight (without cable)	Approx. 2.18 lb (900 g)	Approx. 3.13 lb (1420 g)
Warranty	2 years for defects in quality	

** SW: Sensor as sea water model (with plastic arming (POM))*

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

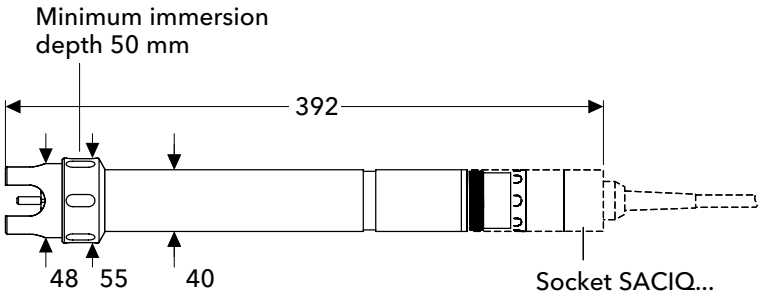
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital ISE combination sensor VARiON® for ammonium and nitrate

Ion selective measurement of ammonium and nitrate free of reagents with automatic compensation of potassium/ chloride with the VARiON® Plus 700 IQ

We would like to inform you about the application range on our website



Technical Data

Model	**VARiON®Plus**	
	Ammonium Measurement	**Nitrate Measurement**
Measuring method	Potentiometric	
Maximum Configuration	Common reference electrode, two measuring electrodes, one compensation electrode	
Integrable Electrodes:		
Reference Electrode	VARiON®Plus Ref	
Measuring Electrode	VARiON®Plus NH_4	VARiON®Plus NO_3
Compensation Electrode	VARiON®Plus K	VARiON®Plus Cl
Measuring range/ Resolution	NH_4-N: 1 ... 2,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0,1 mg/l NH_4^+: 1 ... 2,580 mg/l / 1 mg/l; 0.1 ... 129.0 mg/l / 0,1 mg/l	NO_3-N: 1 … 1,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0,1 mg/l NO_3^-: 5 … 4500 mg/l / 1 mg/l; 0.5 ... 450.0 mg/l / 0,1 mg/l
Compensation Ranges	K^+: 0.1 ... 1,000 mg/l / 0,1 mg/l	Cl-: 0.1 ... 1,000 mg/l / 0,1 mg/l
Measuring Accuracy in laboratory standard solutions	± 5 % of measured value ± 0.2 mg/l in standard solutions	
Calibration Procedures	Matrix adjustment against any reference value, 2-point-calibration possible with multiple standard solution	
Working Life (typically)	Reference electrode: 18 months, measuring and compensation electrode: 18 months (in typical application - municipal sewage plants)	
Temperature Measurement and Compensation	Integrated NTC thermistor, Range 32 °F … 104 °F (0 °C … +40 °C), Accuracy ±0.5 K, Resolution 0.1 K, t_{95} < 20 s	
pH range	pH 4 ... pH 8.5	pH 4 ... pH 11
Pressure Resistance	Maximum 0.2 bar (incl. SACIQ sensor connection cable, with installed electrodes)	
Ambient Conditions	Operating temperature: 32 °F … 104 °F (0 °C … +40 °C), storing temperature: 32 °F … 104 °F (0 °C … +40 °C)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE	
Mechanical	Sensor body: V4A stainless steel 1.4571 Temperature sensor: V4A stainless steel 1.4571 Electrode connector: POM	Protective cup: POM Protection rating: IP 68 (0.2 bar, with installed electrodes)
Weight	Approx. 1.48 lb (670 g, without electrode, without sensor connection cable)	
Warranty	VARiON®Plus 700 IQ: 2 years; Electrodes: 1 year for defects of quality	

Model	**Description**	**Order No.**
VARiON®Plus 700 IQ	Digital sensor for the ion selective measurement of ammonium and nitrate, without electrodes (Please order the sensor cable SACIQ separately)	107040
VARiON®Plus A comp SET NH_4	VARiON®Plus 700 IQ, reference electrode VARiON® Ref, ammonium measuring electrode VARiON®Plus NH_4 and compensation electrode VARiON®Plus K (potassium) (Please order the sensor cable SACIQ separately)	107060
VARiON®Plus N comp SET NO_3	VARiON®Plus 700 IQ, VARiON® Ref, VARiON®Plus NO_3 and VARiON®Plus Cl (chloride) (Please order the sensor cable SACIQ separately)	107062
VARiON®Plus AN/A comp SET NH_4 & NO_3	VARiON®Plus 700 IQ, VARiON®Ref, VARiON®Plus NH_4 and VARiON®Plus NO_3, VARiON®Plus K (potassium) (Please order the sensor cable SACIQ separately)	107066
VARiON®Plus AN/N comp SET NH_4 & NO_3	VARiON®Plus 700 IQ, VARiON®Ref, VARiON®Plus NH_4 and VARiON®Plus NO_3, VARiON®Plus Cl (chloride) (Please order the sensor cable SACIQ separately)	107068

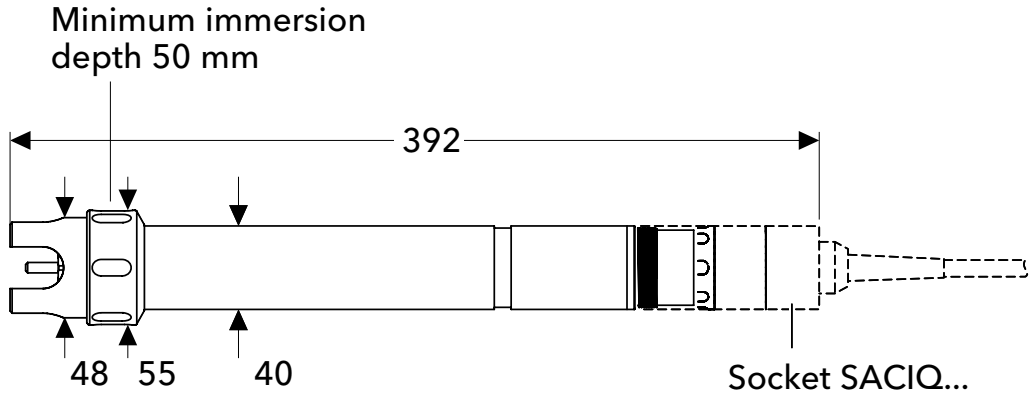
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital ISE sensor AmmoLyt® for ammonium

Ammonium measurement directly in the medium without sample preparation and sample transfer. Measurement of centrate and other process waters up to 2,000 mg/l NH_4-N

We would like to inform you about the application range on our website



Technical Data

Model	**AmmoLyt®*Plus***
Measuring method	Potentiometirc
Appropriate Electrode	Reference electrode VARiON® Ref, Measuring electrode VARiON®*Plus* NO_3, Compensation electrode VARiON®*Plus* Cl
Measuring range/ Resolution Compensation Range	NH_4-N: 1 ... 2,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0.1 mg/l NH_4+: 1 ... 2,580 mg/l / 1 mg/l; 0.1 ... 129.0 mg/l / 0.1 mg/l K+: 0.1 ... 1,000 mg/l / 0.1 mg/l
Measuring Accuracy in laboratory standard solutions	± 5 % of measured value ± 0.2 mg/l in standard solutions
Calibration Procedures	Matrix adjustment against any reference value, 2-point-calibration possible with multiple standard solution
Working Life (typically)	Reference electrode: 18 months, measuring and compensation electrode: 18 months (in typical application - municipal sewage plants)
Temperature Measurement and Compensation	Integrated NTC thermistor, Range 32 °F … 104 °F (0 °C … +40 °C), Accuracy ±0.5 K, Resolution 0.1 K, t_{95} < 20 s
pH range	pH 4 ... pH 8.5
Pressure Resistance	Maximum 0.2 bar (incl. SACIQ sensor connection cable, with installed electrodes)
Ambient Conditions	Operating temperature: 32 °F … 104 °F (0 °C … +40 °C), storing temperature: 32 °F … 104 °F (0 °C … +40 °C)
Electrical connections	2-wire shield cable with quick fastener to sensor
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation
Certifications	CE
Mechanical	Sensor body: V4A stainless steel 1.4571 — Protective cup: POM Temperature sensor: V4A stainless steel 1.4571 — Protection rating: IP 68 (0.2 bar, with installed electrodes) Electrode connector: POM
Weight	Approx. 1.48 lb (670 g, without electrode, without sensor connection cable)
Warranty	AmmoLyt®*Plus* 700 IQ: 2 years Electrodes: 1 year for defects of quality

Model	Description	Order No.
AmmoLyt® Plus 700 IQ	Digital sensor for ion selective measurement of ammonium (Please order the sensor cable SACIQ separately)	107070
AmmoLyt® Plus SET	AmmoLyt®*Plus* 700 IQ, VARiON® Ref and VARiON®*Plus* NH_4 (Please order the sensor cable SACIQ separately)	107071
AmmoLyt® Plus SET/Comp	AmmoLyt®*Plus* 700 IQ, VARiON® Ref, VARiON®*Plus* NH_4 and VARiON®*Plus* K (Please order the sensor cable SACIQ separately)	107072

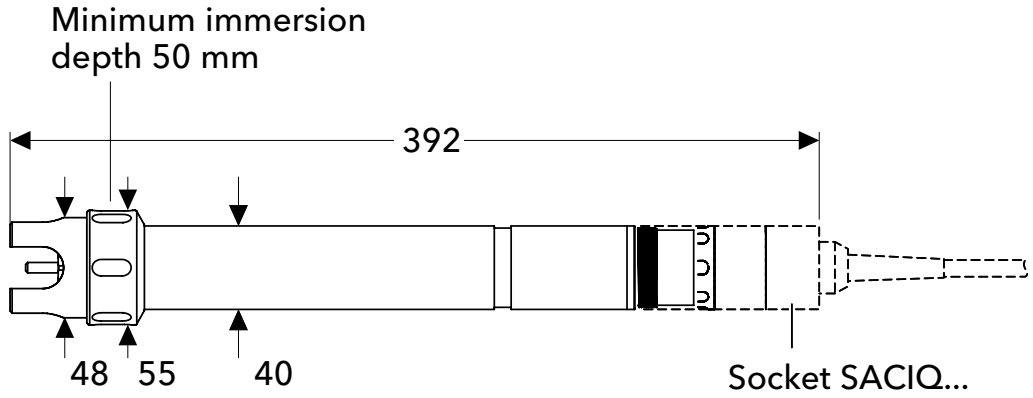
a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital ISE sensor NitraLyt® for nitrate

Nitrogen elimination – transparent, process optimized, economical. Nitrate measurement directly in the medium - optimized for regulation purposes

We would like to inform you about the application range on our website



Technical Data

Model	**NitraLyt®*Plus***
Measuring method	Potentiometirc
Appropriate Electrode	Reference electrode VARiON® Ref, Measuring electrode VARiON®*Plus* NO_3, Compensation electrode VARiON®*Plus* Cl
Measuring range/ Resolution Compensation Range	NO_3-N: 1 ... 1000 mg/l / 1 mg/l; 0.1 ... 100.0 mg/l / 0.1 mg/l NO_3^-: 5 ... 4500 mg/l / 5 mg/l; 0.5 ... 450.0 mg/l / 0.5 mg/l Cl^-: 0.1 ... 1,000 mg/l / 0.1 mg/l
Measuring Accuracy in laboratory standard solutions	± 5 % of measured value ± 0.2 mg/l in standard solutions
Calibration Procedures	Matrix adjustment against any reference value, 2-point-calibration possible with multiple standard solution
Working Life (typically)	Reference electrode: 18 months, measuring and compensation electrode: 18 months (in typical application - municipal sewage plants)
Temperature Measurement and Compensation	Integrated NTC thermistor, Range 32 °F … 104 °F (0 °C … +40 °C), Accuracy ±0.5 K, Resolution 0.1 K, t_{95} < 20 s
pH range	pH 4 ... pH 11
Pressure Resistance	Maximum 0.2 bar (incl. SACIQ sensor connection cable, with installed electrodes)
Ambient Conditions	Operating temperature: 32 °F … 104 °F (0 °C … +40 °C), storing temperature: 32 °F … 104 °F (0 °C … +40 °C)
Electrical connections	2-wire shield cable with quick fastener to sensor
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation
Certifications	CE
Mechanical	Sensor body: V4A stainless steel 1.4571 — Protective cup: POM Temperature sensor: V4A stainless steel 1.4571 — Protection rating: IP 68 (0.2 bar, with installed electrodes) Electrode connector: POM
Weight	Approx. 1.48 lb (670 g, without electrode, without sensor connection cable)
Warranty	NitraLyt®*Plus* 700 IQ: 2 years Electrodes: 1 year for defects of quality

Model	Description	Order No.
NitraLyt® Plus 700 IQ	Digital sensor for the ion selective measurement of nitrate (Please order the sensor cable SACIQ separately)	107080
NitraLyt® Plus SET	NitraLyt®*Plus* 700 IQ, VARiON® Ref and VARiON®*Plus* NO_3 (Please order the sensor cable SACIQ separately)	107081
NitraLyt® Plus SET/Comp	NitraLyt®*Plus* 700 IQ, VARiON® Ref, VARiON®*Plus* NO_3 and VARiON®*Plus* CL (Please order the sensor cable SACIQ separately)	107082

WTW a xylem brand

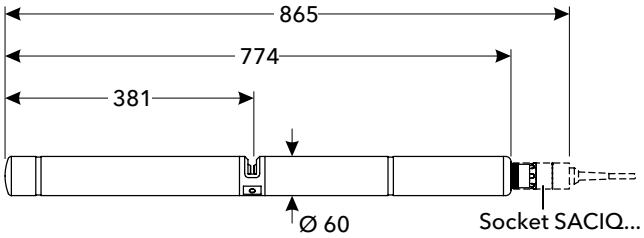
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical UV VIS spectral probe NitraVis® for nitrate and suspended solids

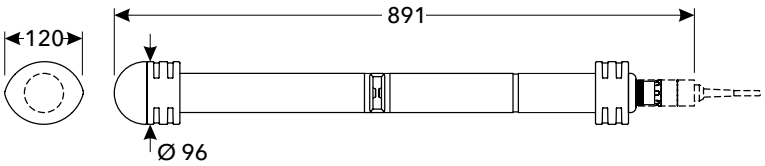
Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate and suspended solids (optional) – optimized for municipal wastewater treatment systems

We would like to inform you about the application range on our website

NitraVis® 701 IQ (TS), NitraVis® 705 IQ (TS)



With shock protection:



Technical Data

Model	NitraVis® 701 IQ	NitraVis® 705 IQ	NitraVis® 701 IQ TS	NitraVis® 705 IQ TS
Measuring method	Spectral Measurement in the UV-VIS Range (200 – 720 nm)			
Measuring gap (optical layer thickness)	1 mm	5 mm	1 mm	5 mm
Application (optimized for)	Municipal wastewater:	Municipal wastewater:	Municipal wastewater:	Municipal wastewater:
Measuring range and Resolution	**Inlet:** NO_3 0.0 ... 300.0 mg/l 0.1 mg/l NO_3-N 0.00 ... 60.00 mg/l 0.01 mg/l TSS		**Inlet:** 0.0 ... 300.0 mg/l 0.1 mg/l 0.00 ... 60.00 mg/l 0.01 mg/l 0.00 ... 15.00 g/l 0.01 g/l	
	Aeration: NO_3 0.0 ... 300.0 mg/l 0.1 mg/l NO_3-N 0.00 ... 60.00 mg/l 0.01 mg/l TSS		**Aeration:** 0.0 ... 300.0 mg/l 0.1 mg/l 0.00 ... 60.00 mg/l 0.01 mg/l 0.00 ... 20.00 g/l 0.01 g/l	
	Effluent: NO_3 *0.0 ... 750.0 mg/l 0.1 mg/l* NO_3-N *0.0 ... 150.0 mg/l 0.1 mg/l* TSS	**Effluent:** 0.0 ... 250.0 mg/l 0.1 mg/l 0.00 ... 50.00 mg/l 0.01 mg/l	*Effluent:* *0.0 ... 750.0 mg/l 0.1 mg/l* *0.0 ... 150.0 mg/l 0.1 mg/l* *0 ... 4,500 mg/l 1 mg/l*	**Effluent:** 0.0 ... 250.0 mg/l 0.1 mg/l 0.00 ... 50.00 mg/l 0.01 mg/l 0.0 ... 900.0 mg/l 0.1 mg/l
Accuracy (standard application muni. WWTP)	NO_3-N: ± 3 % of measured value ± 0.5 mg/l TSS: ± 5 % of measured value ± 50 mg/l			
Flow rate	≤ 3 m/s			
Pressure Resistance	Maximum 1 bar (incl. sensor connection cable)			
Electrical connections	2-wire shield cable with quick fastener to sensor			
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A Intended for indispensable operation			
Certifications	CE			
Mechanical	Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68			
Weight (without cable)	Approx. 8.82 lb (4 kg)			
Warranty	2 years for defects in quality			

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

a xylem brand

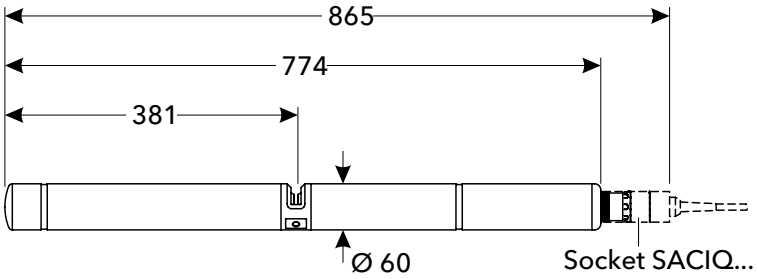
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical sensors NiCaVis® for nitrate, carbon and suspended solids

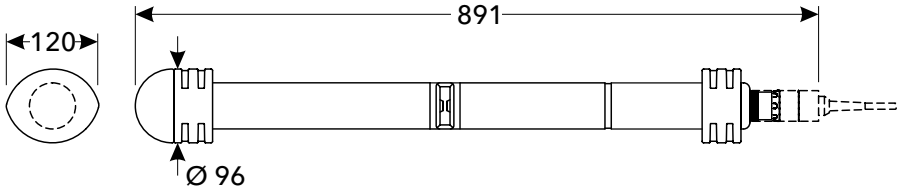
Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate, carbon and suspended solids (optional) in the wastewater treatment system drain

We would like to inform you about the application range on our website

NiCaVis® 705 IQ, NiCaVis® 705 IQ TS



With shock protection:



Technical Data

Model	NiCaVis® 705 IQ	NiCaVis® 705 IQ TS
Measuring method	Spectral Measurement in the UV-VIS Range (200–720 nm)	
Measuring gap (optical layer thickness)	5 mm	
Application (optimized for)	Municipal wastewater:	Municipal wastewater:
Measuring range and Resolution	**Effluent:**	**Effluent:**
NO_3	0.0 ... 250.0 mg/l 0.1 mg/l	0.0 ... 250.0 mg/l 0.1 mg/l
NO_3-N	0.00 ... 50.00 mg/l 0.01 mg/l	0.00 ... 50.00 mg/l 0.01 mg/l
COD	0.0 ... 800.0 mg/l 0.1 mg/l	0.0 ... 800.0 mg/l 0.1 mg/l
TOC	0.0 ... 500.0 mg/l 0.1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
DOC	0.0 ... 500.0 mg/l 0.1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
BOD	0.0 ... 500.0 mg/l 0.1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
$SAC_{254\ total}$	0.0 ... 600.0 1/m 0.1 1/m	0.0 ... 600.0 1/m 0.1 1/m
$SAC_{254\ dissolv}$	0.0 ... 600.0 1/m 0.1 1/m	0.0 ... 600.0 1/m 0.1 1/m
$UVT_{254\ total}$*	0.0 ... 100.0 % 0.1 %	0.0 ... 100.0 % 0.1 %
$UVT_{254\ dissolv}$*	0.0 ... 100.0 % 0.1 %	0.0 ... 100.0 % 0.1 %
TSS		0.0 ... 900.0 mg/l 0.1 mg/l
Accuracy (standard application muni. WWTP)	NO_3-N: ± 3 % of measured value ± 0.5 mg/l Carbon parameters: ± 5 % of measured value ± 2.5 mg/l TSS: ± 5% of measured value ± 50mg/l	
Flow rate	≤ 3 m/s	
Pressure Resistance	Maximum 1 bar (incl. sensor connection cable)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A Intended for indispensable operation	
Certifications	CE	
Mechanical	Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68	
Weight (without cable)	Approx. 8.82 lb (4 kg)	
Warranty	2 years for defects in quality	

** The UVT-254 value is standardized to 10 mm gap width.*

Model	Description	Order No.
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

WTW a xylem brand

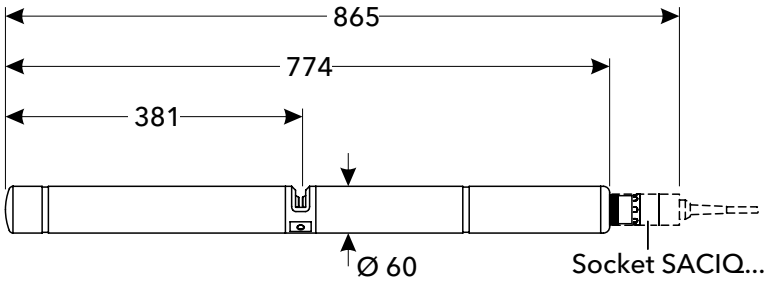
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical UV spectral probe NitraVis® NI for nitrate and nitrite

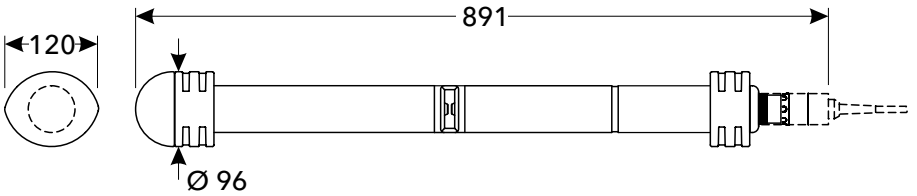
Sensor with maintenance-free ultrasonic cleaning for measurement of nitrate and nitrite directly in the process – optimized for municipal wastewater treatment systems

We would like to inform you about the application range on our website

NitraVis® 701 IQ NI, NitraVis® 705 IQ NI



With shock protection:



Technical Data

Model	NitraVis® 701 IQ NI	NitraVis® 705 IQ NI
Measuring method	Spectral Measurement in the UV Range (200–390 nm)	
Measuring gap (optical layer thickness)	1 mm	5 mm
Application (optimized for)	Municipal wastewater:	Municipal wastewater:
Measuring range and Resolution	**Inlet & Aeration:** NO_3 0.0 ... 300.0 mg/l 0.1 mg/l NO_3-N 0.00 ... 60.00 mg/l 0.01 mg/l NO_2 0.0 ... 120.0 mg/l 0.1 mg/l NO_2-N 0.00 ... 30.00 mg/l 0.01 mg/l	
	Effluent: *NO_3 0.0 ... 750.0 mg/l 0.1 mg/l* *NO_3-N 0.0 ... 150.0 mg/l 0.1 mg/l* *NO_2 0.0 ... 300.0 mg/l 0.1 mg/l* *NO_2-N 0.00 ... 75.00 mg/l 0.01 mg/l*	**Effluent:** 0.0 ... 250.0 mg/l 0.1 mg/l 0.00 ... 50.00 mg/l 0.01 mg/l 0.0 ... 100.0 mg/l 0.1 mg/l 0.00 ... 25.00 mg/l 0.01 mg/l
Accuracy (standard application muni. WWTP)	NO_3-N, NO_2-N: ±3 % of measured value ±0.5 mg/l	
Flow rate	≤ 3 m/s	
Pressure Resistance	Maximum 1 bar (incl. sensor connection cable)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A Intended for indispensable operation	
Certifications	CE	
Mechanical	Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68	
Weight (without cable)	Approx. 8.82 lb (4 kg)	
Warranty	2 years for defects in quality	

Model	Description	Order No.
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

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical UV spectral probe NiCaVis® NI for nitrite, nitrate and carbon

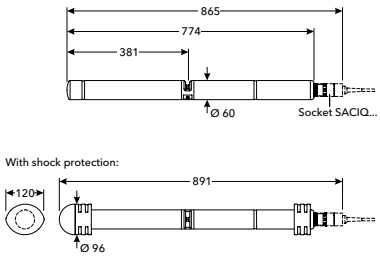
UV probes with integrated ultrasonic cleaning for the reagent-free measurement of nitrate, nitrite and carbon parameters COD, DOC, TOC, BOD, SAC and UVT directly in the process

We would like to inform you about the application range on our website

Technical Data

Model		NiCaVis® 701 IQ NI	NiCaVis® 705 IQ NI
Measuring method		Spectral Measurement in the UV Range (200–390 nm)	
Measuring gap (optical layer thickness)		1 mm	5 mm
Application (optimized for)		Municipal wastewater:	Municipal wastewater:
Measuring range and Resolution		**Inlet:**	
	NO_3	0.0 ... 300.0 mg/l 0.1 mg/l	
	NO_3-N	0.00 ... 60.00 mg/l 0.01 mg/l	
	NO_2	0.0 ... 120.0 mg/l 0.1 mg/l	
	NO_2-N	0.00 ... 30.00 mg/l 0.01 mg/l	
	COD_{total}	0 ... 20,000 mg/l 1 mg/l	
	$COD_{dissolv}$	0 ... 12,500 mg/l 1 mg/l	
	TOC	0 ... 20,000 mg/l 1 mg/l	
	DOC	0 ... 12,500 mg/l 1 mg/l	
	BOD	0 ... 8,000 mg/l 1 mg/l	
	$SAC_{254\ total}$	0 ... 5,000 1/m 1 1/m	
	$UVT_{254\ total}$*	0 ... 100.0 % 0.1 %	
		Aeration:	
	NO_3	0.0 ... 300.0 mg/l 0.1 mg/l	
	NO_3-N	0.00 ... 60.00 mg/l 0.01 mg/l	
	NO_2	0.0 ... 120.0 mg/l 0.1 mg/l	
	NO_2-N	0.00 ... 30.00 mg/l 0.01 mg/l	
	$COD_{dissolv}$	0 ... 12,500 mg/l 1 mg/l	
	DOC	0 ... 12,500 mg/l 1 mg/l	
	$SAC_{254\ total}$	0 ... 5,000 1/m 1 1/m	
	$UVT_{254\ total}$*	0 ... 100.0 % 0.1 %	
		Effluent:	**Effluent:**
	NO_3	*0.0 ... 750.0 mg/l 0.1 mg/l*	0.0 ... 250.0 mg/l 0.1 mg/l
	NO_3-N	*0.0 ... 150.0 mg/l 0.1 mg/l*	0.00 ... 50.00 mg/l 0.01 mg/l
	NO_2	*0.0 ... 300.0 mg/l 0.1 mg/l*	0.0 ... 100.0 mg/l 0.1 mg/l
	NO_2-N	*0.00 ... 75.00 mg/l 0.01 mg/l*	0.00 ... 25.00 mg/l 0.01 mg/l
	COD_{total}	*0 ... 4.000 mg/l 1 mg/l*	0.0 ... 800.0 mg/l 1 mg/l
	$COD_{dissolv}$	*0 ... 4.000 mg/l 1 mg/l*	0.0 ... 800.0 mg/l 1 mg/l
	TOC	*0 ... 2.500 mg/l 1 mg/l*	0.0 ... 500.0 mg/l 1 mg/l
	DOC	*0 ... 2.500 mg/l 1 mg/l*	0.0 ... 500.0 mg/l 1 mg/l
	BOD	*0 ... 2.500 mg/l 1 mg/l*	0.0 ... 500.0 mg/l 1 mg/l
	$SAC_{254\ total}$	*0 ... 3.000 1/m 1 1/m*	0.0 ... 600.0 1/m 1 1/m
	$UVT_{254\ total}$*	*0 ... 100.0 % 0.1 %*	0.0 ... 100.0 % 0.1 %
Accuracy (standard application muni. WWTP)		NO_3-N, NO_2-N: ±3 % of measured value ±0.5 mg/l Carbon parameters: ±5 % of measured value ±2.5 mg/l	
Flow rate		≤ 3 m/s	
Pressure Resistance		Maximum 1 bar (incl. sensor connection cable)	
Electrical connections		2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility		EN 61326. Class B. FCC Class A Intended for indispensable operation	
Certifications		CE	
Mechanical		Housing: Titan Grade 2. PEEK, Window: Sapphire glass Protection class: IP 68	
Weight (without cable)		Approx. 8.82 lb (4 kg)	
Warranty		2 years for defects in quality	

NiCaVis® 701 IQ NI, NiCaVis® 705 IQ NI



** The UVT-254 value is standardized to 10 mm gap width.*

Model	Description	Order No.
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

a xylem brand

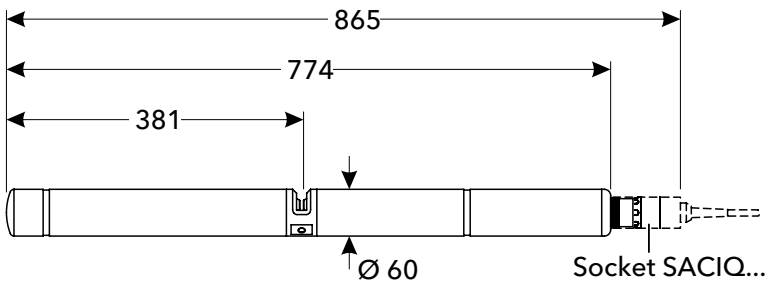
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Optical nitrate sensor UV 70x IQ NOx

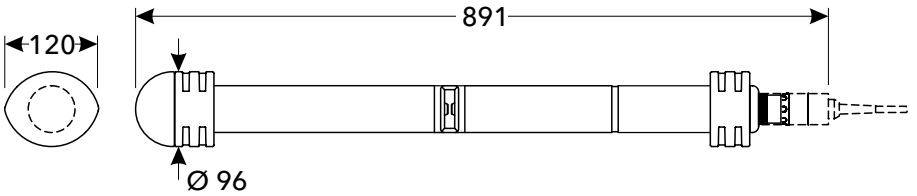
Low-cost probe with integrated ultrasonic cleaning for the maintenance-free and reagent-free measurement of nitrate

We would like to inform you about the application range on our website

UV 701 IQ NOx, UV 705 IQ NOx



With shock protection:



Technical Data

Model	UV 701 IQ NOx	UV 705 IQ NOx
Measuring method	UV Single Wavelengths Absorption Measurement	
Measuring gap (optical layer thickness)	1 mm	5 mm
Application (optimized for)	Municipal wastewater with a low proportion of industrial wastewater, waste water treatment plants, surface water	
Measuring range and Resolution	NO_X 0.0 ... 500.0 mg/l 0.1 mg/l NO_X-N 0.0 ... 100.0 mg/l 0.1 mg/l	0.0 ... 100.0 mg/l 0.1 mg/l 0.0 ... 20.0 mg/l 0.1 mg/l
Accuracy (standard application muni. WWTP)	NO_x-N: ± 3 % of measured value ± 0.5 mg/l	
Flow rate	≤ 3 m/s	
Pressure Resistance	Maximum 1 bar (incl. sensor connection cable)	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A Intended for indispensable operation	
Certifications	CE	
Mechanical	Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68	
Weight (without cable)	Approx. 8.82 lb (4 kg)	
Warranty	2 years for defects in quality	

Model	Description	Order No.
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

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital optical UV-VIS spectral sensors CarboVis®

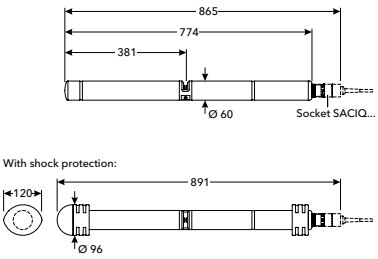
Spectral sensor with integrated ultrasonic cleaning for the chemical-free measurement of the organic load (COD/TOC/DOC/BOD/UVT/SAC) and suspended solids concentration (optional)

We would like to inform you about the application range on our website

Technical Data

Model		CarboVis® 701 IQ		CarboVis® 705 IQ		CarboVis® 701 IQ TS		CarboVis® 705 IQ TS	
Measuring method		Spectral Measurement in the UV-VIS Range (200–720 nm)							
Measuring gap (optical layer thickness)		1 mm		5 mm		1 mm		5 mm	
Application (optimized for)		Municipal wastewater:		Municipal wastewater:		Municipal wastewater:		Municipal wastewater:	
Measuring range and Resolution		**Inlet:**				**Inlet:**			
	COD_{total}	0 ... 20,000 mg/l	1 mg/l			0 ... 20,000 mg/l	1 mg/l		
	$COD_{dissolv}$	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l		
	TOC	0 ... 20,000 mg/l	1 mg/l			0 ... 20,000 mg/l	1 mg/l		
	DOC	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l		
	BOD	0 ... 8,000 mg/l	1 mg/l			0 ... 8,000 mg/l	1 mg/l		
	$SAC_{254\ total}$	0.0 ... 5,000 1/m	1 1/m			0.0 ... 5,000 1/m	1 1/m		
	$SAC_{254\ dissolv}$	0.0 ... 3,000 1/m	1 1/m			0.0 ... 3,000 1/m	1 1/m		
	$UVT_{254\ total}$*	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %		
	$UVT_{254\ dissolv}$*	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %		
	TSS					0.00 ... 15.00 g/l	0.01 g/l		
		Aeration:				**Aeration:**			
	$COD_{dissolv}$	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l		
	DOC	0 ... 12,500 mg/l	1 mg/l			0 ... 12,500 mg/l	1 mg/l		
	$SAC_{254\ total}$	0.0 ... 5,000 1/m	1 1/m			0.0 ... 5,000 1/m	1 1/m		
	$SAC_{254\ dissolv}$	0.0 ... 3,000 1/m	1 1/m			0.0 ... 3,000 1/m	1 1/m		
	$UVT_{254\ total}$*	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %		
	$UVT_{254\ dissolv}$*	0.0 ... 100.0 %	0.1 %			0.0 ... 100.0 %	0.1 %		
	TSS					0.00 ... 20.00 g/l	0.01 g/l		
		Effluent:		**Effluent:**		*Effluent:*		**Effluent:**	
	COD_{total}	*0 ... 4,000 mg/l*	*1 mg/l*	0.0 ... 800.0 mg/l	0.1 mg/l	*0 ... 4,000 mg/l*	*1 mg/l*	0.0 ... 800.0 mg/l	0.1 mg/l
	$COD_{dissolv}$	*0 ... 4,000 mg/l*	*1 mg/l*	0.0 ... 800.0 mg/l	0.1 mg/l	*0 ... 4,000 mg/l*	*1 mg/l*	0.0 ... 800.0 mg/l	0.1 mg/l
	TOC	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l
	DOC	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l
	BOD	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l	*0 ... 2,500 mg/l*	*1 mg/l*	0.0 ... 500.0 mg/l	0.1 mg/l
	$SAC_{254\ total}$	*0.0 ... 3,000 1/m*	*1 1/m*	0.0 ... 600.0 1/m	0.1 1/m	*0.0 ... 3,000 1/m*	*1 1/m*	0.0 ... 600.0 1/m	0.1 1/m
	$SAC_{254\ dissolv}$	*0.0 ... 3,000 1/m*	*1 1/m*	0.0 ... 600.0 1/m	0.1 1/m	*0.0 ... 3,000 1/m*	*1 1/m*	0.0 ... 600.0 1/m	0.1 1/m
	$UVT_{254\ total}$*	*0.0 ... 100.0 %*	*0.1 %*	0.0 ... 100.0 %	0.1 %	*0.0 ... 100.0 %*	*0.1 %*	0.0 ... 100.0 %	0.1 %
	$UVT_{254\ dissolv}$*	*0.0 ... 100.0 %*	*0.1 %*	0.0 ... 100.0 %	0.1 %	*0.0 ... 100.0 %*	*0.1 %*	0.0 ... 100.0 %	0.1 %
	TSS					*0 ... 4,500 mg/l*	*1 mg/l*	0.0 ... 900.0 mg/l	0.1 mg/l
Accuracy (standard application muni. WWTP)		Carbon parameters: ± 5 % of measured value ± 2.5 mg/l TSS: ± 5 % of measured value ± 50 mg/l							
Flow rate		≤ 3 m/s							
Pressure Resistance		Maximum 1 bar (incl. sensor connection cable)							
Electrical connections		2-wire shield cable with quick fastener to sensor							
Electromagnetic Compatibility		EN 61326, Class B, FCC Class A Intended for indispensable operation							
Certifications		CE							
Mechanical		Housing: Titan Grade 2, PEEK; Window: Sapphire glass Protection class: IP 68							
Weight (without cable)		Approx. 8.82 lb (4 kg)							
Warranty		2 years for defects in quality							

CarboVis® 701 IQ (TS), CarboVis® 705 IQ (TS)



** The UVT-254 value is standardized to 10 mm gap width.*

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

WTW a xylem brand

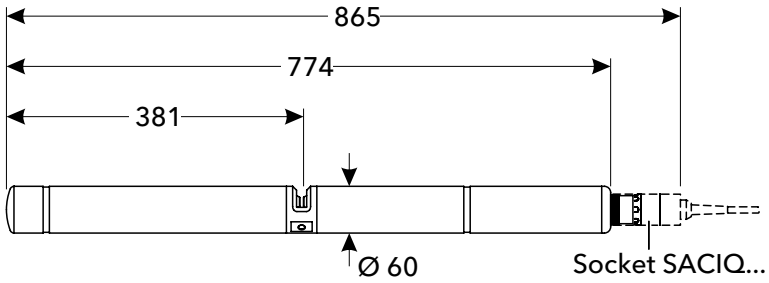
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Optical SAC and UVT sensor UV 70x IQ SAC

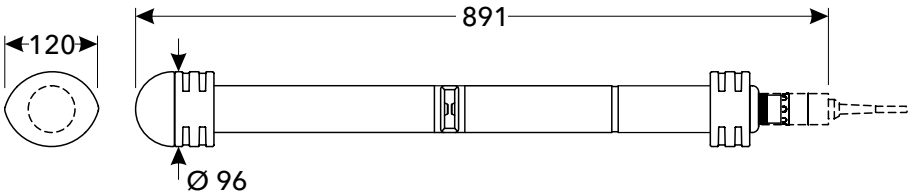
Low-cost probe (integrated ultrasonic cleaning, turbidity compensation) for the maintenance-free and reagent-free SAC measurement according to DIN 38404 C3

We would like to inform you about the application range on our website

UV 701 IQ SAC, UV 705 IQ SAC



With shock protection:



Technical Data

Model		UV 701 IQ SAC	UV 705 IQ SAC
Measuring method		UV-Absorptionsmessung 254 nm (Kompensation 550 nm)	
Measuring gap (optical layer thickness)		1 mm	5 mm
Application (optimized for)		Municipal wastewater with a low proportion of industrial wastewater, wastewater treatment plants, surface water	
Measuring range and Resolution	COD	0.0 ... 12,500 mg/l 1 mg/l	0.0 ... 800 mg/l 1 mg/l
	TOC	0.0 ... 20,000 mg/l 1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
	DOC	0.0 ... 12,500 mg/l 1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
	BOD	0.0 ... 8,000 mg/l 1 mg/l	0.0 ... 500.0 mg/l 0.1 mg/l
	$SAC_{254\ total}$	0.0 ... 3,000 1/m 1 1/m	0.0 ... 600.0 1/m 0.1 1/m
	$SAC_{254\ dissolv}$	0.0 ... 3,000 1/m 1 1/m	0.0 ... 600.0 1/m 0.1 1/m
	$UVT_{254\ total}$*	0.0 ... 100.0 % 0.1 %	0.0 ... 100.0 % 0.1 %
	$UVT_{254\ dissolv}$*	0.0 ... 100.0 % 0.1 %	0.0 ... 100.0 % 0.1 %
Flow rate		≤ 3 m/s	
Pressure Resistance		Maximum 1 bar (incl. sensor connection cable)	
Electrical connections		2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility		EN 61326, Class B, FCC Class A Intended for indispensable operation	
Certifications		CE	
Mechanical		Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68	
Weight (without cable)		Approx. 8.82 lb (4 kg)	
Warranty		2 years for defects in quality	

** The UVT-254 value is standardized to 10 mm gap width.*

Model	Description	Order No.
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

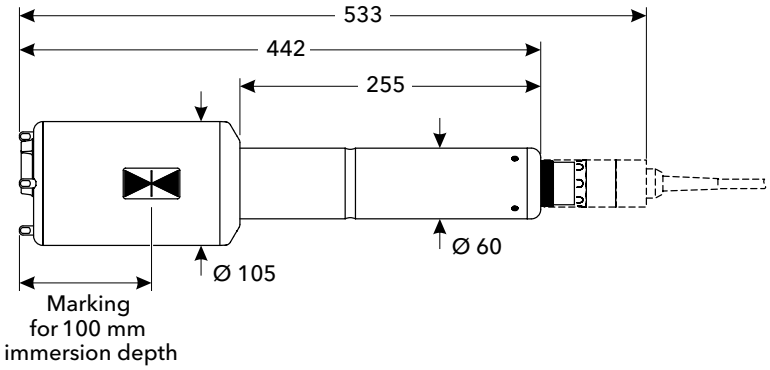
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital IQ sensor IFL 700 IQ to determine the sludge level

Unique on the market: Sludge level measurement with maintenance-free cleaning system – the IFL 700 IQ with smart signal processing

We would like to inform you about the application range on our website



Technical Data

Model	IFL 700 IQ	IFL 701 IQ
Measuring method	Ultrasound echo measurement	
Measuring range and Resolution	0.4 m – 15 m 0.01 m	
Accuracy	0.1 m	
Immersion depth	Min. 5 cm; max. 3 m	
Pressure Resistance	0.3 bar The sensor with connected SACIQ cable complies with the requirements of article 3(3), 97/23/EU guideline	
Ambient Conditions	Medium: 0 °... +50 °C, Storage and transport: –5° … +50°C	
Electrical connections	2-wire shield cable with quick fastener to sensor	
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation	
Certifications	CE, cETL, ETL	
Equipment safety, Standards	EN 61010-1; UL 61010-1; CAN/CSA C22.2#61010-1	
Mechanical	Shaft and baseplate: V4A stainless steel 1.4571 Plug head and transition unit: POM Ultrasound unit: PVC-C Protection rating: IP68 Cleaning system: Grade 2 Titanium (shaft), Grivory	Shaft and baseplate: V4A stainless steel 1.4571 Plug head and transition unit: POM Ultrasound unit: PVC-C Protection rating: IP68
Weight (without cable)	Approx. 3.6 kg (7 lb)	
Warranty	2 years for defects in quality	

Model	Description	Order No.
IFL 700 IQ	Digital ultrasonic sensor with automatic cleaning to measure the sludge level	481200
IFL 701 IQ	Digital ultrasonic sensor to measure the sludge level	481201

WTW a xylem brand

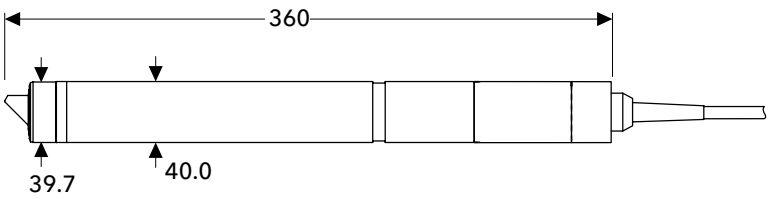
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Digital IQ fixed cable sensors for dissolved oxygen

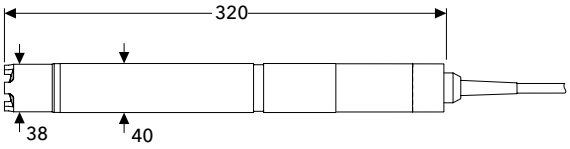
Optical or electro-chemical: The IQ fixed cable sensors for dissolved oxygen provide reliable measuring values for your single parameter measuring point

We would like to inform you about the application range on our website

FDO® 700 IQ F, FDO® 701 IQ F



TriOxmatic® 700 IQ F



Technical Data

Model	TriOxmatic® 700 IQ F	FDO® 700 IQ F	FDO® 701 IQ F
Measuring method	Amperometric	Optical	
Replacement caps	–	SC-FDO® 700 with a working life of 2 years with authorized use	SC-FDO® 701 with a working life of 6 months with authorized use
Measuring range (25 °C)			
O_2 concentration	0.0 ... 60.0 mg/l	0 ... 20.00 mg/l (0 ... 20.00 ppm)	
O_2 saturation	0 ... 600%	0 ... 200.0 %	
Resolution			
O_2 concentration	0.1 mg/l	0.01 mg/l (0.01 ppm)	
O_2 saturation	1%	0.1 %	
Accuracy	Depending on calibration ±0.1 mg/l or 1 % (at 0.0 ... 60.0 mg/l)	< 1 mg/l (ppm): ±0.05 mg/l (ppm) > 1mg/l (ppm): ±0.1 mg/l (ppm)	
Response time at 25 °C	t_{90}: 180 s	t_{90}: < 150 s t_{95}: < 200 s	t_{90}: < 60 s t_{95}: < 80 s
Minimum flow rate	0.05 m/s	No flow required	
SensCheck	SensLeck SensReg	Monitoring of membrane function	
Temp. measurement	Integrated NTC, 23 °F ... 140 °F (-5 °C ... +60 °C) ± 0.5 °C		
Temp. compensation	32 °F ... 140 °F (0 °C ... +60 °C)	23 °F ... 122 °F (-5 °C ... +50 °C)	
Pressure Resistance	Maximum 2 bar (incl. sensor connection cable)		
Ambient Conditions	Operating temperature: 32 °F ... 140 °F (0 °C ... +60 °C) Storage temperature: 23 °F ... 149 °F (-5 °C ... +65 °C)	23 °F ... 122 °F (-5 °C ... +50 °C) -13 °F ... 122 °F (-25 °C ... +50 °C)	23 °F ... 104 °F (-5 °C ... +40 °C) -13 °F ... 104 °F (-25 °C ... +40 °C)
Electrical connections	2-wired shield fixed cable		
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation		
Certifications	CE, cETL, ETL		
Mechanical	Membrane head assembly, locking cap: POM Sensor body: V4A stainless steel 1.4571 Protection rating: IP 68	Sensor cap, fixation: POM, PVC, silicone, PMMA Housing shaft: VA steel 1.4571 Protection rating: IP 68	
Weight (without cable)	Approx. 2.2 lb (1000 g)	Approx. 2.42 lb (1100 g)	
Warranty	2 years for defects in quality		

Model	Description	Order No.
FDO® 700 IQ F	Optical oxygen sensor, calibration-free, for DIQ/S 181(/24V), with 10 m fixed cable for DIQ/S 181(/24V)	201656
FDO® 701 IQ F	Optical oxygen sensor, calibration-free for DIQ/S 181(/24V), with 10 m fixed cable and fast response time, for DIQ/S 181(/24V)	201658
TriOxmatic® 700 IQ F	Electro-chemical oxygen sensor, for DIQ/S 181(/24V), with 10 m fixed cable, for DIQ/S 181(/24V)	201643
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

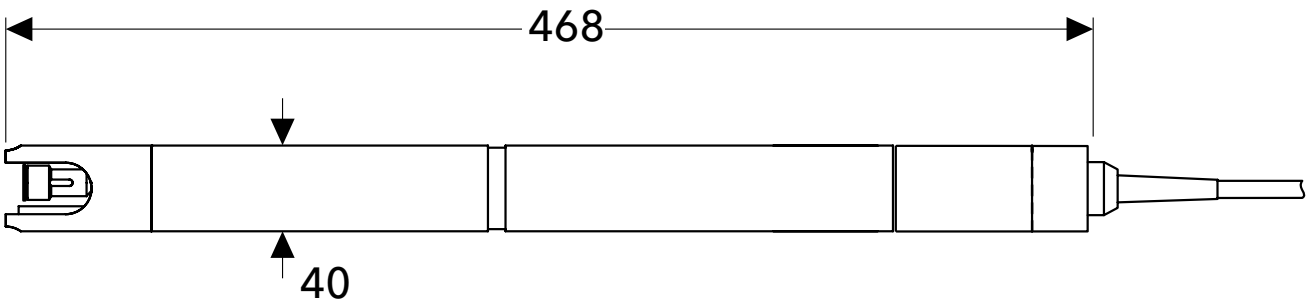
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ fixed cable armature for digital pH/ ORP measurement

SensoLyt® 700 IQ F with integrated pre-amplifier, temperature sensor and lightning protection - in the wastewater treatment plant or for drinking water applications

We would like to inform you about the application range on our website



Technical Data

Model	SensoLyt® 700 IQ F
Measuring method	Potentiometric
Measuring range	0.00 ... 14.00 pH (depending on the electrode) ± 2000mV (depending on the electrode)
Resolution	0.01 pH 1mV
Accuracy	Depends on calibration ±0.2 pH; ±20 mV
Integrated Preamplifier	Yes
Sensor check funktion	Yes
Temp. measurement	Integrated NTC, 23 ... 140 °F (-5 ... +60 °C)
Temp. compensation	32 ... 140 °F (0 ... +60 °C)
Pressure Resistance	2 bar
Ambient Conditions	Operating temperature: 32 ... 140 °F (0 ... +60 °C)
Electrical connections	2-wired shield fixed cable
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation
Certifications	CE, cETL, ETL
Mechanical	Sensor body: V4A stainless steel 1.4571 Protection cap: PVC Sensor holder: POM Protection rating: IP 68
Weight (without cable)	Approx. 3.09 lb (1400 g)
Warranty	2 years for defects in quality

Model	Description	Order No.
SensoLyt® 700 IQ F	Robust digital pH/ORP meter for pH/ORP measuring chains SensoLyt® SEA/DWA/ECA/PtA, can be connected to DIQ/S 181(/24 V), with 10 m fixed cable	109177

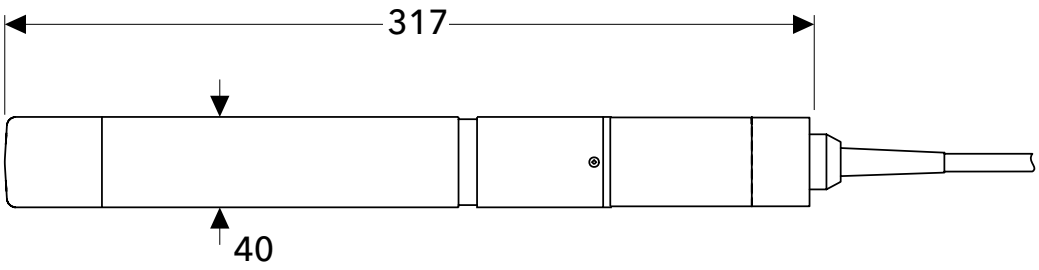
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

IQ fixed cable measuring cell for digital conductivity measurement

Digital fixed cable measuring cell with 4 electrode system – the TetraCon® 700 IQ F especially for operation as fixed conductivity measuring point with DIQ/S 181(/24 V)

We would like to inform you about the application range on our website



Technical Data

Model	TetraCon® 700 IQ F
Measuring method	Conductometric (4-electrode cell)
Measuring range	10 µS/cm - 500 mS/cm SAL: 0 … 70 TDS: 0 … 2000 mg/l
Accuracy	±2 % of measured value ±1 Digit (in standard solution, 25 °C, with non-linear temp. comp. (acc. DIN 38404))
Cell Constants	K = 0.917 cm^{-1}, ±1.5% (in free solution) K = 0.933 cm^{-1}, TetraCon® 700 IQ with EBST 700-DU/N flow assembly
Resolution	Depending on measuring range
Temp. measurement	-5 ... +60 °C (23 ... 140 °F); NTC
Temp. compensation	linear: 32 ... 140 °F (0 ... +60 °C) nonlinear: +5 °C ... 35 °C (acc. to DIN 38404) nonlinear: +35 °C ... +60 °C (acc. to WTW procedure)
Pressure Resistance	10 bar
Ambient Conditions	-5 ... +60 °C (23 ... 140 °F)
Electrical connections	2-wired shield fixed cable
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation
Certifications	CE, cETL, ETL
Mechanical	Sensor head: PVC Sensor body: V4A stainless steel 1.4571 Protection rating IP 68
Weight (without cable)	Approx. 3.09 lb (1400 g)
Warranty	2 years for defects in quality

Model	Description	Order No.
TetraCon® 700 IQ F	Digitale 4 electrode conductivity measuring cell for strongly contaminated wastewater, can be connected to DIQ/S 181(/24V), with 10 m fixed cable	302507

a xylem brand

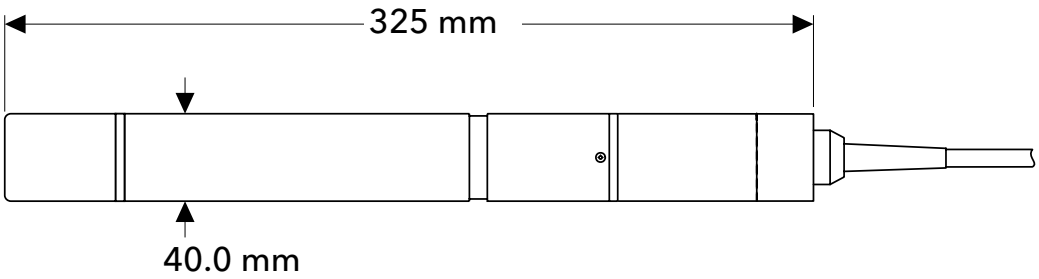
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999245US
February 2020

Digital IQ fixed cable sensor for turbidity measurement

Low-maintenance sensor with ultrasonic cleaning – the VisoTurb® 700 IQ F is especially suitable for operation as fixed turbidity measuring point at the DIQ/S 181(/24 V)

We would like to inform you about the application range on our website



Technical Data

Model	**VisoTurb® 700 IQ F**
Measuring method	Nephelometric principle in compliance with EN ISO 7027
Measuring range	
FNU; NTU; TEF	0 ... 4000 FNU
mg/l SiO_2; ppm SiO_2	0.1 ... 4000 mg/l SiO_2
g/l TSS	0.0001 ... 400 g/l TS
Resolution	
FNU; NTU; TEF	Automatic according to measuring range 0.001 ... 1 FNU
mg/l SiO_2; ppm SiO_2	0.001 mg/l ... 0.01 g/l
g/l TSS	0.001 mg/l … 1 g/l
Accuracy	Process variation coefficient according to DIN 38402 part 51 <1 % (in the range up to 2000 FNU) Repeatability according to DIN ISO 5725 or DIN 1319 < 0.015 % or ≥ 0.006 FNU
Calibration	
FNU; NTU; TEF	Factory calibration with formazine
mg/l SiO_2; ppm SiO_2	Factory calibration with SiO_2
g/l TSS	Calibration by user, (TSS regulations in compliance with DIN 38414)
Cleaning System	Ultrasound cleaning system
SensCheck	Contamination detection of optical window; failure of cleaning system
Pressure Resistance	2 bar
Ambient Conditions	Operating temperature: 32 ... 140 °F (0 ... 60 °C); ultrasonic cleaning system: 32 ... 104 °F (0 ... 40 °C) (overheating protection); Storage temperature: 23 ... 149 °F (-5 ... +65 °C)
Electrical connections	2-wired shield fixed cable
Electromagnetic Compatibility	EN 61326, Class B, FCC Class A; Intended for indispensable operation
Certifications	CE
Mechanical	Measuring window: Sapphire; Sensor body: V4A stainless steel 1.4571; Protection rating: IP 68
Weight (without cable)	Approx. 3.09 lb (1400 g)
Warranty	2 years for defects in quality

Model	Description	Order No.
VisoTurb® 700 IQ F	Digital turbidity sensor to use in drinking water/water/wastewater with ultrasonic cleaning, to be connected to DIQ/S 181(/24 V), with fixed cable	600007

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

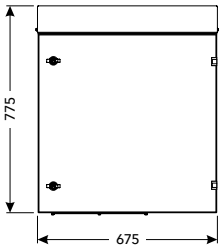
999246US
April 2020

Orthophosphate Analyzer Alyza IQ

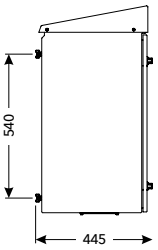
To control precipitant dosing and to monitor the outlet of a wastewater treatment plant with the IQ Sensor Net (Systems 2020 and 282/284)

We would like to inform you about the application range on our website

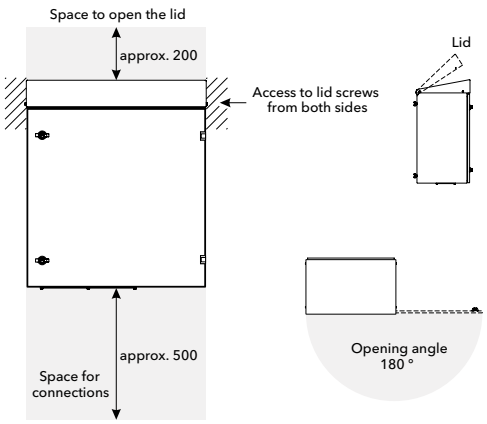
Front view:



Lateral view:



Required space



Technical Data

Model	Alyza IQ PO_4-111	Alyza IQ PO_4-112	Alyza IQ PO_4-121	Alyza IQ PO_4-122
Measuring method	Molybdate vanadate method (Yellow method)			
Measuring range	**MR 1:** 0.02 … 15.00 mg/l PO_4-P Displayed: 0.00 … 15.00 mg/l PO_4-P		**MR 2:** 0.2 … 50.0 mg/l PO_4-P Displayed: 0.0 … 50.0 mg/l PO_4-P	
Resolution	0.01 mg/l PO_4-P		0.05 mg/l PO_4-P	
Accuracy	± 2 % ± 0.02 mg/l		± 2 % ± 0.2 mg/l	
Sample streams/channels	1 channel	2 channel	1 channel	2 channel
pH range	5 … 9			
Sample temperature	+39 ... +113 °F (+4 … +45 °C)			
Filtration unit	Filter/PC, FM-Case/PC (please order separately)			
Cleaning	Automatic cleaning with cleaning solution			
Calibration	Automatic 1- and 2-point calibration			
Ambient conditions	Operational temperature: -4 ... +104 °F (-20 … +40 °C); Storage temperature: -4 ... +122 °F (-20 … +50 °C)			
Electrical connection	120 VAC / 240 VAC, 50/60 Hz			
Mechanics	Housing: powder-coated aluminum, UV resistant Overflow vessel: PMMA			
Weight	Approx. 81.6 lb (37 kg) (without liquids)			
Warranty	2 years			

Subject to technical modifications.

Model	Description	Order No.
Alyza IQ PO_4-111	PO_4 analyzer, 1-channel, with MR 1, yellow method, connectable to IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately	825511
Alyza IQ PO_4-112	PO_4 analyzer, 2-channel, with MR 1, yellow method, connectable to IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately	825512
Alyza IQ PO_4-121	PO_4 analyzer, 1-channel, with MR 2, yellow method, connectable to IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately	825521
Alyza IQ PO_4-122	PO_4 analyzer, 2-channel, with MR 2, yellow method, connectable to IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately	825522
Reagent sets		
R-Set PO4/1-1	Reagents for Alyza IQ PO_4-X1X with MR 1	827550
R-Set PO4/1-2	Reagents for Alyza IQ PO_4-X2X with MR 2	827551
SC-Set PO4/1-1_0/1	Calibration standards and cleaning solution for Alyza IQ PO_4-X1X with MR 1; Calibration standards with 0 mg/l and 1 mg/l	827555
SC-Set PO4/1-1_0/10	Calibration standards and cleaning solution for Alyza IQ PO_4-X1X with MR 1; Calibration standards with 0 mg/l and 10 mg/l	827556
SC-Set PO4/1-2_10/40	Calibration standards and cleaning solution for Alyza IQ PO_4-X2X with MR 2; Calibration standards with 10 mg/l and 40 mg/l	827557

WTW a xylem brand

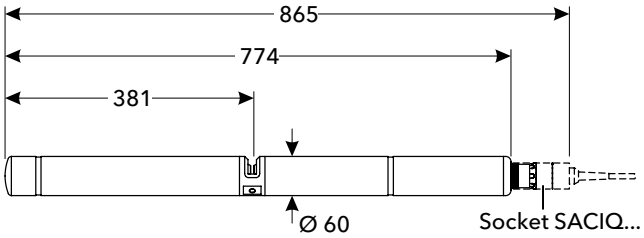
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

NiCaVis® optical sensors for surface water monitoring

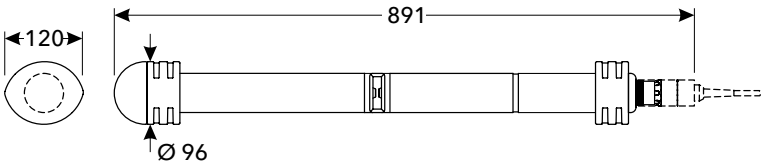
Multiparameter-sensor with maintenance-free ultrasonic cleaning technology for the reagent-free measurement of nitrate, nitrite (optional) and Carbon parameters in rivers and lakes.

We would like to inform you about the application range on our website

NiCaVis® 705 IQ SF, NiCaVis® 705 IQ NI SF



With shock protection:



Technical Data

Model		NiCaVis® 705 IQ SF		NiCaVis® 705 IQ NI SF	
Measuring method		Spectral measurement in the UV-VIS range of 200-720 nm		Spectral measurement in the UV range of 200–390 nm	
Measuring gap (optical layer thickness)		5 mm		5 mm	
Application (optimized for)		Surface water e.g. rivers and lakes		Surface water e.g. rivers and lakes	
Measuring range and Resolution	NO_3	0.0 ... 250.0 mg/l	0.1 mg/l	0.0 ... 250.0 mg/l	0.1 mg/l
	NO_3-N	0.00 ... 50.00 mg/l	0.01 mg/l	0.00 ... 50.00 mg/l	0.01 mg/l
	NO_2			0.0 ... 100.0 mg/l	0.1 mg/l
	NO_2-N			0.00 ... 25.00 mg/l	0.01 mg/l
	COD	0.0 ... 800.0 mg/l	0.1 mg/l	0.0 ... 800.0 mg/l	0.1 mg/l
	TOC	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l
	DOC	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l
	BOD	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l	0.1 mg/l
	$SAC_{254\ total}$	0.0 ... 600.0 1/m	1 1/m	0.0 ... 600.0 1/m	1 1/m
	$SAC_{254\ diss.}$	0.0 ... 600.0 1/m	1 1/m		
	$UVT_{254\ total}$*	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %	0.1 %
	$UVT_{254\ diss}$*	0.0 ... 100.0 %	0.1 %		
	TSS	0.0 ... 900.0 mg/l	0.1 mg/l		
Accuracy (standard application surface water)		NO_3-N, NO_2-N: ± 3 % of measured value +± 0.5 mg/l Carbon parameters: ± 5 % of measured value ± 2.5 mg/l TSS: ± 5 % of measured value ± 50 mg/l			
Flow rate		≤ 3 m/s			
Pressure Resistance		Maximum 1 bar (incl. sensor connection cable)			
Electrical connections		2-wire shield cable with quick fastener to sensor			
Electromagnetic Compatibility		EN 61326, Class B, FCC Class A Intended for indispensable operation			
Certifications		CE			
Mechanical		Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68			
Weight (without cable)		Approx. 8.82 lb (4 kg)			
Warranty		2 years for defects in quality			

** The UVT-254 value is standardized to 10 mm gap width.*

Model	Description	Order No.
NiCaVis® 705 IQ SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, COD, TOC, BOD, DOC, SAC, UVT254 and TS in surface water bodies with integrated ultrasonic cleaning.	481058
NiCaVis® 705 IQ NI SF	Spectral UV-VIS sensor (60 mm) for the measurement of Nitrate, Nitrite, COD, TOC, BOD, DOC, SAC, UVT254 and TS in surface water bodies with integrated ultrasonic cleaning.	481059

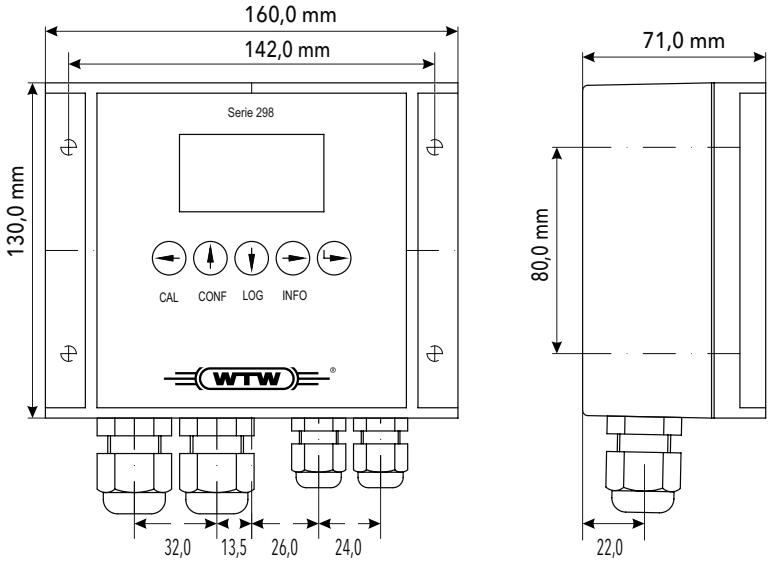
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog controllers

pH 298, **Oxi 298**, **LF 298** and **Cl 298** are analog controllers to directly connect analog pH/ORP electrodes, oxygen sensors, conductivity cells and chlorine electrodes.

We would like to inform you about the application range on our website



Technical Data

Model	pH 298	Oxi 298	LF 298	Cl 298
Parameter	pH/ORP	Oxygen	Conductivity	Chlorine, elektrochemical
Measuring Range	-2 … 16 pH -2000 … +2000 mV	0 … 20 mg/l 0 … 200 %	0 … 500 mS/cm, different measuring ranges adjustabel	0 … 2 mg/l
Temperature Measurement*)	-10 … 130 °C NTC or Pt1000 or Pt100	-10 … 130 °C NTC or Pt1000		-10 … 130 °C Pt1000
Temperature Compensation	Automatically via temperature measurement in the sensor or via manual input			
Relays	2 x switching contacts, change-over, max. 250 VAC / 5 A			
Current Outputs	2 x 0(4) … 20 mA			
Digital Interface	Modbus / RS485 USB (for configuration, calibration, data recording)			
Display	OLED (128 x 64 pixel) with plain text menue			
Data Logger	Integrated with real time clock for 4000 datasets, storable via USB, grafical display			
Electric Supply	100 … 240 V AC or 18 … 36 V DC			
Ambient Conditions	Operational temperature: -10 … 55 °C			
Housing Material	Cast Aluminium for wall mounting			
Protection Rating	IP 65			
Weight	2 kg			
Warranty	3 years on defects in quality according to § 10 terms of condition			

**) Please note: The permitted operating voltage of the sensor can vary considerably*

Model	Description	Order No.
pH 298 NTC	Analog controller to measure pH/ORP, 230 V (and 115 V) and NTC	191230
pH 298 Pt100	Analog controller to measure pH/ORP, 230 V (and 115 V) and Pt100	191232
pH 298 Pt1000	Analog controller to measure pH/ORP, 230 V (and 115 V) and Pt1000	191234
Oxi 298 NTC	Analog controller to measure oxygen, 230 V (and 115 V) and NTC	291230
Oxi 298 Pt1000	Analog controller to measure oxygen, 230 V (and 115 V) and Pt1000	291234
LF 298 NTC	Analog controller to measure conductivity, 230 V (and 115 V) and NTC	391230
LF 298 Pt1000	Analog controller to measure conductivity, 230 V (and 115 V) and Pt1000	391234
Cl 298 Pt1000	Analog controller to measure chlorine, 230 V (and 115 V) and Pt1000	801254

24V versions available upon request

WTW a xylem brand

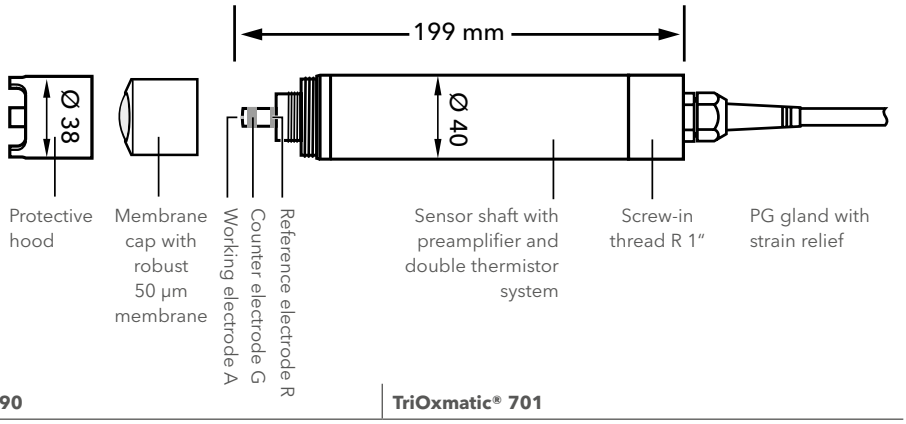
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog electrochemical oxygen sensors TriOxmatic®

The WTW TriOxmatic® has proven its worth in the field over years: More than 20,000 installations in reliable Online operation speak for themselves ...

We would like to inform you about the application range on our website

TriOxmatic® 690, TriOxmatic® 700, TriOxmatic® 701



Technical Data

Model		TriOxmatic® 690	TriOxmatic® 701
Measuring principle		Amperometric	
Measuring Range (25 °C, depends on respective controller)			
	O_2 Concentration	0.0 ... 60.0 mg/l	0.00 ... 20.00 mg/l; 0.0 ... 60.0 mg/l
	O2 Saturation	0 ... 600 %	0.0 ... 200.0 %; 0 ... 600 %
Resolution	**O_2 Concentration**	0.1 mg/l	0.01 mg/l; 0.1 mg/l
	O2 Saturation	1 %	0.1 %; 1 %
Response time at 25 °C		t_{90}: 180 s	t_{90}: 30 s; t_{99}: 90 s
Minimum flow rate		0.05 m/s	0.23 m/s
SensCheck		–	SensLeck, SensReg
Temperature Measurement		Integrated NTC, -5 °C ... +50 °C	
Temperature Compensation		0 °C ... +50 °C	
Pressure Resistance		Maximum 10 bar	
Ambient Conditions		Operational temperature: 0 °C ... +50 °C; Storage Temperature: -5 °C ... +50 °C	
Electrical Connection		Integrated connection cable with 7-pole screw plug (IP 65); electrical supply via WTW controller	
Electromagnetic Compatibility		According to EN 61326 class B and FCC class A	
Certifications		CE, cUL, UL	
Mechanical	Membrane/ sensor head, Protection hood	POM	
	Housing shaft	Stainless steel 1.4571	
	Protection Rating	IP 68	
	Cable	PUR	PU
Weight (without cable)		Approx. 660 g	
Warranty		2 years on defects in quality according to § 10 terms of conditions	

Model	Description	Order No.
TriOxmatic® 690-7	Universal oxygen sensor without self diagnosis, with normal response time, cable length 7 m	201690
TriOxmatic® 690-15	Like TriOxmatic® 690-7, but cable length 15 m	201692
TriOxmatic® 690-SO	Like TriOxmatic® 690-7, but cable length freely selectable	201693V
TriOxmatic® 701-7	Oxygen sensor with automatic self diagnosis and faster response time, cable length 7 m	201678
TriOxmatic® 701-15	Like TriOxmatic® 701-7, but cable length 15 m	201680
TriOxmatic® 701-SO	Like TriOxmatic® 701-7, but cable length freely selectable	201682V

a xylem brand

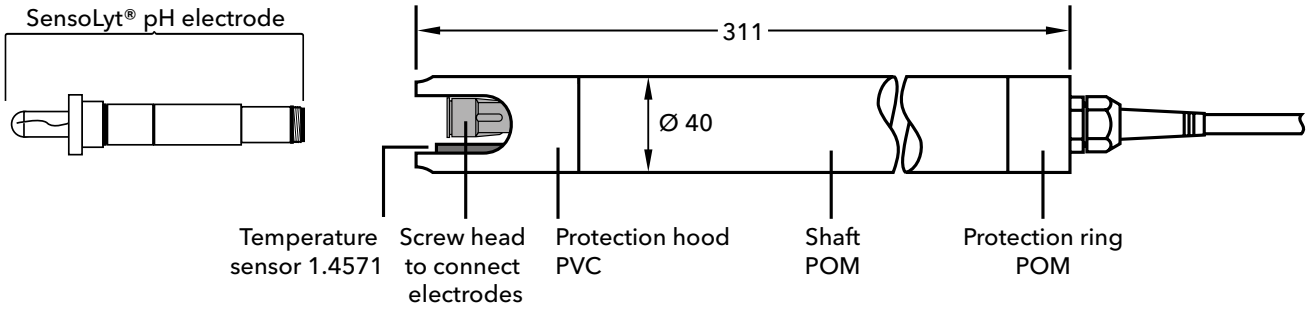
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog pH/ORP armature SensoLyt®

pH/ORP armature for SensoLyt®
electrodes, with overvoltage protection
and integrated temperature sensor

We would like to inform you about the application range on our website

SensoLyt® 650 armature with electrode



Technical Data

Model	**SensoLyt® 650**
Measuring principle	Potentiometric
Measuring Range	4 … 12 pH (armature)
Integrated preamplifier	No
Signal output	High-impedance
Temperature Measurement	Integrated NTC 0 … +60 °C
Pressure Resistance	10 bar
Ambient Conditions	Operational temperature: 0 … +60 °C
Electrical Connection	Integrated PUR connection cable with 7-pole screw plug
Certifications	CE
Mechanical	Sensor shaft: POM; Protection hood: PVC; Protection rate IP 68
Weight (without cable)	Approx. 320 g
Warranty	2 years on defects in quality according to § 10 terms of conditions

Model	**Description**	**Order No.**
SensoLyt® 650-7	pH/ORP armature with high-impedance signal transmission and integrated temperatur sensor, cale length 7 m	109195

WTW a xylem brand

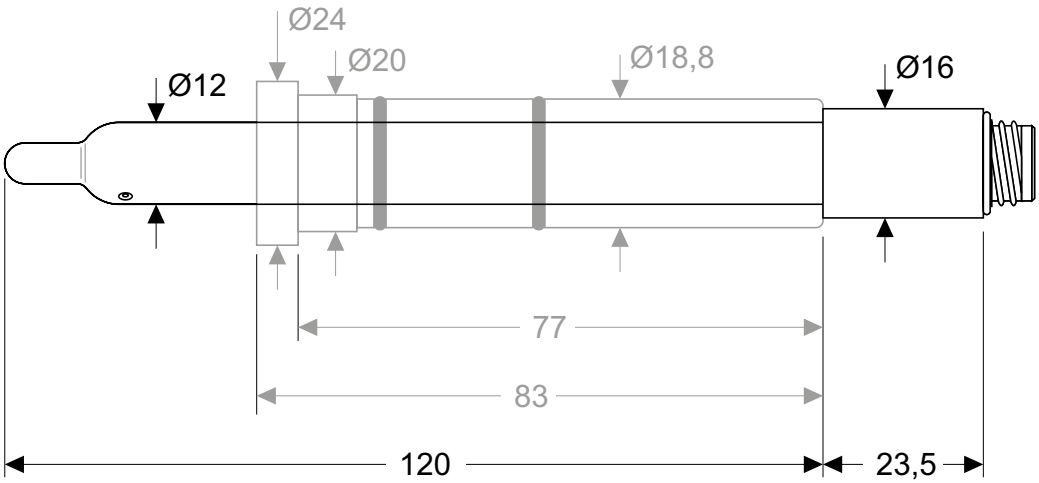
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog pH/ORP electrodes (SensoLyt® series)

SensoLyt® electrodes for all applications – from drinking water to wastewater. Armed versions for connection with SensoLyt® armature

We would like to inform you about the application range on our website

SensoLyt® electrode



Technical Data

SensoLyt® Models		SEA-HP	SEA	SE	TFA	DWA	DW	ECA	EC	PtA	Pt
Reference System		Gel polymer solid electrolyte				Modified gel electrolyte		Gel electrolyte		Gel polymer solid electrolyte	
Diaphragm		2-hole junction			PTFE ring dia-phragm	Ceramic junction		1-hole junction		2-hole junction	
Pressure Resistance	**at 20 °C**	10 bar	10 bar	–	10 bar		–	10 bar	–	10 bar	–
	at 60 °C	10 bar	1 bar	–	1 bar		–	1 bar	–	1 bar	–
Temperature Range		0 ... +60 °C									
Measuring Range / Range of Application		4 ... 12 pH	2 ... 12 pH			0 ... 14 pH		2 ... 12 pH		±2.000 mV***	
Mechanical	Shaft	Glass									
	Armor	POM	PVC-U	–	PVC-U		–	PVC-U	–	PVC-U	–
	Connection head	PPS-GF 40									
	O rings	FPM (Viton)									
	Watering cap	PE									
Temperature sensor		Integrated in SensoLyt® armature									
Electrical Connection		Watertight plug-in system (S7)									
Warranty		6 months on defects in quality according to § 10 terms of conditions									

Model	Description	Order No.
SensoLyt® SEA	pH electrode for heavily loaded wastewater, to be connected to SensoLyt® armature, range 2 ... 12 pH	109115
SensoLyt® TFA	pH electrode for industrial or non typical municipal wastewater, to be connected to SensoLyt® armature, range 2 ... 12 pH	109114
SensoLyt® ECA	pH electrode for normally charged wastewater, to be connected to SensoLyt® armature, range 2 ... 12 pH	109117
SensoLyt® SEA-HP	pH electrode to be used under increased pressure and temperature conditions, to be connected to SensoLyt® armature, range 4 ... 12 pH	109118
SensoLyt® DWA	pH electrode for drinking water, to be connected to SensoLyt® armature, range 0 ... 14 pH	109119
SensoLyt® PtA	ORP electrode for heavily loaded wastewater, to be connected to SensoLyt® armature, range ±2000 mV	109125
SensoLyt® SE	Like model SEA, but unamored, to be installed by example in flow cells	109100
SensoLyt® EC	Like model ECA, but unamored, to be installed by example in flow cells	109102
SensoLyt® DW	Like model DWA, but unamored, to be installed by example in flow cells	109103
SensoLyt® Pt	Like model PtA, but unamored, to be installed by example in flow cells	105412

WTW a xylem brand

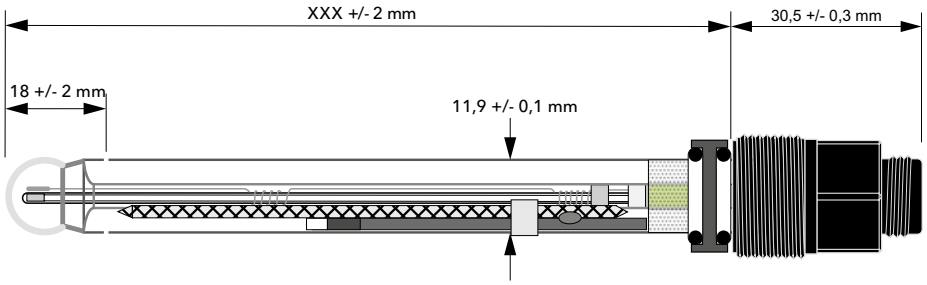
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog pH/ORP electrodes (ProcessLine®series)

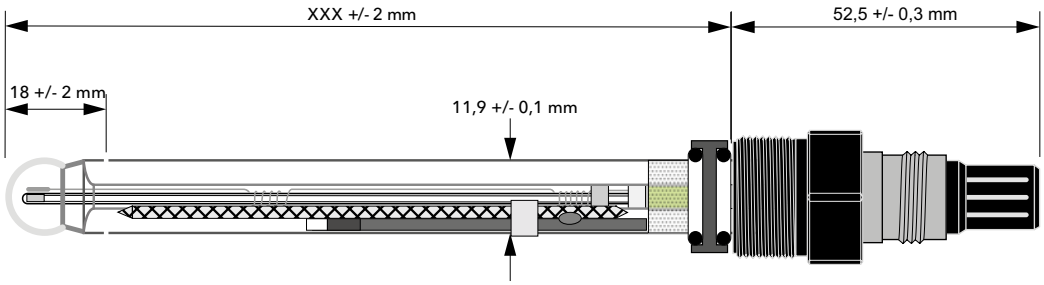
ProcessLine® (PL) electrodes for all applications: To be installed in a flow cell or in a retractable armature

We would like to inform you about the application range on our website

ProcessLine® electrode with S8 plug head



ProcessLine® electrode with VP plug head



Technical Data

ProcessLine® Models		PL 80-120pH	PL 80-225pH	PL 81-225pHT VP	PL 82-225pHT VP	PL 89-225Pt
Reference System		DuraLid polymere electrolyte, low maintenance, Ag/AgCl system				
Diaphragm		2-hole junction				
Pressure Resistance		12 bar				
Temperature Range		0 ... +130 °C				
Measuring range / Range of application		pH 0 ... 14				± 2000 mV
Mechanical		Shaft: Glass Screw-in thread: PPS O rings: Viton® Flat washer: Stainless steel 1.4571 Watering cap: PE				
Dimensions	Installation length	120 mm	225 mm	225 mm	225 mm	225 mm
	Shaft Ø	12 mm				
Temperature sensor		–		Pt 1000	Pt 100	–
Electrical Connection		S8 plug head, PG 13,5		VP plug, PG 13,5	VP plug, PG 13,5	S8 plug head, PG 13,5
Warranty		6 months on defects in quality according to § 10 terms of conditions				

Model	Description	Order No.
PL 80-120pH	pH electrode with S8 plug head, measuring range 0 ... 14 pH	109233
PL 80-225pH	pH electrode with S8 plug head, measuring range 0 ... 14 pH, can be installed in CHEMTrac 830 M retractable armature	109234
PL 81-225pHT VP	pH electrode with VP plug head, measuring range 0 ... 14 pH, can be installed in CHEMTrac 830 M retractable armature	109236
PL 82-225pHT VP	pH electrode with VP plug head, measuring range 0 ... 14 pH, can be installed in CHEMTrac 830 M retractable armature	109239
PL 89-225Pt	ORP electrode with S8 plug head, measuring range ±2000 mV, can be installed in CHEMTrac 830 M retractable armature	109235

WTW a xylem brand

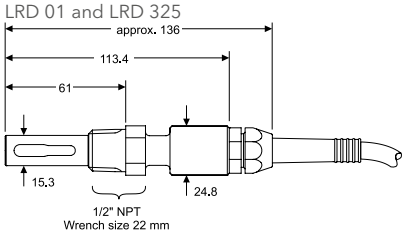
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog conductivity measuring cells

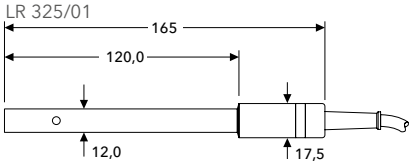
The analog conductivity measuring cells are equipped with an integrated temperature compensation and cover all applications

We would like to inform you about the application range on our website

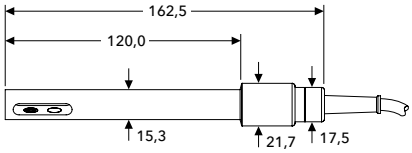
LRD 01 and LRD 325



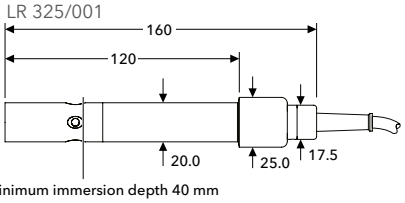
LR 325/01



TetraCon® 325



LR 325/001



Minimum immersion depth 40 mm

Technical Data

Model		LRD 01	LRD 325	LR 325/01	LR 325/001	TetraCon® 325	TetraCon® DU/T
Measuring principle		Conductometric (2 electrode cell)	Conductometric (4 electrode cell)	Conductometric (2 electrode cell)		Conductometric (4 electrode cell)	
Measuring Range		0.001 µS/cm ... 200 µS/cm	1 µS/cm ... 2 S/cm	0.001 µS/cm ... 200 µS/cm	0.0001 µS/cm ... 30 µS/cm	1 µS/cm ... 2 S/cm	
Cell constant		0.1 cm^{-1}, ±2%	0.475 cm^{-1}, ±1.5%	K = 0.1 cm^{-1}	K = 0.01 cm^{-1}	K = 0.475 cm^{-1}	K = 0.778 cm^{-1}
Resolution		Depends on measuring range					
Temperature sensor		Integrated NTC					
Temperature Measurement		0 °C ... +130 °C	0 °C ... +100 °C	-5 °C ... 80 °C			0 °C ... 60 °C
Maximum pressure		14 bar (at 20 °C)	10 bar (at 20 °C)	2 bar			
Electrical Connection		Integrated PU connection cable with 7-pole screw plug (IP 65)		Integrated cable mit 8-pole plug			8-pole socket for cable KKDU 325
Mechanical	Shaft	Stainless steel 1.4571				Epoxy	POM
	Kable gland	Brass, nickel-plated		–	–	–	–
	Connection head	–	–	POM			–
	Electrodes	Stainless steel 1.4571	Graphite	Stainless steel 1.4571		Graphite	
	Protection Rating	IP68 Measuring cell until screw-in length		IP68 (Sensor with connection cable)			IP65 in plugged condition
Weight (without cable)		Approx. 350 g	Approx. 300 g	Approx. 135 g	Approx. 280 g	Approx. 135 g	Approx. 170 g
Warranty		2 years on defects in quality according to § 10 terms of conditions					

Model	Description	Order No.
TetraCon® 325	4 electrodes measuring cell, with integrated temperature sensor, cell constant K=0.475 cm^{-1}, cable length 1.5 m	301960
TetraCon® 325-3	Like TetraCon® 325, but cable length 3 m	301970
TetraCon® 325-6	Like TetraCon® 325, but cable length 6 m	301971
LRD 01-1,5	2 electrodes measuring cell to be screwed into pipe, with integrated temperature sensor, cable length 1.5 m	302220
LRD 01-7	Like LRD 01-1,5, but cable length 7 m	302222
LRD 325-1,5	4 electrodes measuring cell to be screwed into pipe, with integrated temperature sensor, cable length 1.5 m	302225
LRD 325-7	Like LRD 325-1,5, but cable length 7 m	302229
LR 325/01	Conductiviy measuring cell for ultrapure water, with integrated temperature sensor, cell constant K=0.1 cm^{-1}, Glass flow cell	301961
LR 325/001	Conductiviy measuring cell for trace measurement, with integrated temperature sensor, cell constant K=0.01 cm^{-1}, Stainless steel flow cell	301962
TetraCon DU/T	4 electrodes flow measuring cell, with integrated temperature sensor, cell constant: K=0.0778 cm^{-1}	301252

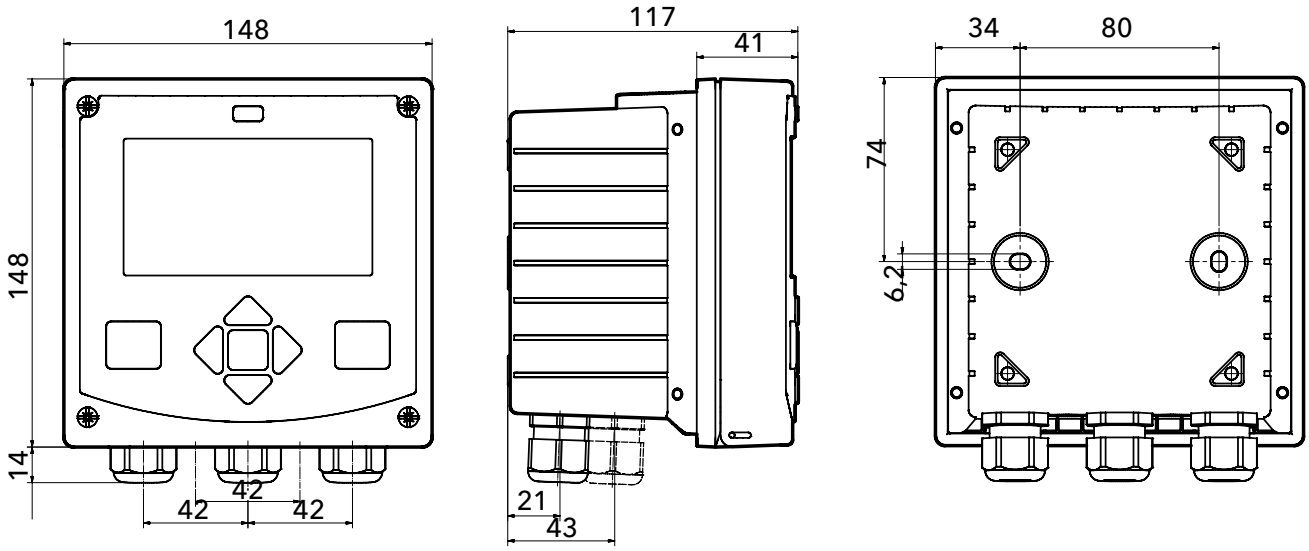
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog controllers for EX area

EX compliant controller for pH or conductivity, useable in zone 0 IIC T4 and suitable for high ambient temperatures

We would like to inform you about the application range on our website



Technical Data

Model	StratosProA201xpH-0	StratosProA201xpH-1	StratosProA201xCond-0	StratosProA201xCond-1
Displayed	-2.00 … +16.00		0.000 µS/cm ... 999.9 mS/cm	
Outputs	4 ... 20 mA each (22 mA at error message)			
Measured value	pH or mV or temperature		Conductivity, spec. resistance, concentration, salinity or temperature	
Explosion protection	II 1G Ex ia IIC T4			
EMC	EN 61326-1, class B			
LC-Display	Main display, secondary display, text, Sensoface®, status display			
Warranty	2 years on defects in quality according to § 10 terms of conditions			

Model	Description	Order No.
StratosProA201xpH-0	Controller for pH with 1 current output	109 444 EX
StratosProA201xpH-1	Controller for pH with 2 current outputs	109 445 EX
StratosProA201xCond-0	Controller for conductivity with 1 current output	300 944 EX
StratosProA201xCond-1	Controller for conductivity with 2 current outputs	300 945 EX

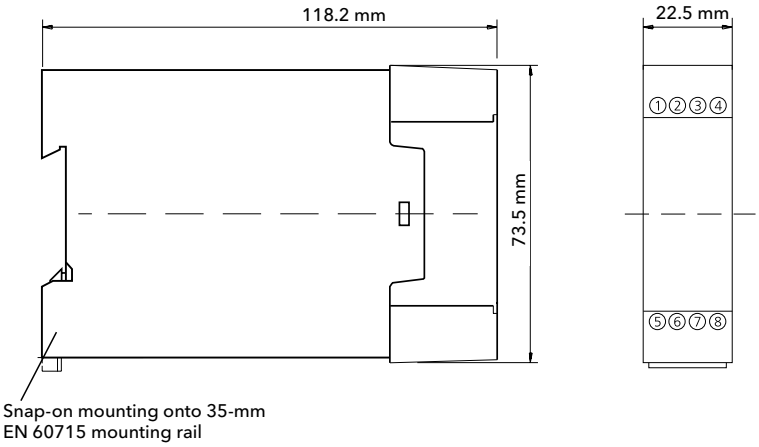
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Isolated amplifier for EX area

The isolated amplifier WG21A7 provides power for the intrinsically safe controller and transfers the measured value. Integration into the IQ SENSOR NET is possible with auxiliary voltage option and module MIQ/IC2.

We would like to inform you about the application range on our website



Technical Data

Current loop	Intrinsically safe supply voltage ≥ 18 V
Output	4 … 20 mA
Construction	Modular housing A7, with snap-on mounting for top-hat rail 35 mm, according to DIN EN 50022
Protection Rating	IP40, terminals IP20
Explosion protection	II (1)G [Ex ia Ga] IIC
EMC	EN 61326-1, class B
Warranty	3 years on defects in quality according to § 10 terms of conditions

Model	Description	Order No.
WG21A7	Isolated amplifier	109 446 EX
WG21A7 Opt. 336	Isolated amplifier, with auxiliary voltage 24 V AC/DC	109 447 EX
WG21A7 Opt. 470	Isolated amplifier, with HART® communication	109 448 EX
WG21A7 Opt. 336,470	Isolated amplifier, with auxiliary voltage and HART® communication	109 449 EX

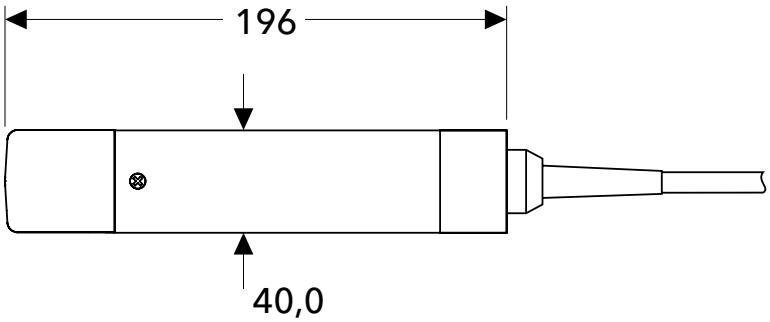
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog conductivity measuring cells TetraCon® for EX area

Conductivity measuring cells for locations in explosive atmosphere (EX area, Zone 1 IIC T6) – TetraCon® 700 EX with 4 electrodes system

We would like to inform you about the application range on our website



Technical Data

Model	**TetraCon® 700 EX**
Measuring principle	Conductometric (4-electrode cell)
Measuring Range	10 µS/cm … 1000 mS/cm
Cell constant	K = 0.917cm^{-1}, ±1.5 % (in free solution)
Signal output	Analog
Temperature sensor	NTC, integrated in measuring cell
Temperature Measurement	0 °C … +40 °C, ±0.2 K
Electrical Connection	PUR connection with open wires
Certifications	CE
Mechanical	Shaft: POM, conductive Sensor head: PVC, Epoxy (filler) Protection ring: POM, conductive Temperature sensor, electrodes: Graphite Protection rating: IP 68
Weight (without cable)	Approx. 660 g
Explosion protection	Ex ib IIC T6 Gb X
Warranty	2 years on defects in quality according to § 10 terms of conditions

Model	**Description**	**Order No.**
TetraCon® 700-1,5 EX	Analog 4 electrodes conductivity measuring cell with integrated temperature sensor and 1.5m cable with open wires	302314EX
TetraCon® 700-7 EX	Like above, but with 7 m cable and open wires	302316EX
TetraCon® 700-15 EX	Like above, but with 15 m cable and open wires	302318EX

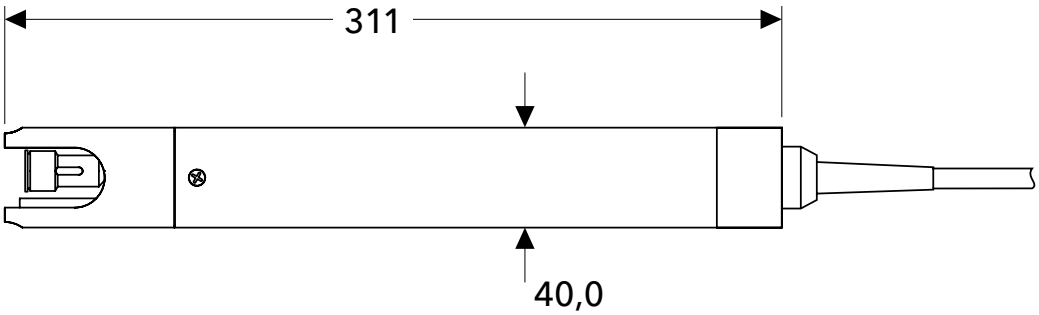
a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Analog pH/ORP aramture SensoLyt® for EX area

Easy exchange of electrodes and flexible measuring ranges – the SensoLyt® 650-7 EX for explosion-endangered areas (Zone1 IIC T6)

We would like to inform you about the application range on our website



Technical Data

Model	SensoLyt® 650-7 EX
Integrated preamplifier	No
Signal output	High-impedance, analog
Temperature Measurement	Integrated NTC, 0 °C …+60 °C
Ambient Conditions	Operational temperature: 0 °C … +60 °C
Electrical Connection	Pur connection with open wires
Certifications	CE
Mechanical	Shaft: POM, conductive Protection cage: POM, conductive Protection ring: POM, conductive Temperature sensor: Stainless steel 1.4571 Protection rating: IP 68
Weight	Approx. 800 g (incl. 7 m cable, without electrode)
Explosion protection	Ex ib IIC T6 Gb X
Warranty	2 years on defects in quality according to § 10 terms of conditions

Model	Description	Order No.
SensoLyt® 650-7 EX	Analog pH/ORP aramture for explosion-endangered area (Ex ib IIC T6 Gb X), connectable to StratosProA201XpH-0(-1). Electrodes need to be ordered separately	109195EX
SensoLyt® SEA EX	pH electrode for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor), measuring range 2 … 12 pH , for heavily loaded wastewater.	109115EX
SensoLyt® ECA EX	pH electrode for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor), measuring range 2 … 12 pH, for normally charged wastewater (e.g. municipal wastewater).	109117EX
SensoLyt® SEA-HP EX	pH electrode for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor), measuring range 4 … 12 pH, to be used under increased pressure and temperature conditions.	109118EX
SensoLyt® DWA EX	pH electrode for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor), measuring range 0 … 14 pH, for drinking water application.	109119EX
SensoLyt® PtA EX	ORP electrode for explosion-endangered area (only when connected to SensoLyt® 650-7 EX Sensor), measuring range ±2000 mV, for heavily loaded wastewater.	109125EX

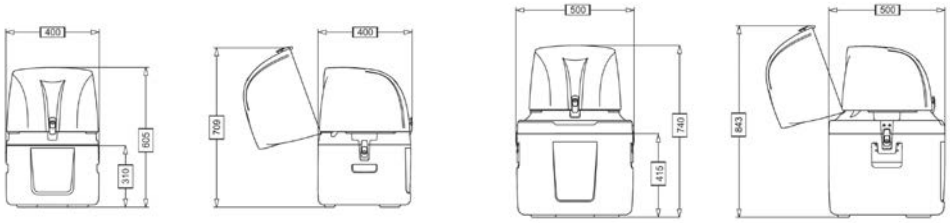
WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Portable Samplers PB-M

Mobile sampling in safe 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.

We would like to inform you about the application range on our website



Technical Data

Model	PB-M-S	PB-M-L
Sampling method	Vacuum-System	
Sampling fractioning	Collection container (PE): 1 x 13 l	Bottles (PE): 24 x 1 l*
Dosing	20 ... 350 ml	
Sampling modes	Time-, amount-, event-proportional or manual	
Volume accuracy	< 2.5 % or ± 3 ml	
Sampling temperature	+32 ... +104 °F (0 ... +40 °C)	
Ambient temperature	+32 ... +122 °F (0 ... +50 °C)	
Suction height	Max. 21 ft (6.5 m) at 1013 hPa	
Suction tube	PVC, 16 ft (5 m), 0.39 in (10 mm), fabric reinforced**	
Signal inputs	2 x 0(4) ... 20 mA 8x digital (amount, event, freely programmable)	
Programming	12 programs (freely programmable); with function to link programs	
Program start	Immediately, at a certain time, by an external signal	
Program stop	End of sampling program after one program run, continuous operation or x-runs	
Pause mode	Interruption of program run at any time	
Languages	Multi-language, selectable	
Signal outputs / status messages	8 x digital, 1 x collective malfunction message	
Data logging	3000 entries, nonvolatile data memory, storage of sampling and malfunction data (sampling extraction, bottle changes, messages, external signals)	
Interfaces	Mini-USB, RS422/485, Ethernet RJ45	
Housing	ABS, double-walled insulation	
Wetted materials	PC, PVC, silicone, PS, PE	
Dimensions (D x H)	15.8 x 23.8 in (400 x 605 mm)	19.7 x 29.1 in (500 x 740 mm)
Weight	17.6 lb (8 kg)	26.5 lb (12 kg)
Power supply	12 V	
Standards	CE, sampling according to ISO 5662-10 and EN 16479	
Protection Rating	IP66 (power supply)	
Warranty	2 years on defects in quality according to § 10 terms of conditions	

** further configurations on request*
*** expandable per meter, max. length 98 ft (30 m)*

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

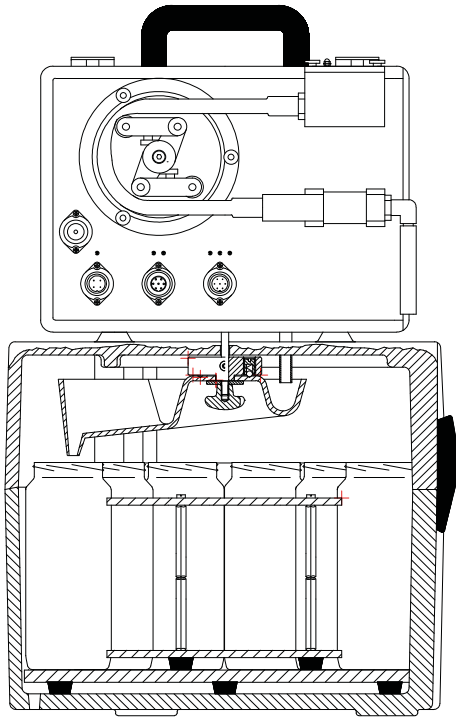
WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999294US
November 2019

Portable Samplers PB-25-S

The portable sampler **PB-25-S** with peristaltic pump technology and a built-in battery pack is available for fractional samples via circular distributors to 12 x 1 l or 24 x 0.5 l sampling containers. The sampler convinces with its compact design and the possibility to sample very small single dosage volumes.

We would like to inform you about the application range on our website



Technical Data

Model	PB-25-S	PB-25-S/24
Sampling method	Peristaltic pump	
Sampling fractioning	12 x 1 l	24 x 0.5 l
Dosing	10 ml to 25,000 ml, depending on the chosen bottle volume, otherwise adjustable	
Operating temperature	+32 ... +104 °F (0 ... +40 °C)	
Suction height	6 m	
Suction tube	PVC, 20 m long, 9 mm Ø	
Programming	5 freely parameterizable application programs, up to 6 programs can be connected to a sequence	
Data logging	2 MB EEPROM data storage, ring buffer for results and errors	
Housing	PUR (Polyurethan)	
Wetted materials	Suction hose: PVC Pump hose : silicone Hose coupling: PA Inlet pipe: PVC Distributor: PS Suction piece: V2A (1.4305/AISI303) Water detection: contactless (inner pipe PVC) Bottles: HDPE or glass	
Dimensions (D x H)	37 cm x 59 cm	36 cm x 69 cm
Weight	12 kg	19 kg
Power supply	Lead-gel battery 12 V DC / 8 Ah	
Standards	CE	
Protection Rating	IP 65 (with protective cover)	
Warranty	2 years on defects in quality according to § 10 terms of conditions	

Model	Description	Order No.
PB 25 S	Version with 12 x 1 l sample bottles	000103
PB 25 S/24	Version with 24 x 0.5 l sample bottles	000105

WTW a xylem brand

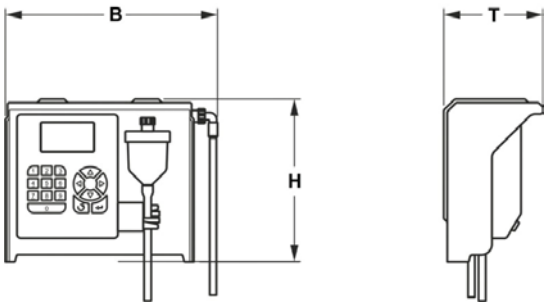
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999295US
November 2019

Samplers for wall mounting

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

We would like to inform you about the application range on our website



Technical Data

Model	PB-W
Sampling method	Vacuum System
Sampling fractioning	Collection container (PE): 1 x 13 l, 1 x 25 l*
Dosing	20 ... 350 ml
Sampling modes	Time-, amount-, event-proportional or manual
Volume accuracy	< 2.5 % or ± 3 ml
Sampling temperature	+32 ... +104 °F (0 ... +40 °C)
Ambient temperature	+32 ... +113 °F (0 ... +45 °C)
Suction height	Max. 21 ft (6.5 m) at 1013 hPa
Suction tube	PVC, 16 ft (5 m), 0.39 in (10 mm), fabric reinforced**
Signal inputs	2 x 0(4) ... 20 mA 8x digital (amount, event, freely programmable)
Programming	12 programs (freely programmable); with function to link programs
Program start	Immediately, at a certain time, by an external signal
Program stop	End of sampling program after one program run, continuous operation or x-runs
Pause mode	Interruption of program run at any time
Languages	Multi-language, selectable
Signal outputs / status messages	8 x digital, 1 x collective malfunction message
Data logging	3000 entries, nonvolatile data memory, storage of sampling and malfunction data (sampling extraction, bottle changes, messages, external signals)
Interfaces	Mini-USB, RS422/485, Ethernet RJ45 (optional)
Housing	PS/PC (GF10)
Wetted materials	PC, PVC, silicone, PS, PE
Dimensions (HxWxD)	14.25 x 17.4 x 8.74 in (362 x 442 x 222 mm)
Weight	22 lb (10 kg)
Power supply	230V / 115V
Standards	CE, sampling according to ISO 5662-10 and EN 16479
Protection Rating	IP65
Warranty	2 years on defects in quality according to § 10 terms of conditions

** further configurations on request*
*** expandable per meter, max. length 98 ft (30 m)*

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

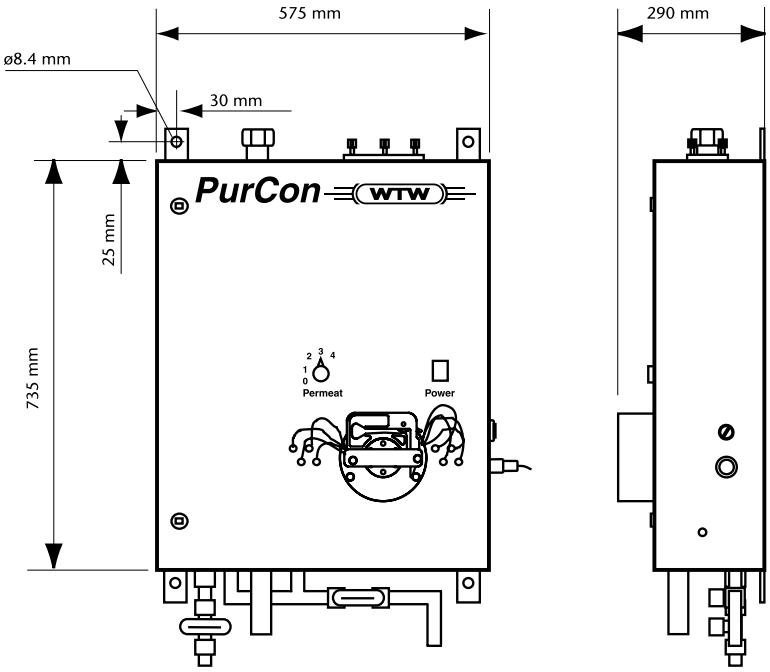
WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999296US
January 2020

Sample preparation system PurCon®

The perfect online sample preparation – continuously, safe, low in maintenance. Provides solid free and bacteria free samples.

We would like to inform you about the application range on our website



Technical Data

Model		PurCon®
Permeate	Permeate transport	Continuously
	Permeate amount	Max. 3.6 l/h, can be setted in 4 steps
	Permeate quality	Free of solids and bacteria
Sample transportation	Minimum - Maximum	400 - 1500 l/h
Connections	Sample feed	Hose support, inner diameter 3/4"
	Sample retention	Pipe socket, inner diameter 50 mm, pressure less
	Container outlet for service	Hose support, inner diameter 3/4"
	Permeate outlet	Screw fitting Ø 1,54 mm
Electrical Connection Data	Power supply	230 V / 115 V AC (depends on version)
	Power consumption	Approx. 150 W (without pump)
	EMC	According to EN 61326 class B, appendix A, FCC class A
Mechanical Data, Protection Rating	Housing Height x Width x Depth	735 mm x 575 mm x 220 mm
	Housing Material	Stainless steel (V4A); IP 33
	Weight	Approx. 36 kg
Maintenance	Municipal application	Depends on operational site and load of the wastewater, typically 20 min / month
Ambient Conditions	Temperature	Storage: -25 ... 60 °C / Operation: 0 ... 40 °C
Certifications		CE
Warranty		2 years on defects in quality according to § 10 terms of conditions

Model	Description	Order No.
PurCon®/115	PurCon® sample preparation system, 115VAC/50 Hz.	810008
PurCon®/230	PurCon®, 230 VAC/60 Hz.	810000

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Filtration Alyza IQ

High operational safety with the system for filtration and sample preparation directly at the edge of the sink - especially for the digital phosphate analyzer P700 IQ

We would like to inform you about the application range on our website

1 Chain (scope of delivery: Attachment for filtration M 1.5)
2 Guide rail (scope of delivery: Attachment for filtration M 1.5)
3 Height adjustable slide (scope of delivery: Suction line)
4 Intake line (scope of delivery: Suction line)
5 Sleeve tube (scope of delivery: Suction line)
6 Filter module (FM/PC) with filter plate (Filter/PC)

Technical Data

Model	**FM/PC**
Membrane area:	219.02 in² (1413 cm²)
Maximum operating temperature	113 °F (45 °C)
Materials	Housing: PVC Screws: Stainless steel

Model	Description	Order No.
FM/PC	Filter membrane module FM-Case/PC with premounted membrane. Suitable for Alyza IQ and P 700 IQ	821939
Filter/PC	Filter module for housing FM-Case/PC. Suitable for Alyza IQ and P 700 IQ	821940
FM-Case/PC	Housing for filter module Filter/PC. Suitable for Alyza IQ and P 700 IQ	821941
SH-5	Intake line with slide fo Alyza IQ, unheated, 5 m (16.4 ft)	822201
SH-10	Intake line with slide fo Alyza IQ, unheated, 10 m (32.8 ft)	822202
SH-15	Intake line with slide fo Alyza IQ, unheated, 15 m (49.2 ft)	822203
SH-20	Intake line with slide fo Alyza IQ, unheated, 20 m (65.6 ft)	822204
SH 120-5	Intake line with slide fo Alyza IQ, heated, 120 VAC, 5 m (16.4 ft)	822211
SH 120-10	Intake line with slide fo Alyza IQ, heated, 120 VAC, 10 m (32.8 ft)	822212
SH 120-15	Intake line with slide fo Alyza IQ, heated, 120 VAC, 15 m (49.2 ft)	822213
SH 120-20	Intake line with slide fo Alyza IQ, heated, 120 VAC, 20 m (65.6 ft)	822214
SH 240-5	Intake line with slide fo Alyza IQ, heated, 240 VAC, 5 m (16.4 ft)	822221
SH 240-10	Intake line with slide fo Alyza IQ, heated, 240 VAC, 10 m (32.8 ft)	822222
SH 240-15	Intake line with slide fo Alyza IQ, heated, 240 VAC, 15 m (49.2 ft)	822223
SH 240-20	Intake line with slide fo Alyza IQ, heated, 240 VAC, 20 m (65.6 ft)	822224
FM-B	Cleaning brush for filter membrane module	821968
FM-Adapter	Adapter for horizontal mounting of filter membrane module FM	821983
Filter-CL	Cleaning case for filter membranes	821984
M-EXT 1.5	Extension for attachement M 1.5. Included: Extension 1.5 m, chain, bracket	821985
M 1.5	Attachment for filtration. Included: Rail 1.5 m (4.9 ft), chain, bracket	821986

WTW a xylem brand
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999242US
January 2020

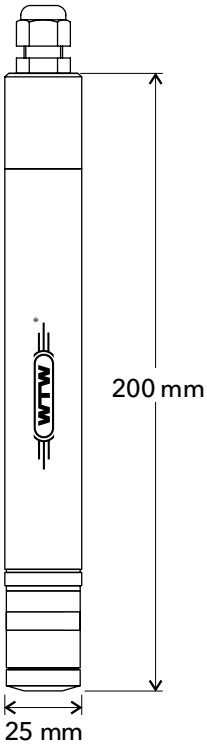
Analog chlorine sensors

For free and total chlorine

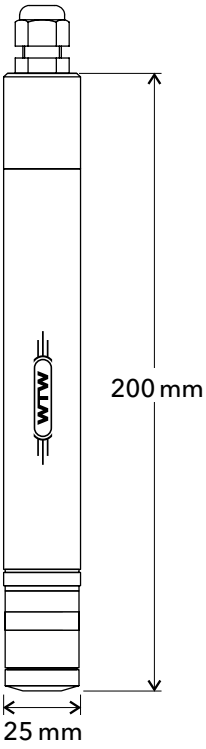
The electrochemical WTW chlorine sensors can be applied for measurements in swimming pools and drinking water. Directly connectable to the controller Cl 298.

We would like to inform you about the application range on our website

FCML 412 N



TCML N



Technical Data

Model	FCML 412 N	TCML N
Measuring principle	Amperometric	
Measured value	Free chlorine	Total chlorine
Measuring Range	0.01 … 2.00 mg/l Cl_2	0.01 … 2.00 mg/l Cl_2
Response time	t_{90} Approx. 120 s	
Minimum flow rate	Recommended minimum flow rate in flow cell D-CL: > 30 l/h	
Temperature Measurement	0 … 45 °C	
Temperature Compensation	Automatically via integrated sensor	
pH range	4 … 9	4 … 12
Polarization time	Approx. 1 hour after new installation or change of electrolyte	
Calibration method	1-point-calibration (according to DPD method as reference)	
Pressure Resistance	3 bar	
Electrical Connection	2-wire-connection	
Certifications	CE	
Mechanical	Shaft: PVC Membrane cap: PVC Working electrode: Gold Reference electrode: Ag/AgCl Cable connection: Polyamid Protection rate: IP64	
Weight	Approx. 0.5 kg	
Warranty	2 years on defects in quality according to § 10 terms of conditions	

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

WTW a xylem brand

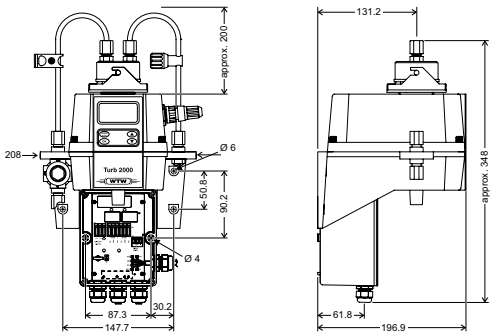
Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

Drinking Water Analyzer

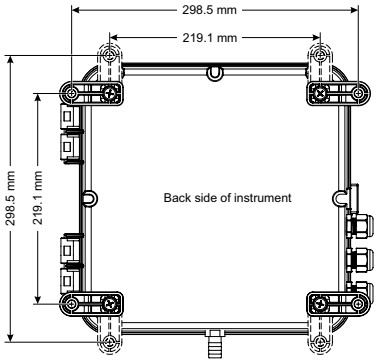
The analyzers for turbidity, free and total chlorine work according to standard procedures and thus yield reliable values across a large measuring range!

We would like to inform you about the application range on our website

Turb 2000



Chlorine 3000



Technical Data

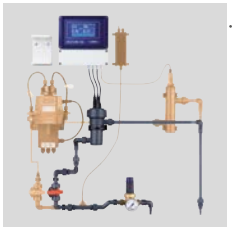
Model	TURB 2000	TURB 2020	TURB 2100	TURB 2120	TURB 2110	Chlorine 3000
Measuring principle	Scattered light measurement					Colorimetric
Measuring range	0…1000 NTU				0 … 10 NTU	0…10 mg/l
Resolution	Selectable up to 0.0001					0.01 mg/l
Accuracy	±2 % of the measured value or ±0.02 NTU below 40 NTU (the higher value), ±5 % of the measured value above 40 NTU					±0.03 mg/l or 5 % (up to 6 mg/l; the higher value)
Sampling temperature	+1 … +50 °C					+5 … +40 °C
Cleaning	–	Ultrasonic	–	Ultrasonic	–	–
Calibration	Manual with standards					Calibration free (but possible if required by authorities)
Outputs	RS 485 or 4…20 mA					RS 485 and 4…20 mA
Ambient conditions	Operational temperature: +1 … +50 °C					Operational temperature: +5 … +40 °C
	Not recommended for outdoor use. Altitude up to 2000 meters. Up to 95 % RH (non-condensing)					
Electrical connection	100…240 VAC, 47…63 Hz					
Mechanics	Wetted materials: Nylon, borosilicate glass, silicon, polypropylene, stainless steel Housing: Designed for IP 66 /NEMA 4X					Wetted materials: PVC, borosilicate glass, Reslyn (FFKM), Viton® (FKM), Polypropylene, stainless steel, acetal, Nitrile, Noryl®, Nylon Housing: Designed to meet IP 66 / NEMA 4X
Weight	2.5 kg					2.5 kg (5.5 lbs.), without reagents
Warranty	1 year on defects in quality according to § 10 terms of conditions					

Model	Description	Order No.
TURB 2000	Online turbidity meter, with white light and integrated bubble trap; nephelometric measurement specified according to US EPA 180.1, 110-240 VAC	600020
TURB 2020	Like TURB 2000, but with ultrasonic cleaning	600025
TURB 2100	Online turbidity meter, with infrared light and integrated bubble trap; nephelometric measurement specified according to EN ISO 7027, 110-240 VAC	600030
TURB 2110 Set	Online turbidity meter with low measuring range and standards, with infrared light and bubble trap, nephelometric measurement, specified according to EN ISO 7027, 110-240 VAC	600032
TURB 2110	Online turbidity meter with low measuring range, with infradred light; nephelometric measurement specified according to EN ISO 7027, 110-240 VAC	600033
TURB 2120	Like TURB 2100, but with ultrasonic cleaning	600035
Chlorine 3000	Online analyzer for the photometric measurement of free or total chlorine according to the DPD method (US EPA)	860150

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

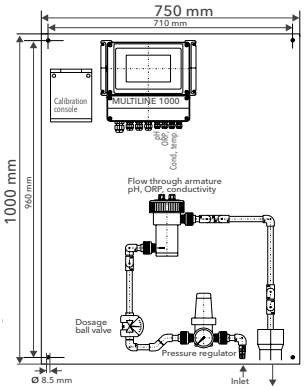
Drinking water panels



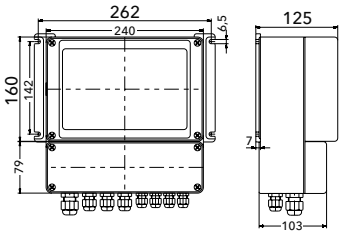
The premounted drinking water panels for multi-parameter or chlorine are user-friendly and deliver reliable measuring values

We would like to inform you about the application range on our website

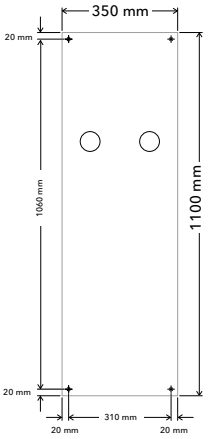
Basic equipment of the drinking water panel 8X-yyyyy



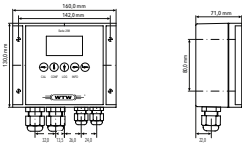
MULTILINE 1000



CL 298/P (Flow)



CL 298



Technical Data

Model		MULTILINE 1000 (Controller for panel 8X-yyyyy)	CL 298/P (Flow)
Measuring range	**pH/ORP**	pH: 0.00....14.00; -2000 … +2000 mV	
	Conductivity	0 … 100 mS/cm, automatic range selection, adjustable	
	Chlorine	0.00 … 2.00 mg/l	0 … 2 mg/l
Resolution	**pH/ORP**	pH: 0.01; 1 mV	
	Conductivity	Depending on range 0.1 µS/cm … 0.1 mS/cm	
	Chlorine	0.01 mg/l	0.01 mg/l
Flow measurement (optional)		Flow measurement via impeller	Flow detection (yes/no)
Temperature measurement *)			
	pH/ORP	Additional TFK 5000 (Pt1000), -10 … +100 °C	
	Conductivity	Integrated (Pt 1000), -5 … +80 °C	
	Chlorine	Integrated (Pt 1000), 0 … +45 °C	-10 … 130 °C, Pt1000
Temperature compensation		Automatically via temperature measurement of the sensor or manual input	
Outputs	**Relays**	4	2
	Analog Outputs	4 x 0(4) ... 20 mA	
	Digital	Modbus / RS485	
Display		Touch screen, 240 x 128 pixel, back-lighted	OLED (128 x 64 pixel)
Data logger		Integrated with real-time clock for 50,000 records	Integrated with real-time clock for 4,000 records
Electric supply		115 / 230 V AC; 48 ... 63 Hz	100 ... 240 V AC
Ambient temperature		-10 °C ... +55 °C (-14 ... 131 °F)	
Mechanics		Housing: Aluminium; IP 65 Panel: PVC rigid foam, white; 1000 x 750 x 13 mm (HxWxD)	Housing: Cast aluminium; IP 65 Panel: PVC rigid foam, white; 1100 x 350 x 13 mm (HxWxD)
Weight		Controller: 5 kg; Panel: 35 kg (incl. Turb 2000)	Controller: 1.4 kg; Panel: 10 kg
Warranty		Controllers: 3 years on defects in quality according to § 10 terms of conditions	

**) Please note: Tolerated sensor operation temperature may vary significantly.*

Model	Description	Order No.
MULTILINE 1000 230VAC	Multi-parameter monitor to connect up to any 16 sensors, power supply 230 VAC	480200
Drinking water panel	Ready-to-use panel to measure pH, ORP, Cond, Chlorine and Turbidity (Turb 2000); X: with or without flow; yyyyy: coding depnedent on parameter selection; details see price list or drinking water flyer	8X-yyyyy
CL 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
CL 298/P Flow - 230 VAC	Like the CL 298/P, but with FlowControl to monitor the flow volume	801261

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

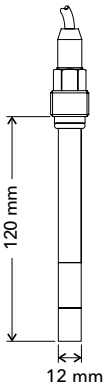
Drinking water sensors

For measurement of pH/ORP, D.O. and conductivity at drinking water monitoring. Sensor can directly be connected to the series 298 or to the MULTILINE 1000.

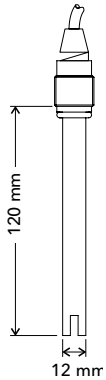
We would like to inform you about the application range on our website

SenTix® ML 70 / ORP

Oxi ML 41



LR ML



Technical Data

Model	SenTix® ML 70	SenTix® ML ORP	Oxi ML 41	LR ML
Measuring principle	Potentiometric	Potentiometric	Amperometric	Conductometric
Measured value	pH	ORP	Dissolved Oxygen	Conductivity
Measuring Range	pH 0 ... 14		0 ... 20 mg/L O_2 0 ... 200 % air saturation	100 µS/cm ... 20 mS/cm
Cell constant	_	_	_	1.0 cm^{-1} ± 20 %
Response time (at 25 °C)	_	_	t_{90} (90 % of the final value display after) < 30 s	_
Temperature Measurement	_	_	Platinum measurement resistor Pt 1000	Platinum measurement resistor Pt 1000
Temperature Compensation	_	_	Automatic	Automatic
Application temperature	0 ... 80 °C	0 ... 80 °C	-5 ... 45 °C	-5 … 80 °C
Pressure Resistance	Max. 6 bar	Max. 6 bar	Max. 3 bar	Max. 6 bar
Electrical Connection	S7 industrial screw plug connection; Screw-in connection PG 13.5 on the plug head connector for installation	S7 industrial screw plug connection; Screw-in connection PG 13.5 on the plug head connector for installation	1 m multi-wire, screened fixed cable without plug, twistable PG 13.5 screw coupling at the shaft	1 m multi-wire, screened fixed cable without plug, twistable PG 13.5 screw coupling at the shaft
Certifications	CE	CE	CE	CE
Mechanical	Shaft Glass Connection head: Plastic (ABS) Sealing: Silicone Protection Rate: IP68	Shaft Glass membrane Metal electrode: Platinum rounded end Ø 6 mm Connection head: Plastic (ABS) Sealing: Silicone Protection Rate: IP68	ABS, stainless steel 1.4571, polysulphone, silicone Protection Rate: IP64	Shaft Plastic (PSU) Electrodes: Special graphite Connection head: Plastic (ABS) Sealing: Silicone Protection Rate: IP64
Weight	Approx. 0.1 kg	Approx. 0.1 kg	Approx. 0.2 kg	Approx. 0.1 kg
Warranty	½ year on defects in quality according to § 10 terms of conditions			2 years on defects in quality according to § 10 terms of conditions

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
Oxi ML 41	Electrochemical D.O. sensor with 1 m (3.3 ft) fixed cable for measuring and controlling oxygen in drinking water. Use with 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
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

WTW a xylem brand

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49 881 1830 · Fax: +49 881 183-420 · Info.WTW@Xyleminc.com
www.xylemanalytics.com

999283US
November 2019

Xylem Watermark

xylem watermark®
Because Every Drop Counts

Improves Access to Water and Education on Water Issues

Committed to our mission. Xylem Watermark, our corporate citizenship and social investment program, has a twofold mission: provide and protect safe water resources for communities in need, and educate people about water issues. In a world where more than 650 million people lack access to water, and 2.4 billion lack improved sanitation*, we're using our expertise and technologies to make a difference.

Focused on urgent needs.
We work to create measurable results in three key areas:

- School and community projects, providing safe water, sanitation, and hygiene (WASH) education to students, teachers and families
- Disaster response, delivering water in the aftermath of emergencies
- Disaster risk reduction, securing water in vulnerable areas

Involving our employees.

We amplify the impact of Watermark through our employee engagement program. Their volunteer work and financial contributions advance our sustainable solutions.

Make your mark.
To learn more about Watermark, visit **xylemwatermark.com**

*Source: UNICEF/WHO

General Information

1. Special versions of instruments on request.
2. Accessories and spare parts for older models – please make separate inquiry.
3. In order to avoid our customers having to pay a surcharge for small-volume purchases, we supply our consumables in practical minimum ordering quantities.

Technical alterations

The technical description corresponds to the current products. Alterations because of technical improvements are possible.

Illustrations

We draw your attention to the fact that the illustrations are intended to clarify certain points. There may therefore be discrepancies between the illustrations and the written text.

Liability

We accept no responsibility for printing errors, writing errors or mistakes in the translation.

Edition April 2020

Publisher

xylem
Let's Solve Water

Xylem Analytics Germany Sales
GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1
82362 Weilheim
Germany

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

Xylem |'zīləm|

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

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

For more information on how Xylem can help you, go to **www.xylem.com**

WTW®

Regional Sales Offices

UK:
Xylem Analytics UK Limited
Tel +44 1462 673581
salesuk@xyleminc.com
www.xylemanalytics.co.uk

Asia:
Xylem Analytics Japan
Tel +81 (0)44-222-0009
ysijapan.support@xyleminc.com
www.xylem-analytics.jp

Middle East & Africa:
Xylem Analytics Middle East & Africa
Tel +971 4 806 1000
Info.MEA@Xyleminc.com
www.xylemanalytics.com

Australia:
Xylem Analytics Australia
Tel +61 1300 995362
salesAus@xyleminc.com
www.xylem-analytics.com.au

China:
Xylem Analytics (Beijing) Co., Ltd
Tel +86 10 5785 2266
Xylemanalytics.China@xyleminc.com
www.xylemanalytics.cn

France:
Xylem Analytics France
Tel + 33 (0)1 46 95 32 81
XAFCialFR@xyleminc.com
XAFInfoFR@xyleminc.com
www.xylemanalytics.com

Visit our website for more contact info

Connect with us: /wtw.wm /wtwgmbhinternational

xylem
Let's Solve Water

Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1
82362 Weilheim, Germany
Tel +49 881 1830
Fax +49 881 183-420
Info.WTW@Xyleminc.com
www.xylemanalytics.com

 999277US April 2020