



Process Instrumentation

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

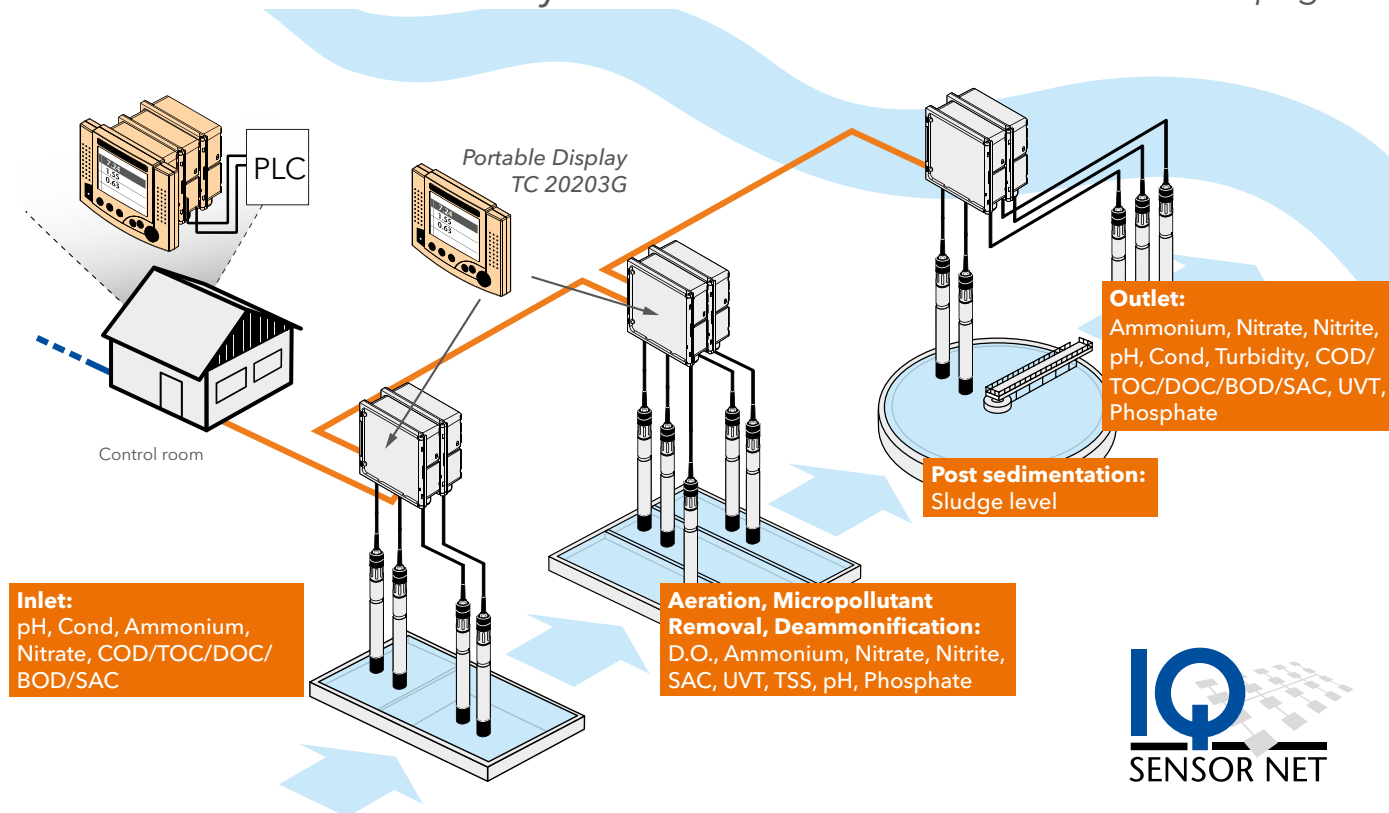


a xylem brand

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

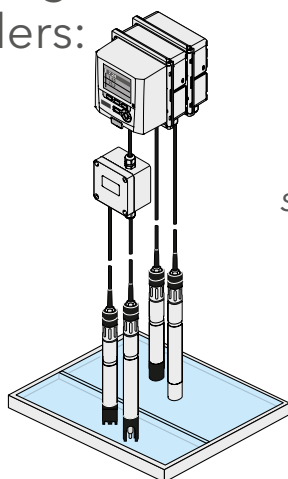
① IQ Sensor Network: System 2020

see from page 46



② Outstanding among the compact Controllers: System 282/284

see from page 50



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

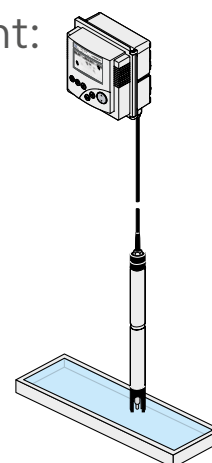
Ammonium & Nitrate measurement with ISE sensors (e.g. VARiON® Plus 700 IQ)

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

see page 28

③ The Single Parameter Measuring Point: System 181

see from page 52



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

<div> <div>Sensors</div> <div>Parameter</div> </div>		see catalog page																		
		10	9	13	17	22	23	28	28	28	30	30	34	30	30	34	30	39	37	
		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	
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 PO₄ provides 10W

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

† Nitrite and Nitrate are included in the measured value.

Systems in Detail

see catalog page 47 47 48 48 48 48 49 49 48 48 48 46 49 49 49 66 66 49

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
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 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



Xylem Analytics Germany Sales GmbH & Co. KG, WTW
Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49881 1830 · Fax: +49881 183-420 · Info.WTW@Xyleminc.com

www.xylemanalytics.com
Info.WTW@Xyleminc.com

Contents

D.O. Measurement

FDO®: Optical D.O. Measuring

TriOxmatic®: Electrochemical D.O. Measuring

Further analog Sensors

pH/ORP Measurement

SensoLyt® System Design

Analog ProcessLine® Combination Electrodes

Analog SenTix® Electrodes

Conductivity Measurement

TetraCon® 4-electrode Design

2-electrode Measuring Cells

Turbidity/ Suspended Solids

Turbidity Sensor VisoTurb®

Suspended Solids Sensor ViSolid®

UV-VIS Spectral Sensors

Analyzer for Turbidity

Nitrogen Measurement

ISE Sensors

UV-VIS and UV Spectral Sensors

Carbon

UV-VIS and UV Spectral Sensors

Phosphate

Analyzer

Sludge Level Measurement

Digital IQ Sensor to Determine the Sludge Level

Chlorine Measurement

Analog Sensors

Analyzer

IQ SENSOR NET

Fields of Application and Product Overview

IQ Systems

IQ Sensors

IQ Analyzer

IQ SENSOR NET System 2020

IQ SENSOR NET System 282/284

IQ SENSOR NET System 181

Analyzer

Alyza IQ Series

Further Analyzers

Analog Monitors

Series 298 Single-parameter Field Monitor

Panels with Analog Monitors

ATEX Instrumentation

EX monitors Stratos Pro A 201 X

Isolated amplifier WG 21 A7

Samplers

Portable samplers

Sampler for wall mounting

Accessories

Accessories for the IQ SENSOR NET System

Accessories for further Process Instrumentation

Data sheets

6

8

10

11

12

13

15

15

16

17

19

20

22

23

24

25

26

28

30

32

34

36

37

38

39

40

41

41

42

43

44

45

45

46

50

52

54

55

55

56

57

58

60

61

61

62

63

63

64

65

67

77



IP-Code (International Protection Code)

Protection types acc. to DIN EN 60529

1st number:

instrument

protected against

entry of solid bodies

0 not protected

1 with $\varnothing \geq 50$ mm

2 with $\varnothing \geq 12$ mm

3 with $\varnothing \geq 2.5$ mm

4 with $\varnothing \geq 1.0$ mm

5 dust protected*

6 dustproof

* limited amounts of dust

may enter under certain conditions

2nd number:

protection against water

0 not protected

1 vertically falling drops

2 drops of water at angles of up to 15° to vertical

3 drops of water at angles of up to 60° to vertical

4 splashes from any direction

5 jets of water from any direction

6 strong jets of water from any direction

7 intermittent submersion (max. 1 m deep, 30 min)

8 permanent submersion

(conditions must be specified)

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



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 Hazardous 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.



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.



Reference to **Data sheets**

at the end of the catalog or separately available

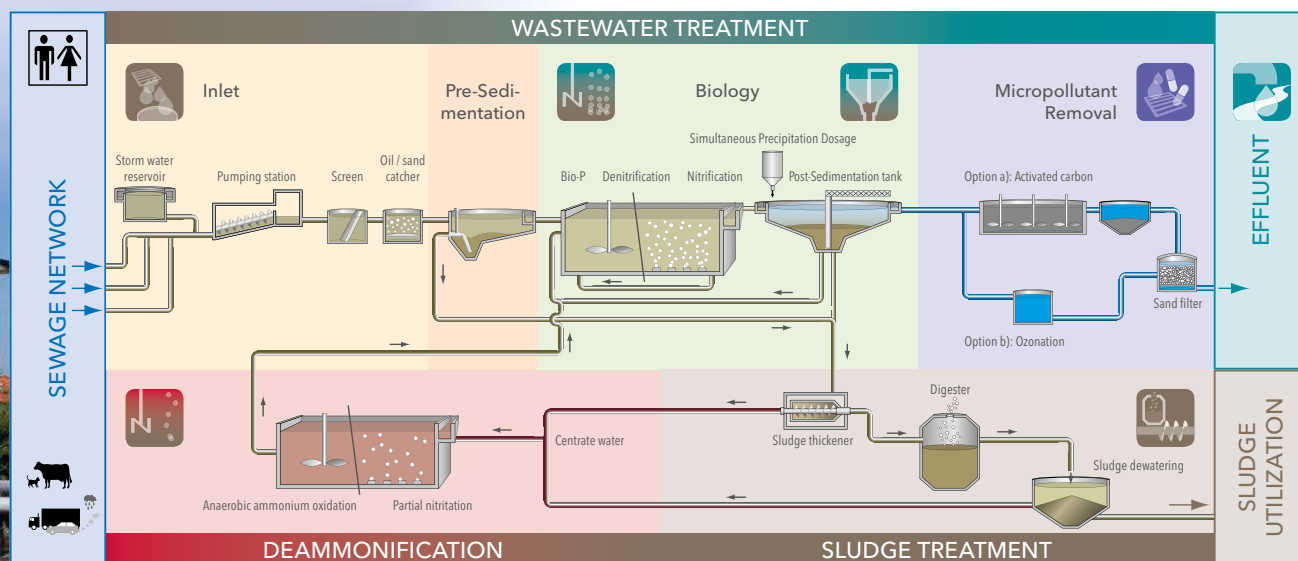
Typical Applications

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
		Conductivity:	TetraCon® 700 IQ	page 17	TSS, NO ₃ , NO ₂ , NO _x , COD, BOD, TOC, DOC, SAC, UVT:	Spectral sensors	page 30
	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
		NH ₄ , NO ₃ :	TriOxmatic® 700 IQ	page 10	TSS:	ViSolid® 700 IQ	page 23
	Sedimentation	Sludge level:	IFL 700 IQ	page 39	Orthophosphate:	Alyza IQ PO ₄	page 37
	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
	Micropollutant Removal	NH ₄ , NO ₃ :	ISE sensors	page 28	Orthophosphate:	Alyza IQ PO ₄	page 37
		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)	NH ₄ , NO ₃ :	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

Process Instrumentation



Drinking Water



see also www.xylenalytics.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

CI 298 Pt 1000 (24V)
see page 57



+ Sensor

FCML 412 N
see page 41
TCML N
see page 41

D.O.

Monitor

Oxi 298 Pt 1000 (24V)
see page 57



+ Sensor

Oxi ML 41
see page 11

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

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.xylenalytics.com/en/applications/industry

The IQ SENSOR NET can further be used for different industrial applications. Please consider the application range of our sensors, e.g. pH, temperature, corrosion or resistance. Given lifetimes and accuracies might differ due to the specific composition of the measured media.

IQ SENSOR NET

from page 42

IQ Sensors

from page 9

IQ Sensors (corrosion resistant SW versions)

from page 9

Typical Applications

Process Instrumentation



Surface Water

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



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

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 (NO₃):	NiCaVis® 705 IQ SF	page 30
Nitrit (NO₂):	NiCaVis® 705 IQ NI SF	page 30
COD/BOD	NiCaVis® 705 IQ SF	page 34



Fish Farming

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



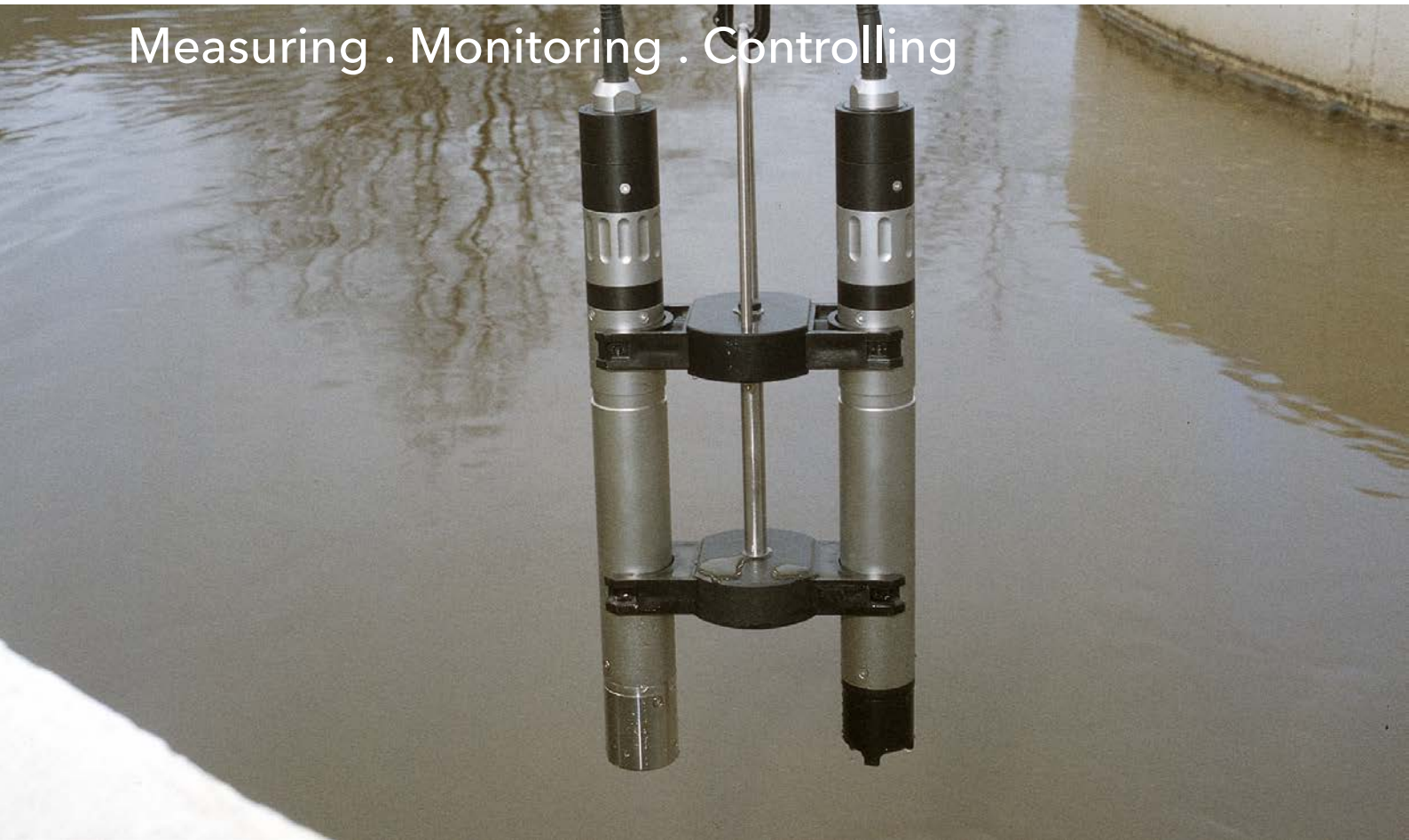
From extensive to intensive management, from fresh to salt water fish farming - to monitor relevant parameters like pH, oxygen concentration, salinity, total suspended solids or turbidity, we offer respective sensors; including temperature.

	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 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 separately

D.O. Measurement

Measuring . Monitoring . Controlling



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

Fields of application:

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

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



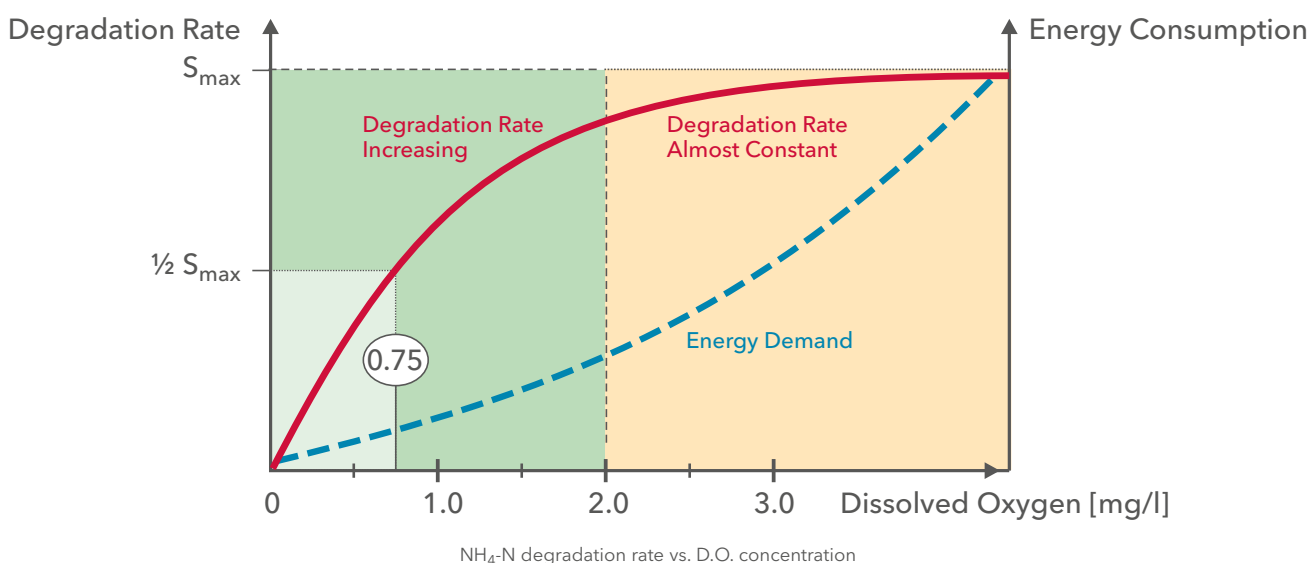
Monitoring and Control

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

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

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

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



Measurement Systems

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

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

FDO®: Optical D.O. Measuring

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

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

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



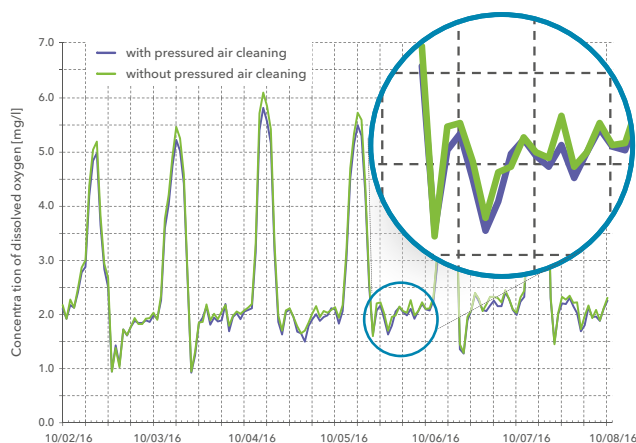
FDO® 700 IQ



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



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

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



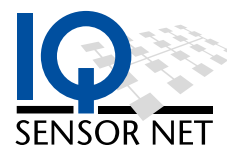
For technical data please see datasheets D2.02 and D2.20

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

Information about IQ SENSOR NET system see from page 42

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

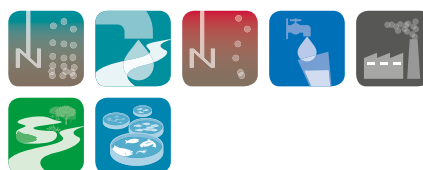
TriOxmatic®: Electrochemical D.O. Measuring

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



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

Analog

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

TriOxmatic® 690



suitable for pure measuring tasks in wastewater/water

TriOxmatic® 701

increased resolution for the residual oxygen in the denitrification



analog TriOxmatic® sensor

Ordering Information

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



For technical data please see datasheet D3.02

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 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



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

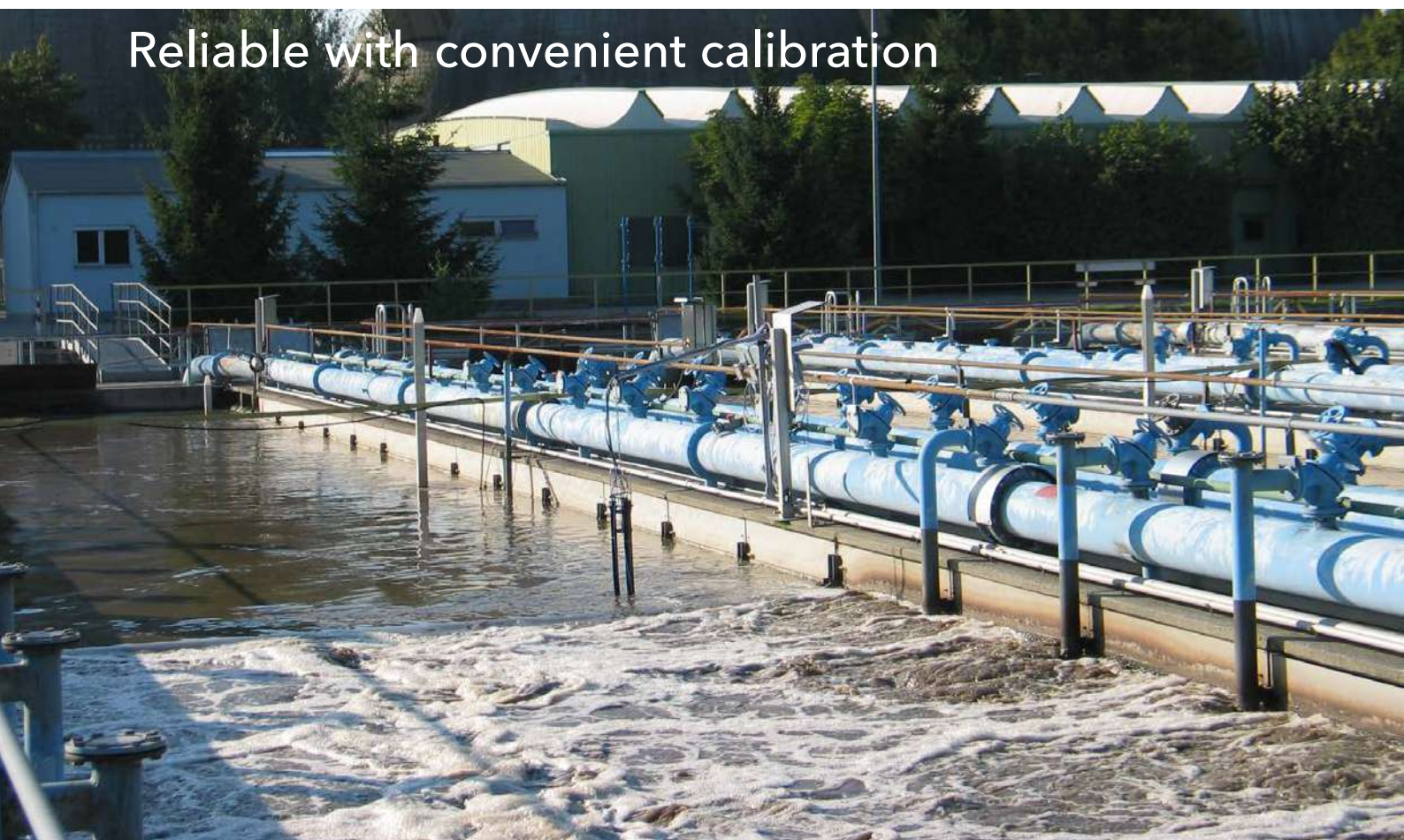
Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 56

Optical IQ dissolved oxygen sensors see from page 9

pH / ORP Measurement

Reliable with convenient calibration

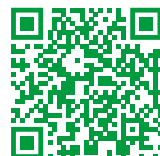


pH is one of the most important parameters measured throughout the water, wastewater and many process industries. In the biological treatment of wastewaters, for example, the acidic or alkaline condition of the waste water has an essential influence on the activity of the microorganisms; continuous online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

Fields of application:

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

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



SensoLyt® System Design

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



SensoLyt® 700 IQ



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



D2.03, 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



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

SensoLyt® 650 EX



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



SensoLyt® 650

Ordering Information

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



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

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 56



Controllers / isolated amplifier for EX area see from page 60

Combination Electrodes

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

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.



SEA-HP



EC

SensoLyt®

1/2 Year Warranty

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 unarmored, to be installed by example in flow cells	109100



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

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 56

SensoLyt® armature see page 13

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



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



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

Reliable in multiple applications

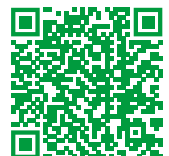


Conductivity is a well recognized and often indispensable parameter of state-of-the-art water, wastewater and industrial process analysis. Continuous measuring systems are employed to monitor the salt load of the influent in wastewater treatment plants, to control quality of drinking water and ultra-pure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

Fields of application:

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

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



TetraCon® 4-electrode Design

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



TetraCon® 700 IQ



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

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 TetraCon® 700 IQ, but as a sea water model	302501
TetraCon® 700 IQ F	Like TetraCon® 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 conductivity measuring cells see from page 18

Analog

To be operated with analog transmitters.

TetraCon® 700



especially developed submersible sensor assembly for use in wastewater treatment plants



TetraCon® 700 EX



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



TetraCon® 325

Suitable for universal applications



TetraCon® DU/T



flow measuring cell for standard industrial applications



LRD 325

for installation in pipes



Ordering Information

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



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

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 56



Controllers / isolated amplifier for EX area see from page 60

2-electrode Measuring Cells

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



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

Analog

To be operated with analog transmitters.



LRD 01

for installation in pipes



LR 325/01

for ultra-pure water applications



LR 325/001

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



LR ML

for drinking water and connection to LF 298 or MULTILINE 1000

Ordering Information

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



For technical data please see datasheet D3.06

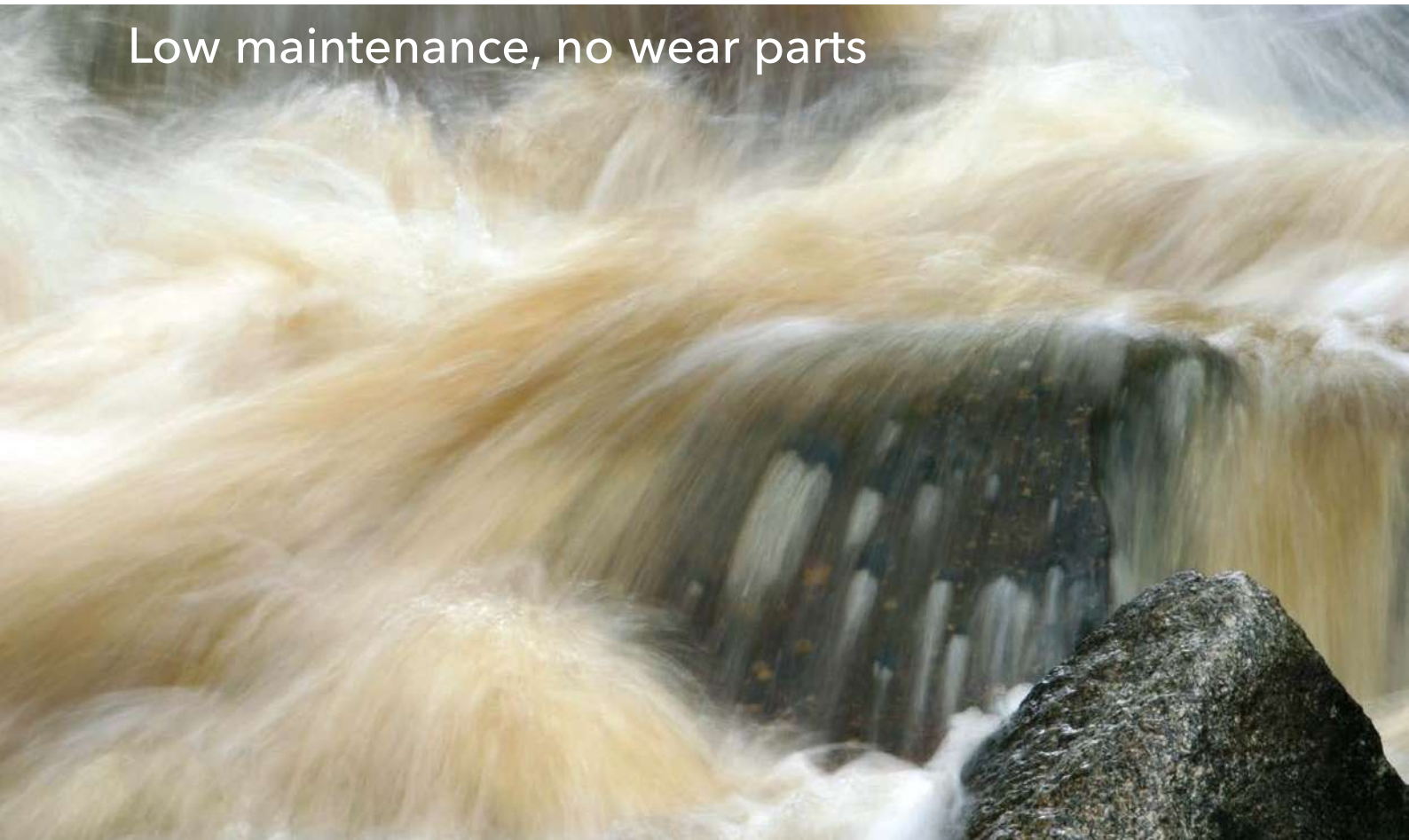
Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 56

Digital conductivity measuring cells see from page 17

Turbidity / Suspended Solids

Low maintenance, no wear parts



Turbidity

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

Fields of application:

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

Suspended Solids (TS)

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

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

Cleaning System

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

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

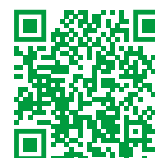
Likewise, the IQ spectral sensors provide the integrated ultrasonic cleaning.



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



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



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

Turbidity Sensor VisoTurb®

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

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



VisoTurb® 700 IQ



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



Digital

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

Suspended Solids Sensor ViSolid®

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

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



ViSolid® 700 IQ

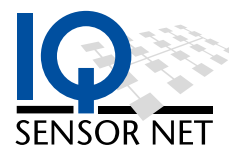


- Ultrasonic cleaning without wear or spare parts
- Extremely low maintenance
- Highly accurate factory calibration
- High operational safety (SensorCheck function)



Digital

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



ViSolid® 700 IQ

for the IQ SENSOR NET



ViSolid® 700 IQ SW

for use in corrosive media



Ordering Information

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



For technical data please see datasheet D2.06

Alternatives and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 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 spectral 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 spectral sensors are designed for monitoring of surface water:

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



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



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 2110

infrared light, without ultrasonic cleaning, low measuring range



Turb 2120

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 ($\pm 2\%$ / 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

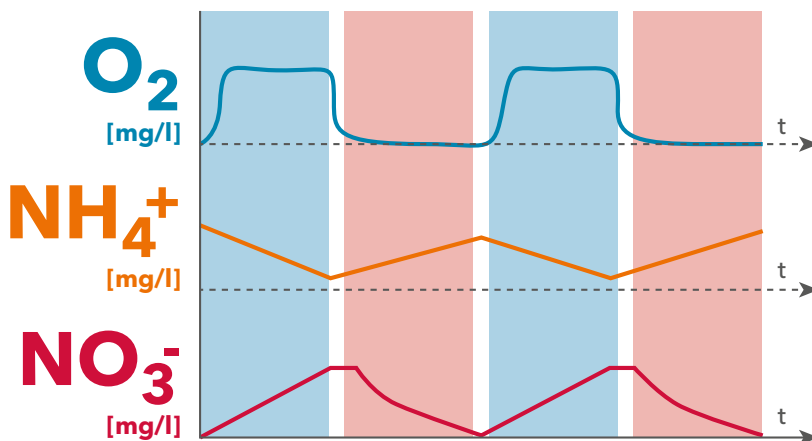
Nitrogen is found in a large variety of compounds and forms, it is considered to be the ultimate “quick-change artist”. In municipal wastewater it is mainly encountered as a waste product in the form of urea, which is already partly converted to ammonium nitrogen by ammonification.

Fields of application:

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

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 transferred into surface water and groundwater leading to eutrophication and therefore higher algae growth, as well as increasing nitrate content in drinking water.

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

Nitrite

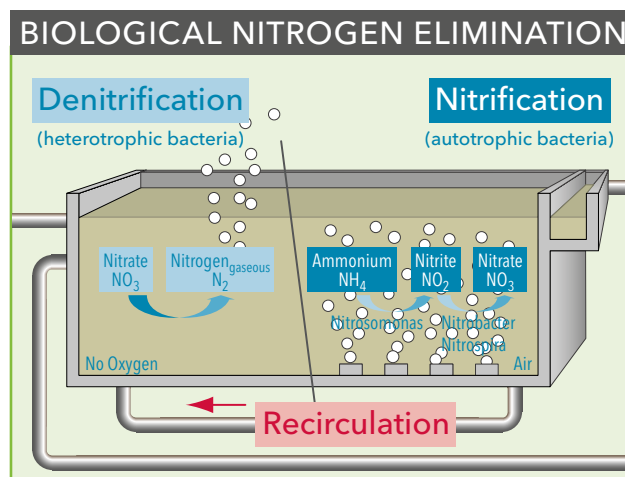
Nitrite occurs in considerably smaller amounts within wastewater treatment plants and soils. It is an intermediate product and oxidized very quickly into

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

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

NO_x

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



ISE Sensors

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



- 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

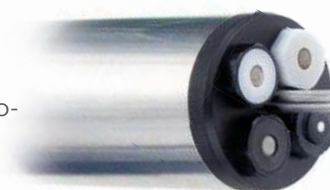
Digital Sensors

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



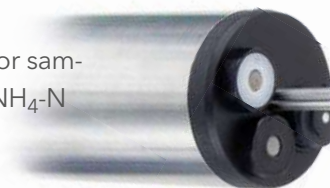
VARiON®Plus 700 IQ

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



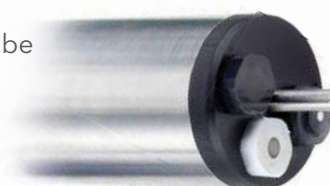
AmmoLyt®Plus 700 IQ

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 $\text{NH}_4\text{-N}$



NitraLyt®Plus 700 IQ

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



Ordering Information

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



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

Alternatives and accessories
see brochure "Product
Details" and website

Information about
IQ SENSOR NET system see
from page 42

Spectral nitrate/nitrite
sensors see from
page 30

Electrodes

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

Reference electrode VARiON® Ref

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

Ammonium electrode VARiON®Plus NH₄

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

Potassium electrode VARiON®Plus K

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

Nitrate electrode VARiON®Plus NO₃

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

Chloride electrode VARiON®Plus Cl⁻

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

Ordering Information

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

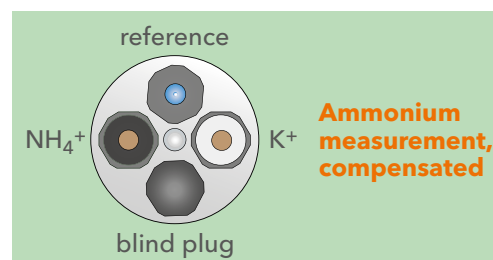


Sets and accessories see
brochure "Product Details"
and website

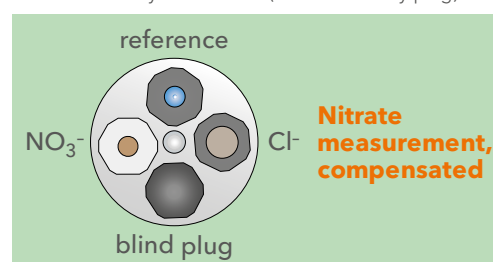
Information about
IQ SENSOR NET system see
from page 42

Spectral nitrate/nitrite
sensors see from
page 30

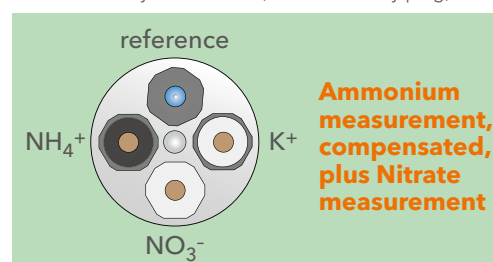
Ammonium analyzer see
from page 64



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



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



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

UV-VIS and UV Spectral Sensors



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



Spectral sensor with multifunctional slide and Shock-Absorption-Rings



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



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 (NO_x) 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

Parameter	Sensors															
	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
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)																
UV _{T254} (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



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

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

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

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

Fields of application:

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

COD

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

BOD

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

TOC

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

DOC

Dissolved Organic Carbon – dissolved organic share of TOC.

SAC

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

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

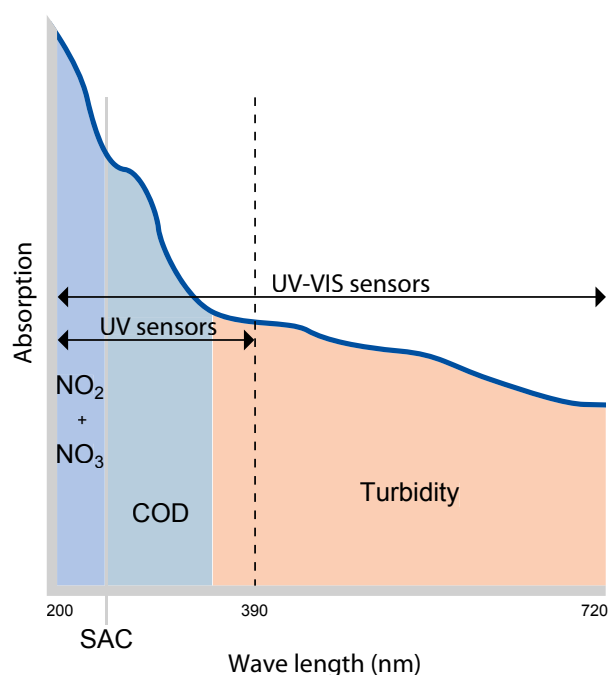
UVT

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

Spectral Online Sensors

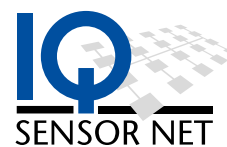
The CarboVis® and NiCaVis® sensors measure the total spectrum range from ultraviolet to long wave visible light (200–720 nm; UV-VIS sensors) or in the ultraviolet range (200–390 nm; UV sensors). The measured values are determined from the high information content of the spectral data. The calculation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

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



Example spectrum of UV-VIS sensor

UV-VIS and UV Spectral Sensors



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

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

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



Spectral sensor with multifunctional slide and Shock-Absorption-Rings



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



D2.11, D2.13,
D2.15, 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

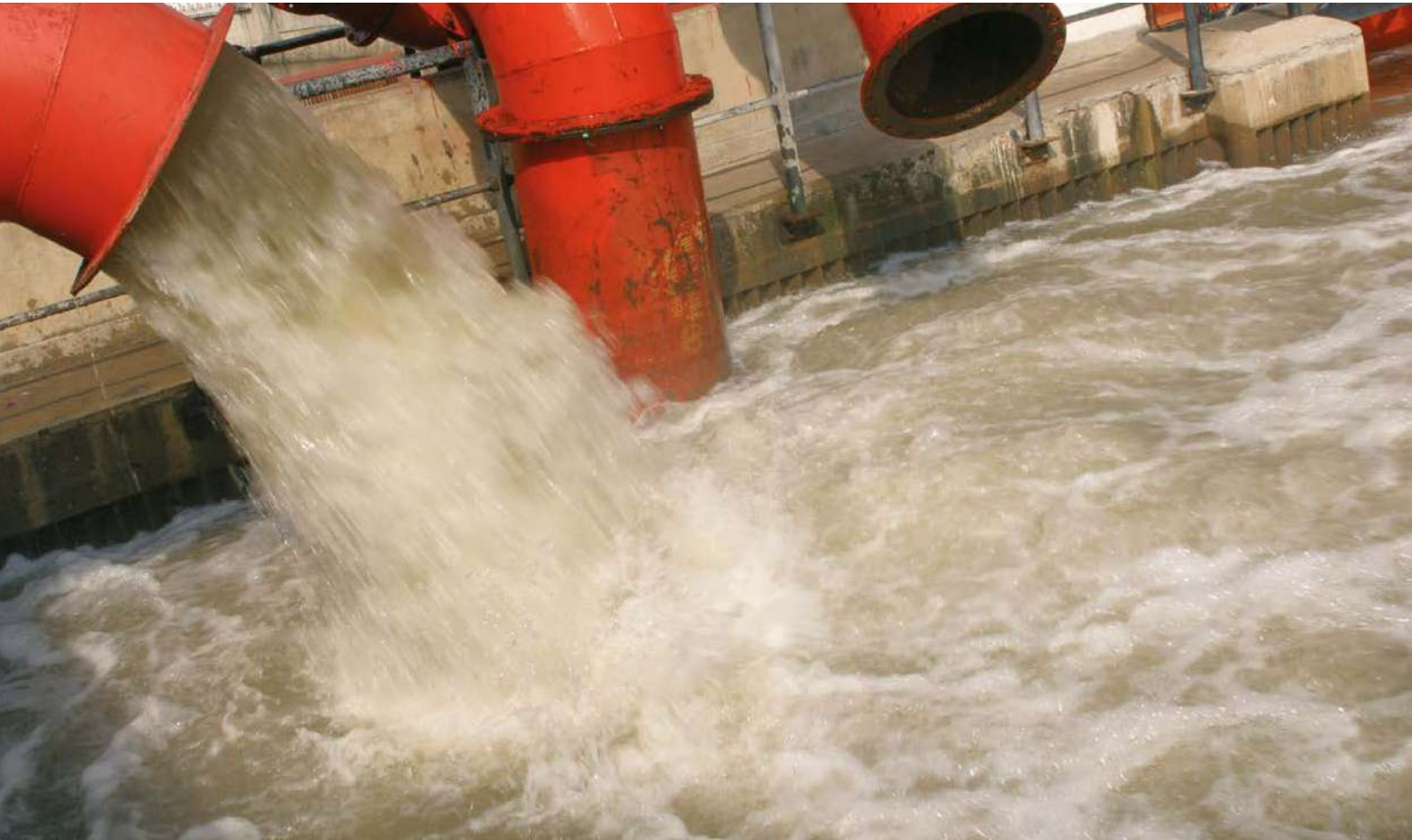
Parameter	Sensors															
	NitraVis® 701 IQ	NitraVis® 705 IQ	NitraVis® 701 IQ TS	NitraVis® 705 IQ TS	NitraVis® 701 IQ NI	NitraVis® 705 IQ NI	NiCaVis® 705 IQ	NiCaVis® 705 IQ TS	NiCaVis® 701 IQ NI	NiCaVis® 705 IQ NI	UV 701 IQ NOx	UV 705 IQ NOx	NiCaVis® 705 IQ SF	NiCaVis® 705 IQ NI SF	CarboVis® 701 IQ	CarboVis® 705 IQ
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>



Analyzer

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

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



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



Orthophosphate Analyzer Alyza IQ PO₄

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



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



Alyza IQ PO₄ two channel version with covered measuring unit

Alyza IQ PO₄-111

1-channel version for measuring range 1

Alyza IQ PO₄-121

1-channel version for measuring range 2

Alyza IQ PO₄-112

2-channel version for measuring range 1

Alyza IQ PO₄-122

2-channel version for measuring range 2

Ordering Information

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



For technical data please see datasheet D2.25

Reagents and accessories see brochure "Product Details" and website

Information about IQ SENSOR NET system see from page 42

Further analyzer see from page 54

Sludge Level Measurement

Objective, Reliable, Low Maintenance

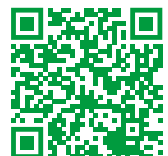


The sludge level is the boundary of settled sludge to the projecting turbid or clear water, wherein the location of the sludge level is defined as the distance to the water surface (sludge level depth), or as distance from the tank bottom (sludge level).

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

Fields of application:

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



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

Digital IQ Sensor to Determine the Sludge Level



Digital ultrasonic sensor IFL 700 IQ



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



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

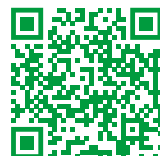
Free and Total Chlorine



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>

Analog Sensors

For free and total chlorine

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



FCML 412 N



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



D7.01

FCML 412 N

for measurement of free chlorine

TCML N

for measurement of total chlorine

Ordering Information

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



For technical data please see datasheet D7.01

Alternatives and accessories see brochure "Product Details" and website

Analog monitors see from page 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



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



Content

43	Fields of Application and Product Overview	50	IQ SENSOR NET System 282/284
44	IQ Systems	50	The Controllers
45	IQ Sensors	51	The Sensors and Parameters
45	IQ Analyzer	51	The Modules
46	IQ SENSOR NET System 2020	52	IQ SENSOR NET System 181
46	The basic equipment	52	The Controllerws
47	The Sensors and Parameters	53	The Sensors and Parameters
48	The Modules	53	The Modules
		77	Data sheets

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



Fields of Application and Product Overview

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

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

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



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

	Network System 2020		Measuring Location System 282/284		Single Parameter Measuring Point System 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 <i>sensors see from page 8</i>	●	●	●	●	●
pH/ORP <i>probes see from page 13</i>	●	●	●	●	●
Conductivity <i>cells see from page 17</i>	●	●	●	●	●
Turbidity <i>sensors see from page 22</i>	●	●	●	●	●
Suspended solids <i>sensors see from page 23</i>	●	●	●	●	
Nitrogen <i>probes see from page 28</i>	●	●	●	●	
Carbon <i>probes see from page 34</i>	●	●	●	●	
SAC/UVT <i>probes see from page 34</i>	●	●	●	●	
Phosphate <i>analyzer see from page 37</i>	●	●	●	●	
Sludge level <i>probes see from page 39</i>	●	●	●	●	
	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 log-book data, measured values and configurations for additional safety on a USB stick
- Up to 3 portable and clear displays even in direct sun light

2) Outstanding among the compact:

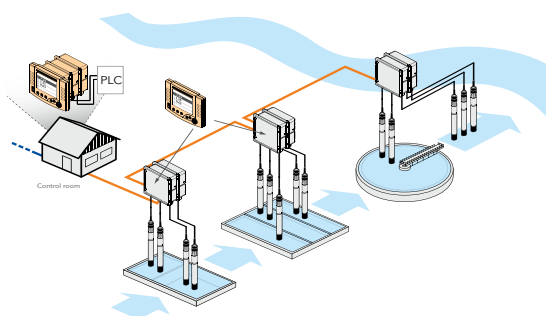
System 282/284

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

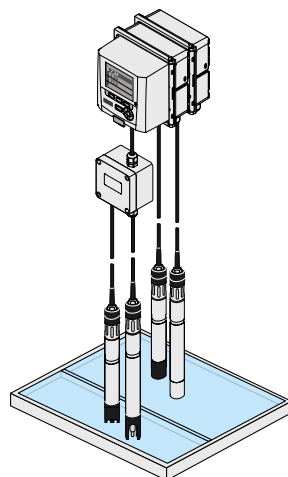
3) The single parameter measuring point:

System 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

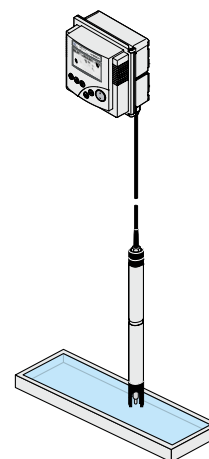


Product descriptions of single components see page 46



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

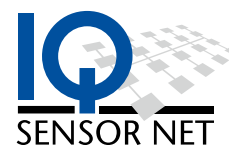


IQ System 181 with FDO® 700 IQ F

Product descriptions of single components see page 52

Visual overview of systems see cover of this catalog.

IQ Sensors



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

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

For the following parameters WTW offers IQ sensors:

Oxygen (D.O.)	from page 8
pH/ORP	from page 13
Conductivity	from page 17
Turbidity	from page 22
Suspended Solids	from page 23
Nitrogen: NH_4 , NO_3 , NO_2 , NO_x	from page 28
Carbon: COD/TOC/DOC/BOD	from page 34
SAC/UVT	from page 34
Sludge Level	from page 39



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:

Orthophosphate	from page 37
----------------	--------------



IQ SENSOR NET System 2020



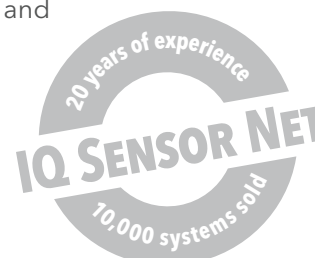
A flexible system - reliable results

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

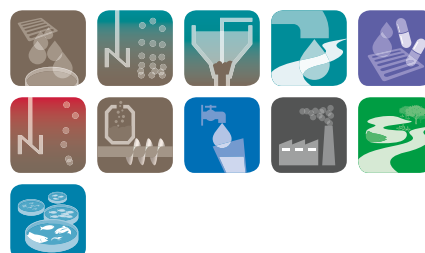
Application areas and system concept

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

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



The basic equipment



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



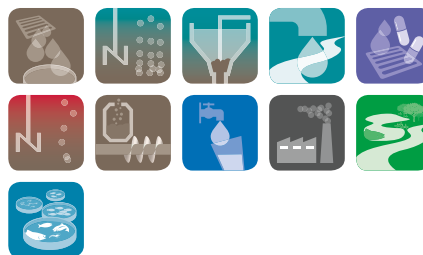
Terminal/Controller MIQ/TC 2020 3G

Terminal/Controller MIQ/TC 2020 3G

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



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



Modules for Power Supply

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

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

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



Ordering Information

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



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

Alternatives and accessories see brochure "Product Details" and website

Analog systems from 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:

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

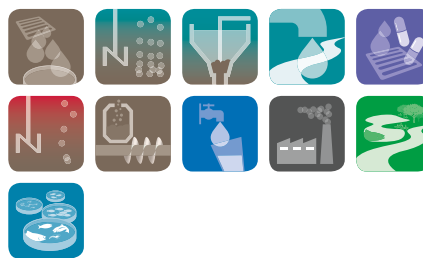
from page 8
from page 13
from page 17
from page 22
from page 23
from page 28
from page 34
from page 34
from page 39

IQ analyzer:

Orthophosphate from page 37

The Modules

Expand the functions of your system by adding specific modules.



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

Modules for System Expansion

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

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

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

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



TD D1.02, D1.04,
D1.05, D1.06



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

Modules with Analog Outputs

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

MIQ/R6 with 6 relays

MIQ/CR3 with 3 current outputs and 3 relays

MIQ/C6 with 6 current outputs

Module with Analog Inputs

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



Antenna of radio module MIQ/WL PS

Modules with Digital Outputs

MIQ/3-MOD for MODBUS RTU connection

MIQ/3-PR for PROFIBUS DP connection

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.

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



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



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



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

The Sensors and Parameters

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

For the following parameters WTW offers

IQ sensors:

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

from page 8
from page 13
from page 17
from page 22
from page 23

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

from page 28
from page 34
from page 34
from page 39

IQ analyzer:

Orthophosphate

from page 37

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



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



DIQ/S 181

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

Ordering Information

Model	Description	Order No.
DIQ/S 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

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

Alyza IQ Series

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



Alyza IQ PO₄ two-channel version with covered measuring unit



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

IP 67
IP 54



2 Jahre
Garantie



D2.25

Alyza IQ PO₄

for the measurement of orthophosphate
see from page 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

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



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

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

Fields of application:

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

Series 298 Single-parameter Field Monitor

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



pH 298



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



pH 298

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

analog pH electrodes see from page 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 CI 298/P

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

Monitors

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



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

Electrode with flow cell

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



D3.01, D7.01,
D7.03

Flow control monitoring (optional)

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

Dosing valve

for optimum flow adjustments

Pressure reducer

0 ... 16 bar with integrated temperature sensor



CI 298/P

Ordering Information

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



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

Configuration of alternatives
and accessories brochure
"Product Details"

Analog sensor technology
see parameter chapters
starting from page 11



EX monitors see
from page 61

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)

Ordering Information

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



- 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)



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.xylenalytics.com/en/products/process-controllers-and-sensors/atex-controller-and-sensor

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



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



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



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



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



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.

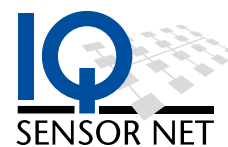
Fields of application:

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

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



Accessories for the IQ SENSOR NET System



Sensor Mounting

Extensions and holders

Controller/Module Mounting

Sunshields and mounting kits

Cable

Sensor and connection cables

Ready-to-go Sets

To mount up to 3 sensors including controller/module



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



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



Sun shield SSH/IQ

Ordering Information

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

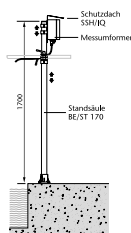
Sensors see from
page 8



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 pendulum and swing holders, without stands



Swivel fixture BE/R 170-D

Chain and Shackle

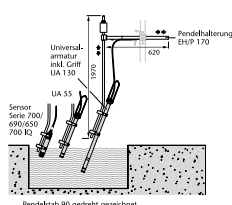
For individual solutions



CH/SO

Swing, Pendulum and Clamp Holders

To mount sensors and holders



EH/P 170

Mounting Equipment for 60 mm Sensors

For spectral and sludge level sensors



Holding Device
VIS Set/EH

Cleaning Accessories

Cleaning Air Box (Pressured air cleaning) and spare parts



Cleaning head CH

Junction Boxes

To connect analog sensors to the IQ SENSOR NET



KI/pH-MIQ/S

Ordering Information

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



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

Information about IQ SENSOR NET system see from page 42

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



Accessories for EX area see brochure "Product Details"

Retractable Armatures

For pipe installation, enables sensor removal during operation



Retractable armature

Flow Cells

For measurements in the bypass



VIS FT-1

Flow Assemblys

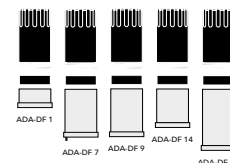
For pipe installation, without sensor removal during operation



EBST 700-DU/ND

Adapters

Needed for usage of flow cells and vessels



Ordering Information

Model	Description	Order No.
WA 700/10	Retractable armature for measurements in pipelines, 40 mm sensors, removal during operation, 10 bar	480100
WA 700/2	Retractable armature for measurements in pipelines, 40 mm sensors, removal during operation, 2 bar	480102
ESS-WA 700/VA	Stainless steel (1.4571) weld-in socket for retractable armatures	480106
ADA-WA 1	Adapter for retractable armatures for pH/ORP, conductivity, D.O., turbidity and TSS	480108
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



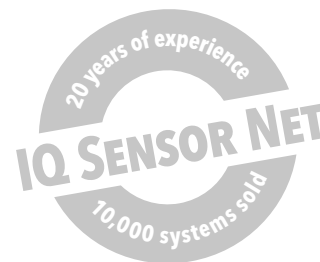
further accessories and alternatives see brochure "Product Details" and website

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**

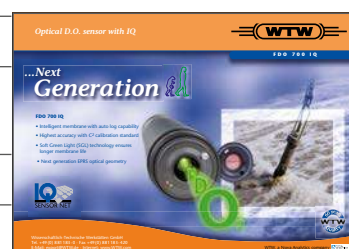
2015 MIQ/WL PS module for **radio transmission**

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**

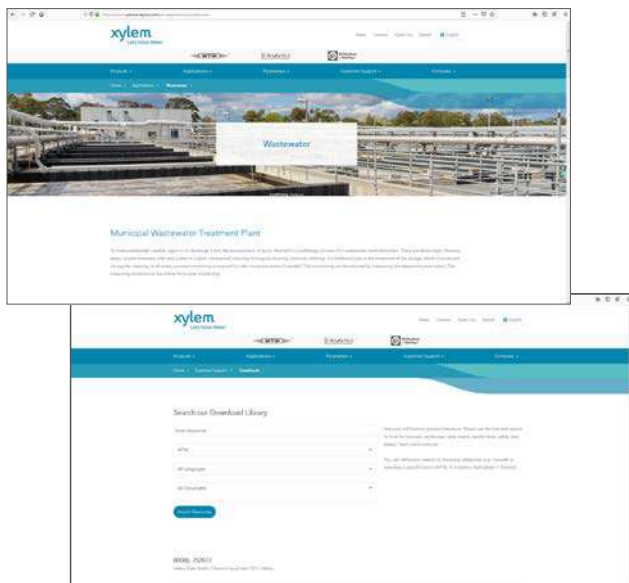
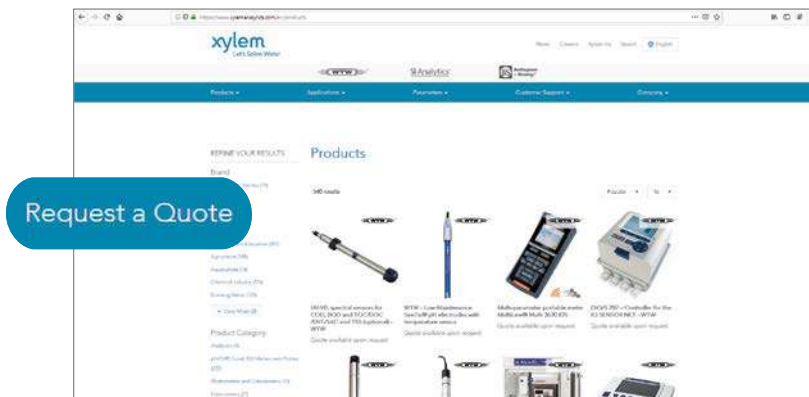
2019 Alyza IQ new generation of wet chemical analyzers for **NH₄** and **PO₄**



www.xylemanalytics.com

News around the clock

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



New products

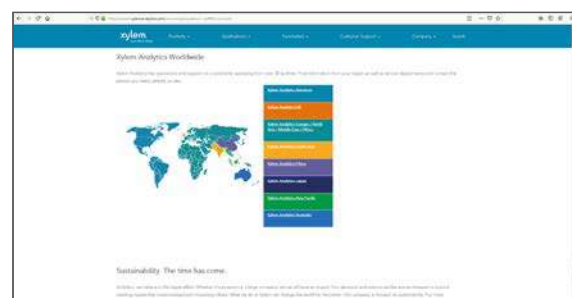
Take a look: Here you can find new products, developments, innovative measurement and analysis instruments, helpful accessories, useful system extensions, special sets, and much more.

Applications

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

Downloads

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



WTW – Laboratory and Field Instrumentation

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

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

Are you interested?

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



photoLab[®] SERIES



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

OptRF – faster as the fastest digestion

The photoLab[®] 7000 series



OxiTop[®]



More than just BOD

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

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

The new measuring head OxiTop[®]-i

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



Portable Meters

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

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

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

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

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



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

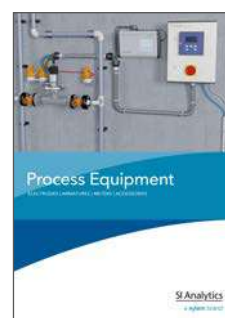


SI Analytics – Process Electrodes

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

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

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



27.00

Are you interested in
Level Measurement or
further Application?



We're here to help:

+49 881 1830

Info.WTW@Xyleminc.com

Our Brands

AANDERAA®

BS Bellingham
+ Stanley®

-ebro®

mjkl®

O-I Analytical®

SI Analytics®

SonTek®

TIDELAND

WTW®

YSI®

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

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

Xylem Analytics

Capabilities of Proven Brands

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

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



SI Analytics



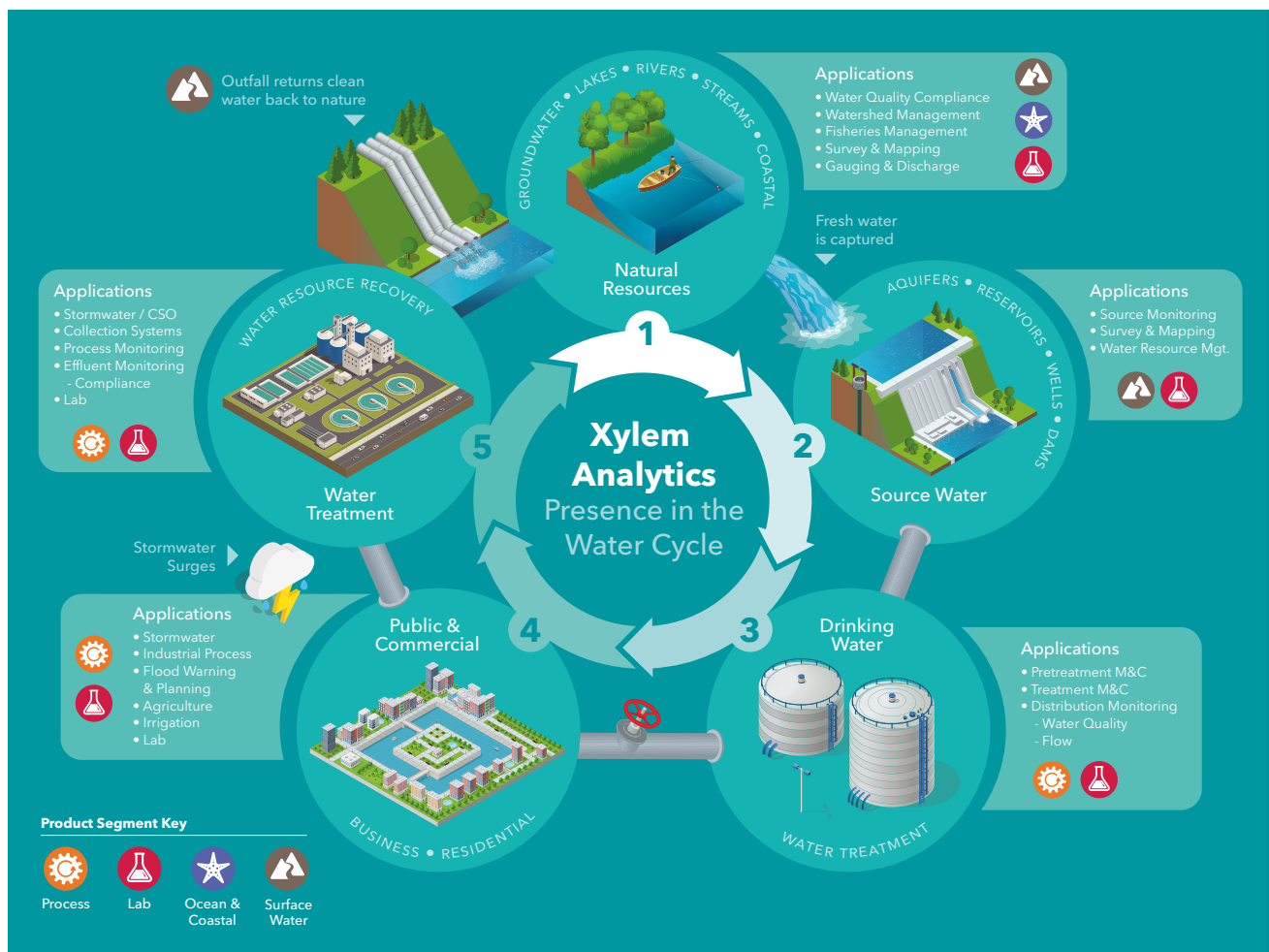
AANDERAA

-ebro-



O+Analytical

mjkl



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



Xylem Analytics Germany Sales GmbH & Co. KG, WTW
 Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim · Germany · Phone: +49881 1830 · Fax: +49881 183-420 · Info.WTW@Xyleminc.com

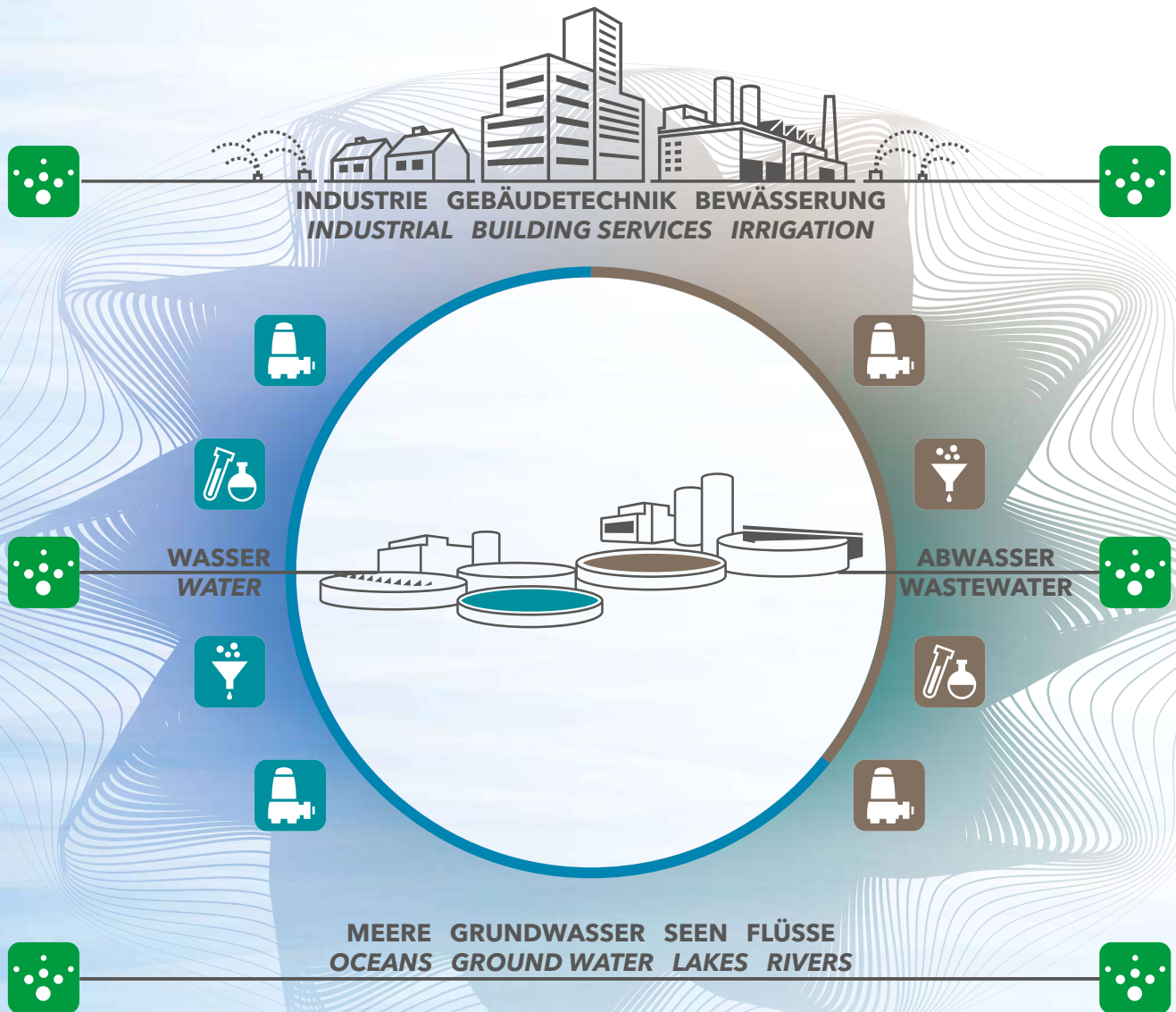
www.xylemanalytics.com
Info.WTW@Xyleminc.com

Water Cycle

Xylem provides the right solutions

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

Talk to us!



INDUSTRIAL:

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

COMMERCIAL:

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



Transport
Transport



Transport
Transport

Water & Wastewater Transport

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

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

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



Behandlung
Treat



Behandlung
Treat

Water & Wastewater Treatment

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

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



Analyse
Analyze



Analyse
Analyze

Analysis & Measurement Instrumentation

Xylem analytical systems test and ensure water quality.

Xylem analytical systems measure water quality and monitor the environment.



Netzwerk
Network



RESIDENTIAL:

Water supply and HVAC heating and cooling systems to homes.

AGRICULTURE:

Irrigation to farms, golf courses and turf applications.

Index

8X-yyyyy	59	391234	57	ADA-DF 1	67	PB 25 S	63
000103	63	401995	67	ADA-DF 7	67	PB 25 S/24	63
000105	63	470020	47	ADA-DF 9	67	PB-M-L/R24	63
104100	15	471020	49	ADA/D-SUB	65	PB-M-S/1	63
104150	15	471022	49	ADA-G 1"	67	PB-W/115V	63
107040	28	471023	49	ADA-WA 1	67	PB-W/230V	63
107042	29	471026	49	Alyza IQ PO4-111	37	pH 298 NTC	57
107044	29	472005	51	Alyza IQ PO4-112	37	pH 298 Pt100	57
107045	29	472007	51	Alyza IQ PO4-121	37	pH 298 Pt1000	57
107046	29	472100	52	Alyza IQ PO4-122	37	PL 80-120pH	15
107047	29	472110	50	AmmoLyt®Plus 700 IQ	28	PL 80-225pH	15
107070	28	472130	50	BE/M 170	66	PL 81-225pH VP	15
107080	28	480004	47	BE/R 170-D	66	PL 82-225pH VP	15
108533	67	480006	47	BE/ST 170	66	PL 89-225Pt	15
108540	66	480008	49	BE/ST 170-M	66	PMS/IQ	65
109100	14	480013	49	BE/ST 170-R	66	S 200	66
109114	14	480014	49	CarboVis® 701 IQ	34	SACIQ-1,5	65
109115	14	480015	49	CarboVis® 701 IQ TS	34	SACIQ-7,0	65
109115EX	14	480016	49	CarboVis® 705 IQ	34	SACIQ-15,0	65
109119	14	480018	49	CarboVis® 705 IQ TS	34	SACIQ-20,0 SW	65
109125	14	480019	66	CH	66	SC-FDO 700	8
109170	13	480025	49	CHEMtrac 830 M	67	SC-FDO 701	8
109171	13	480040	65	Chlorine 3000	41	S/CH	66
109177	13	480042	65	CH/SO	66	SD/K 170	65
109195	14	480044	65	CI 298/P - 230 VAC	58	Sensolyt® 650-7	14
109195EX	14	480045	65	CI 298/P Flow - 230 VAC	58	Sensolyt® 650-7 EX	14
109233	15	480046	65	CI 298 Pt1000	57	Sensolyt® 700 IQ	13
109234	15	480048	65	Cleaning Air Box - 230 VAC	66	Sensolyt® 700 IQ F	13
109235	15	480050	65	D 222/3	67	Sensolyt® 700 IQ SW	13
109236	15	480068	65	D 700/N	67	Sensolyt® DWA	14
109237	67	480080	67	D-CL	67	Sensolyt® PtA	14
109239	15	480100	67	DIQ/CHV	51	Sensolyt® SE	14
109260	65	480102	67	DIQ/JB	51	Sensolyt® SEA	14
109261	65	480106	67	DIQ/S 181	52	Sensolyt® SEA EX	14
109272	66	480108	67	DIQ/S 282-CR3	50	Sensolyt® TFA	14
109273	66	480200	59	DIQ/S 284-CR6	50	SenTix®ML 70	15
109274	65	480201	59	Drinking water panel	59	SenTix®ML ORP	15
109276	66	481034	30	EBST 700-DU/N	67	SNCIQ	65
109279	66	481035	30	EH2/U 170	65	SNCIQ-100	65
109280	66	481036	34	EH/F 170-1,5	66	SSH/IQ	65
109281	66	481038	34	EH/F 170-2,5	66	StratosProA201xCond-0	61
109283	66	481044	30	EH/U 170	65	StratosProA201xCond-1	61
109284	65	481045	30	EH/W 170	65	StratosProA201xpH-0	61
109286	65	481046	30	EH/W 172	66	StratosProA201xpH-1	61
109295	65	481047	30	EH/WB	66	TCML N	41
109304	65	481048	34	ESS 700 VA/N	67	TetraCon® 325	18
109305	65	481049	34	ESS-WA 700/VA	67	TetraCon® 700-7	18
109306	65	481050	34	EST-LRD	67	TetraCon® 700-7 EX	18
109320	65	481051	34	FCML 412 N	41	TetraCon® 700 IQ	17
109323	65	481052	30, 34	FDO® 700 IQ	9	TetraCon® 700 IQ F	17
109361	66	481053	30, 34	FDO® 700 IQ F	9	TetraCon® 700 IQ SW	17
109362	66	481054	30, 34	FDO® 700 IQ SW	9	TetraCon® DU/T	18
109444EX	61	481055	30, 34	FDO® 701 IQ	9	THS/IQ	65
109445EX	61	481056	30	FDO® 701 IQ F	9	TriOxmatic® 690-7	11
109446EX	61	481057	30	FDO® 701 IQ SW	9	TriOxmatic® 700 IQ	10
109447EX	61	481058	30, 34	IFL 700 IQ	39	TriOxmatic® 700 IQ F	10
191230	57	481059	30, 34	IFL 701 IQ	39	TriOxmatic® 700 IQ SW	10
191232	57	481200	39	IN/SET1	65	TriOxmatic® 701-7	11
191234	57	481201	39	IN/SET2	65	TriOxmatic® 701 IQ	10
201150	67	503200	63	IN/SET3	65	TriOxmatic® 702 IQ	10
201187	41	503201	63	KI/LF-0,4/MIQ	66	TURB 2000	25
201192	41	503250	63	KI/pH-MIQ/S	66	TURB 2020	25
201640	10	503280	63	LF 298 NTC	57	TURB 2100	25
201641	10	505123	66	LF 298 Pt1000	57	TURB 2110	25
201643	10	505124	66	LR 325/01	19	TURB 2110 Set	25
201644	10	505544	66	LR 325/001	19	TURB 2120	25
201646	10	505572	66	LRD 01-7	19	UA 55	65
201650	9	600007	22	LRD 325-7	18	UA 130	65
201652	9	600010	22	LR ML	19	UV 701 IQ NOx	30
201653	9	600011	22	MIQ/3-MOD	49	UV 701 IQ SAC	34
201654	8	600012	23	MIQ/24V	47	UV 705 IQ NOx	30
201655	8	600013	23	MIQ/C6	49	UV 705 IQ SAC	34
201656	9	600020	25	MIQ/CHV PLUS	49	VARION®Plus 700 IQ	28
201658	9	600025	25	MIQ/CR3	49	VARION®Plus CI	29
201660	9	600030	25	MIQ/IC2	49	VARION®Plus K	29
201678	11	600032	25	MIQ/JB	49	VARION®Plus NH ₄	29
201690	11	600033	25	MIQ/MC3	49	VARION®Plus NO ₃	29
201931	11	600035	25	MIQ/MC3-MOD	49	VARION®Ref	29
203745	67	801254	57	MIQ/MC3-PR	49	VIS FT-1	67
203753	67	801260	58	MIQ/PS	47	ViSolid®700 IQ	23
203755	67	801261	58	MIQ/R6	49	ViSolid®700 IQ SW	23
203761	67	825511	37	MIQ/TC 2020 3G	47	VisoTurb® 700 IQ	22
203773	67	825512	37	MIQ/WL PS SET	49	VisoTurb® 700 IQ F	22
203777	67	825521	37	MR/SD 170	65	VisoTurb® 700 IQ SW	22
291230	57	825522	37	MULTILINE 1000 115VAC	59	WA 700/2	67
291234	57	860150	41	MULTILINE 1000 230VAC	59	WA 700/10	67
300944EX	61	900107	66	MZ WIS 40 ST 44	67	WG21A7	61
300945EX	61	902888	65	NiCaVis® 701 IQ NI	30, 34	WG 21 A7 Opt. 336	61
301150	19			NiCaVis® 705 IQ	30, 34		
301252	18			NiCaVis® 705 IQ NI	30, 34		
301960	18			NiCaVis® 705 IQ NI SF	30, 34		
301961	19			NiCaVis® 705 IQ SF	30, 34		
301962	19			NiCaVis® 705 IQ TS	30, 34		
302222	19			NitraLyt®Plus 700 IQ	28		
302229	18			NitraVis® 701 IQ	30		
302316	18			NitraVis® 701 IQ NI	30		
302316EX	18			NitraVis® 701 IQ TS	30		
302500	17			NitraVis® 705 IQ	30		
302501	17			NitraVis® 705 IQ NI	30		
302507	17			NitraVis® 705 IQ TS	30		
303202	67			Oxi 298 NTC	57		
303209	67			Oxi 298 Pt1000	57		
391230	57			Oxi ML 41	11		

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, O₂)

- 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 armature 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

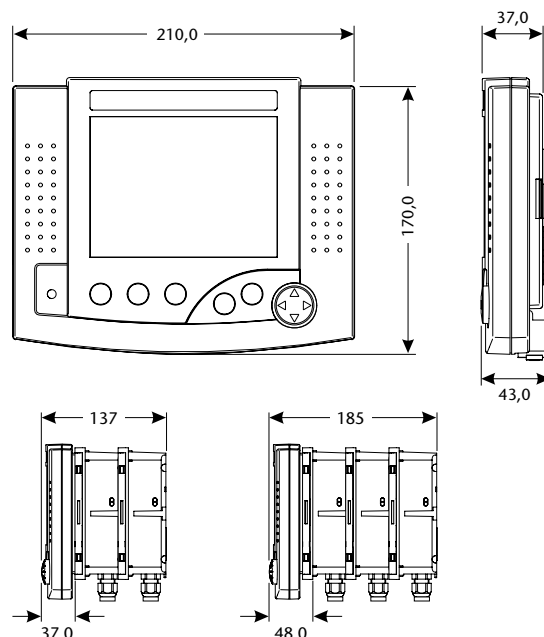
- D7.01 Analog chlorine sensors
- D7.02 Drinking Water Analyzer
- D7.03 Drinking water panels
- D7.04 Drinking water sensors

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	

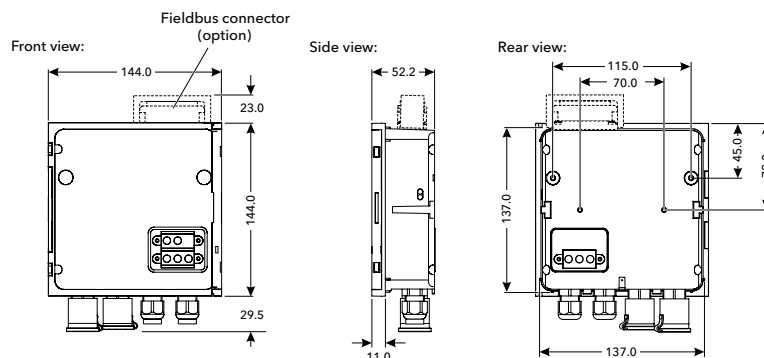
Model	Description	Order No.
MIQ/TC 2020 3G	Module IQ terminal/controller, configurable as a controller (fixed installation) or as a terminal with redundant controller function for system 2020, with USB interface, can be coupled to any IQ SENSOR NET module	470020
MIQ/TC 2020 3G-CR3	Starter set consisting 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 with 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

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

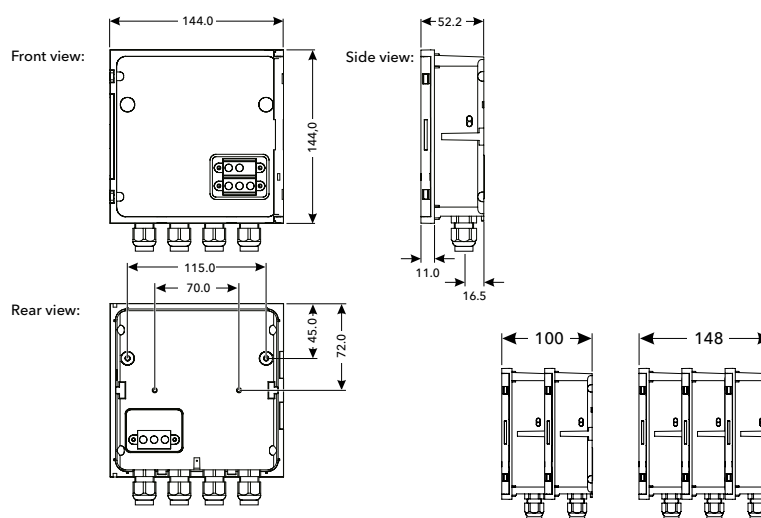
Model	Controller MIQ/MC3
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configured as Terminal) and for docking additional modules
MIQ Module Coupling at Rear	Combined mechanical and electrical connection, 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 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)
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 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/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

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

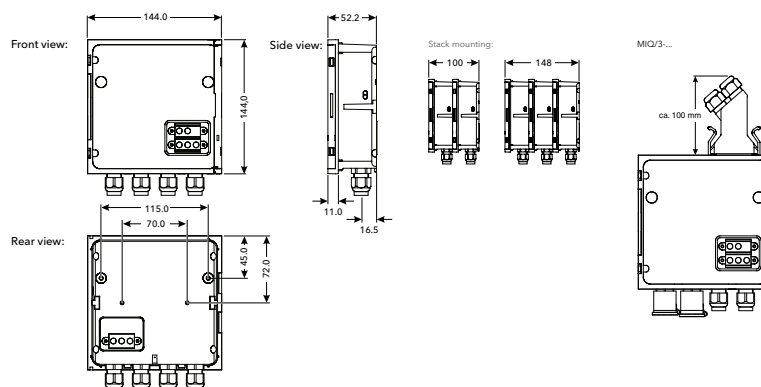
Models	MIQ module MIQ/PS	MIQ module MIQ/24V
MIQ Module Coupling at Front	Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configured as Terminal) and for docking additional modules	
MIQ Module Coupling at Rear	Combined mechanical and 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

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



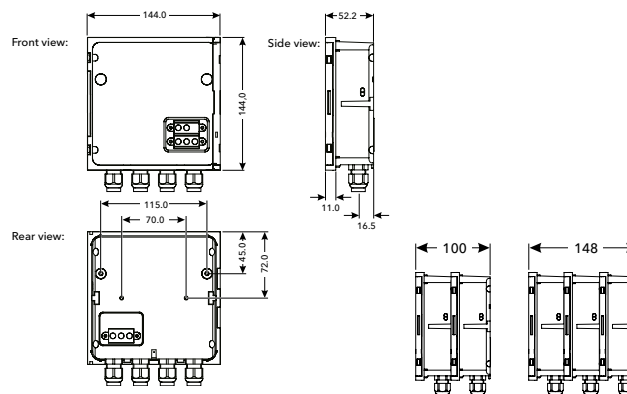
Technical Data

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 (configured 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 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)					
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 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/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

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



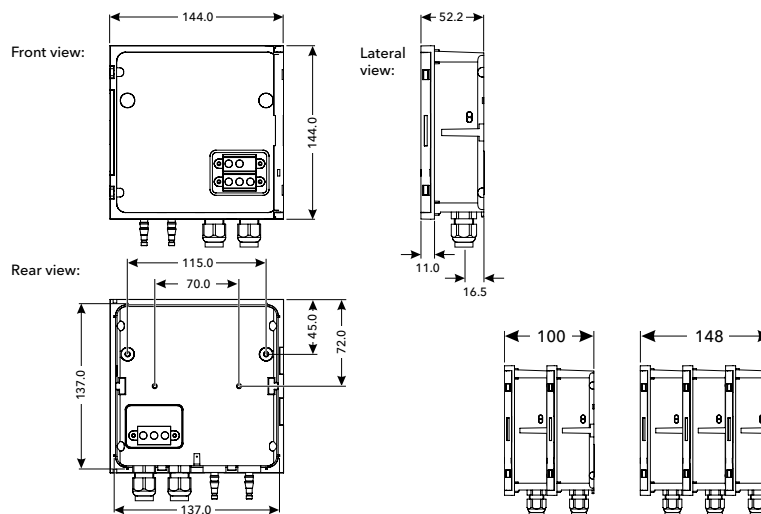
Technical Data

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 (configured 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 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)		
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 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)		
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	

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 (configured 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	

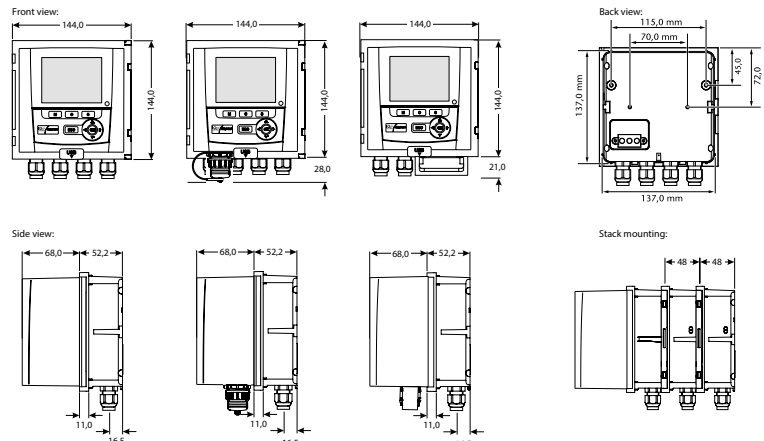
Model	Description	Order No.
MIQ/CHV PLUS	Module IQ/Cleaning Head Valve for automatic relay or IQ SENSOR NET controlled compressed air cleaning (relay and compressed air supply, external)	480018

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

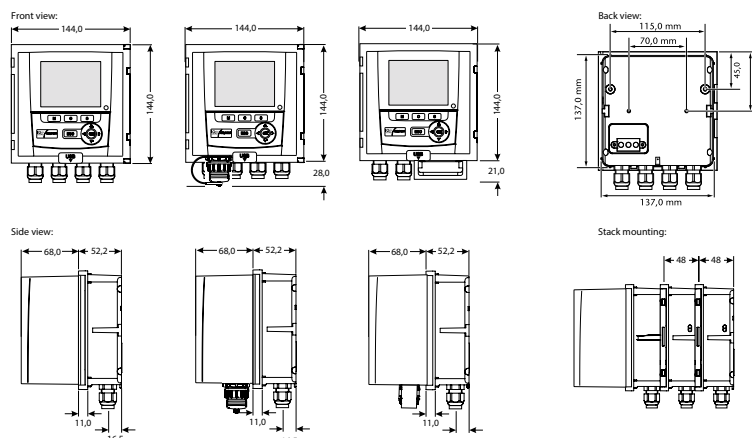
Model	Description	Order No.
DIQ/S 282-CR3	Controller for up to 2 IQ sensors, with 3 Relays, with 3 mA-outputs, 100 ... 240 VAC	472110
DIQ/S 282-PR	Like above, but with PROFIBUS-interface (RS 485), 100 ... 240 VAC	472111
DIQ/S 282-MOD	Like above, but with 3 Relays, with MODBUS-interface (RS 485), 100 ... 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

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; backlight
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 (expandable 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

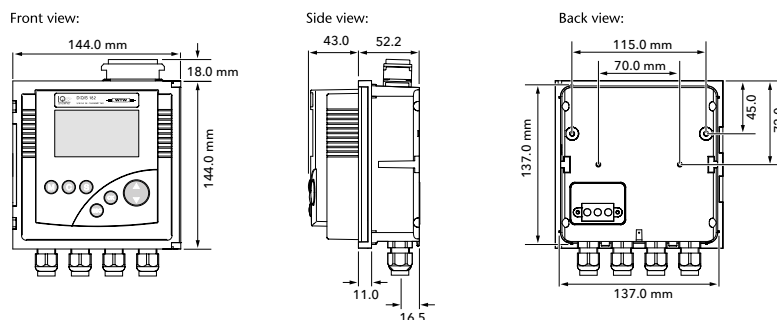
Model	Description	Order No.
DIQ/S 284-CR6	Controller for up to 4 IQ sensors, with 6 Relays, with 6 mA-outputs, 100 ... 240 VAC	472130
DIQ/S 284-PR	Like above, but with 3 Relays, with PROFIBUS-interface (RS 485), 100 ... 240 VAC	472131
DIQ/S 284-MOD	Like above, but with 3 Relays, with MODBUS-interface (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

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



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	

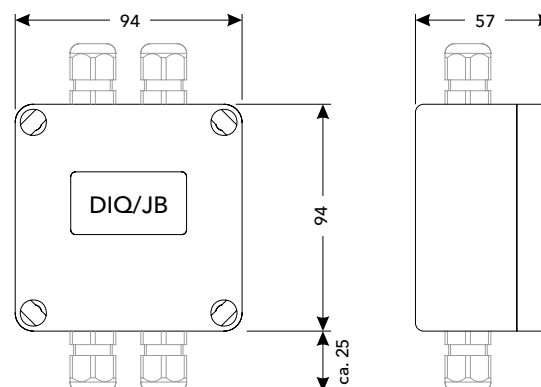
Model	Description	Order No.
DIQ/S 181	Dual IQ/System 181, Universal monitor for the connection of 1 digital IQ fixed cable sensor, with 2 analog outputs (0/4-20 mA) and 3 relays	472100
DIQ/S 181/24V	Like the DIQ/S 181, but for 24 V AC/ DC voltage supply	472101

IQ SENSOR NET DIQ modules

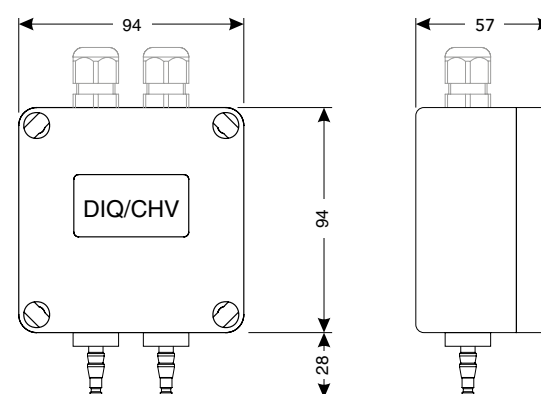
Modules for the flexible expansion of digital IQ SENSOR NET systems 181 and 282/284 by additional measuring points or functions – compact design

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 mm ² Terminal area for flexible conductors: 0.2 ... 2.5 mm ² 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 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. 250 m/273 yds	
Warranty	3 years for defects of quality	

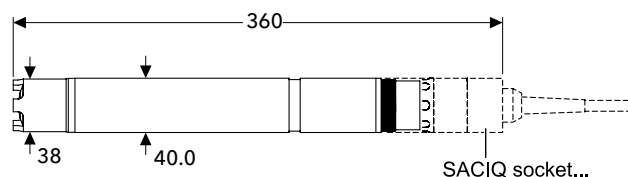
Model	Description	Order No.
DIQ/JB	Dual IQ/Junction Box to connect a second or remote IQ sensor in the system 181 and 282/284	472005
DIQ/CHV	Dual IQ/Cleaning Head Valve, for the automatic relay-controlled compressed air cleaning in the system 181 and 282/284	472007

Digital electro-chemical IQ sensors for dissolved oxygen TriOxmatic®

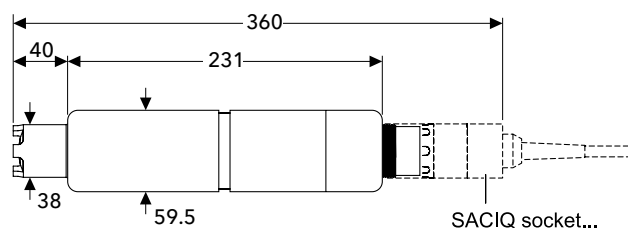
Reliable and proven digital electro-chemical oxygen sensors with 3 electrode system (ECDO) for precise and accurate measurements

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)				
O₂ concentration	0.0 ... 60.0 mg/l		0.00 ... 20.00 mg/l 0.0 ... 60.0 mg/l 0.0 ... 200.0% 0 ... 600%	0 ... 2000 µg/l 0.00 ... 10.00 mg/l 0 ... 110%
O₂ saturation	0 ... 600%			
Resolution				
O₂ concentration	0.1 mg/l		0.01 mg/l 0.1 mg/l 0.1% 1%	0.001 mg/l 0.01 mg/l 0.1%
O₂ saturation	1%			
Accuracy	Depending on calibration ± 0.1 mg/l or 1 % (at 0.0 ... 60.0 mg/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))

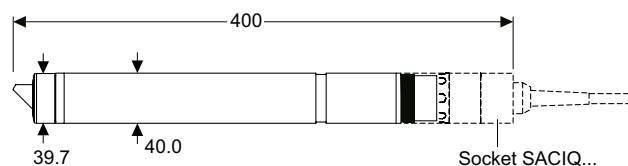
Model	Description	Order No.
TriOxmatic® 700 IQ	Universal oxygen sensor for the measurement and regulation of oxygen input in wastewater treatment plants (please order cables separately)	201640
TriOxmatic® 700 IQ SW	Like TriOxmatic® 700 IQ, but as a sea water model	201641
TriOxmatic® 701 IQ	Like TriOxmatic® 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

Digital optical IQ sensors for dissolved oxygen FDO®

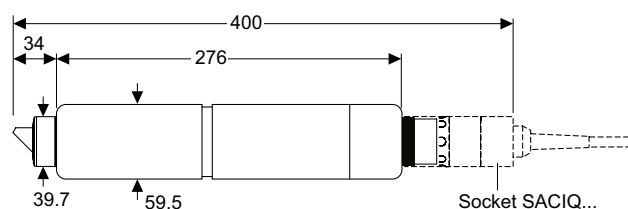
Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ SENSOR NET to regulate biological cleaning steps

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

Model	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))

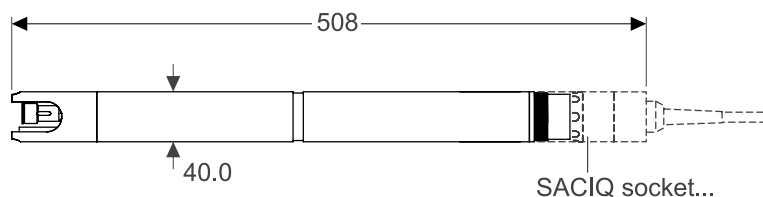
Model	Description	Order No.
FDO® 700 IQ	Optical O ₂ sensor for connection to the IQ SENSOR NET. (Please order cable separately)	201650
FDO® 701 IQ	like the FDO® 700 IQ, but with a faster response time	201660
FDO® 700 IQ SW	like the FDO® 700 IQ, but as sea water model with plastic arming (POM)	201652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

Digital IQ pH/ORP armatures SensoLyt®

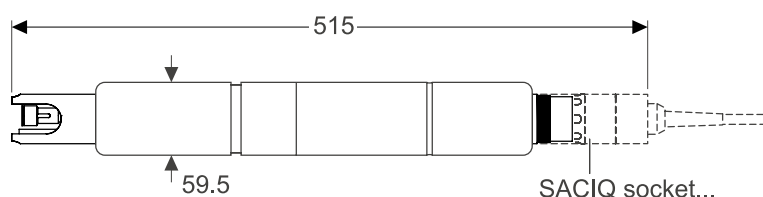
Digital pH/ORP armature with integrated preamplifier and temperature sensor as well as lightning protection to be connected to IQ SENSOR NET

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



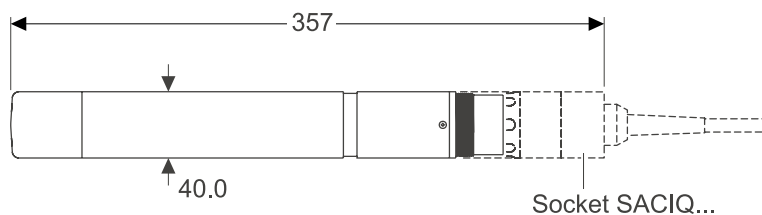
Digital IQ conductivity measuring cells

TetraCon®

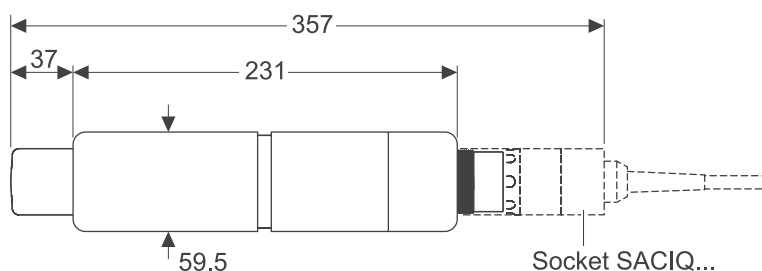
Digital 4 electrode conductivity measuring cell with flow-free operation, especially with high conductivity

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 TetraCon® 700 IQ, but as a sea water model	302501

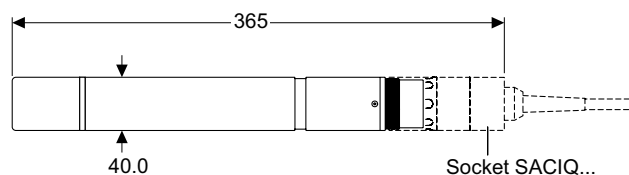
Digital turbidity sensors VisoTurb®



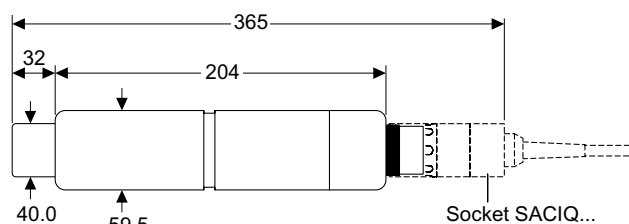
Optical turbidity sensors with nephelometric principle according to EN ISO 7027 for the in-situ use in water/waste-water incl. ultrasonic cleaning system

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 SiO₂; ppm SiO₂ 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 SiO₂; ppm SiO₂ 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 SiO₂; ppm SiO₂ Factory calibration with SiO ₂ g/l TS Calibration by user, (TSS regulations in compliance with DIN 38414)	
Cleaning System	Ultrasonic 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

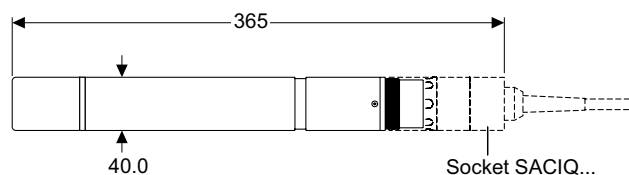
Digital suspended solids sensors ViSolid®



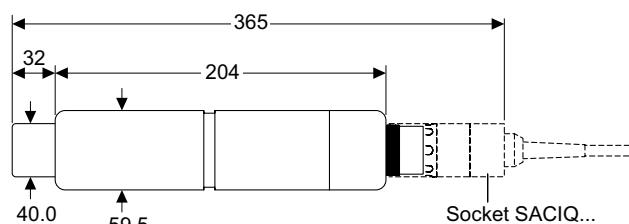
Optical sensors for the in-situ use to measure suspended solids via scattered light and direct back-scattering with ultrasonic cleaning system

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))

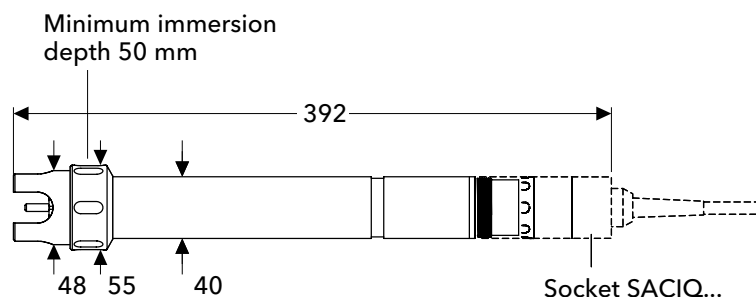
Model	Description	Order No.
ViSolid® 700 IQ	Digital suspended solids sensor with integrated ultrasonic cleaning (please order cable separately)	600012
ViSolid® 700 IQ SW	Like ViSolid® 700 IQ, but as a sea water model	600013



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	

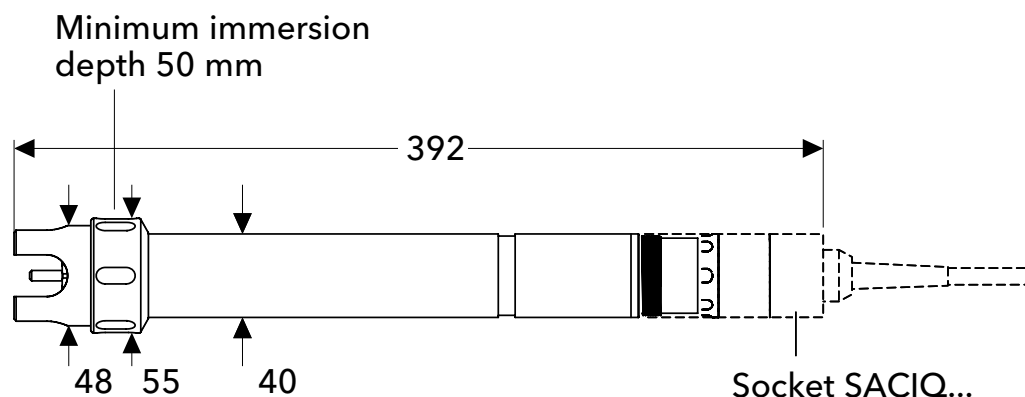
Model	Description	Order No.
VARiON®Plus 700 IQ	Digital sensor for the ion selective measurement of ammonium and nitrate, without electrodes (Please order the sensor cable SACIQ separately)	107040
VARiON®Plus A comp SET NH₄	VARiON®Plus 700 IQ, reference electrode VARiON® Ref, ammonium measuring electrode VARiON®Plus NH ₄ and compensation electrode VARiON®Plus K (potassium) (Please order the sensor cable SACIQ separately)	107060
VARiON®Plus N comp SET NO₃	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 NH₄ & NO₃	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 NH₄ & NO₃	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



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 NH₄-N

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



Technical Data

Model	AmmoLyt®Plus	
Measuring method	Potentiometric	
Appropriate Electrode	Reference electrode VARiON® Ref, Measuring electrode VARiON®Plus NO ₃ , Compensation electrode 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	
Compensation Range	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 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	AmmoLyt®Plus 700 IQ: 2 years Electrodes: 1 year for defects of quality	

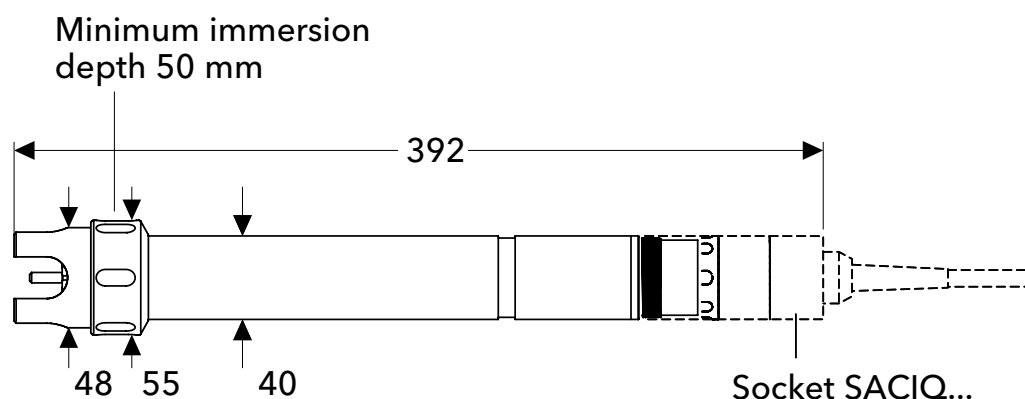
Model	Description	Order No.
AmmoLyt® Plus 700 IQ	Digital sensor for ion selective measurement of ammonium (Please order the sensor cable SACIQ separately)	107070
AmmoLyt® Plus SET	AmmoLyt®Plus 700 IQ, VARiON® Ref and VARiON®Plus NH ₄ (Please order the sensor cable SACIQ separately)	107071
AmmoLyt® Plus SET/Comp	AmmoLyt®Plus 700 IQ, VARiON® Ref, VARiON®Plus NH ₄ and VARiON®Plus K (Please order the sensor cable SACIQ separately)	107072

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	Potentiometric	
Appropriate Electrode	Reference electrode VARiON® Ref, Measuring electrode VARiON®Plus NO ₃ , Compensation electrode VARiON®Plus Cl	
Measuring range/Resolution	NO ₃ -N: 1 ... 1000 mg/l / 1 mg/l; 0.1 ... 100.0 mg/l / 0.1 mg/l	
Compensation Range	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 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	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

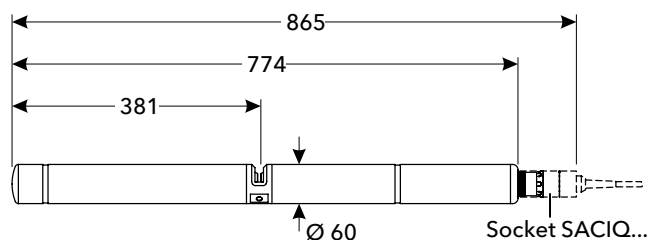


Digital optical UV VIS spectral probe NitraVis® for nitrate and suspended solids

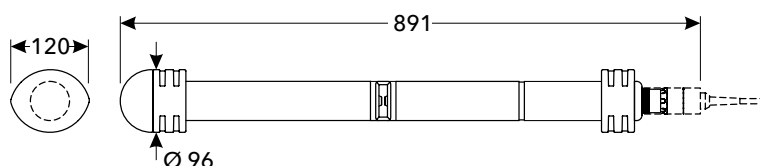
Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate and suspended solids (optional) - optimized for municipal wastewater treatment systems

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

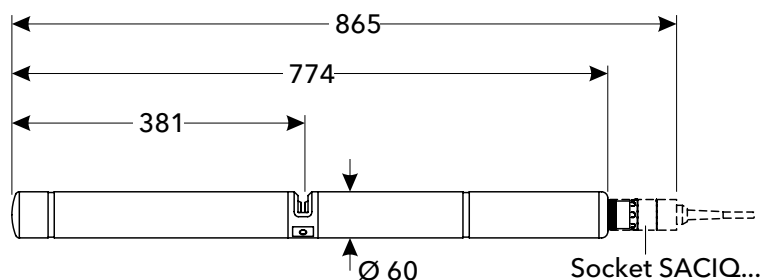


Digital optical sensors NiCaVis® for nitrate, carbon and suspended solids

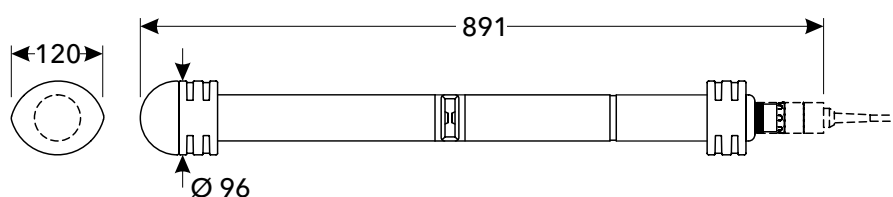
Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate, carbon and suspended solids (optional) in the wastewater treatment system drain

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

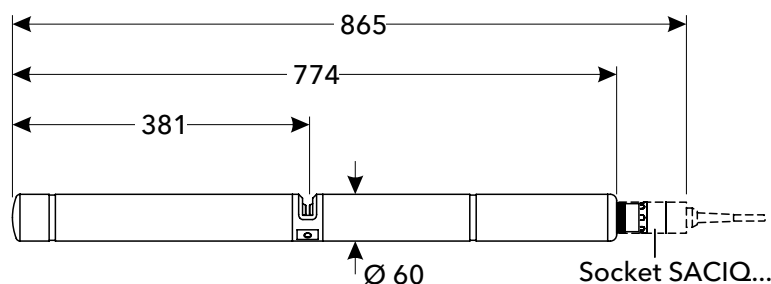


Digital optical UV spectral probe NitraVis® NI for nitrate and nitrite

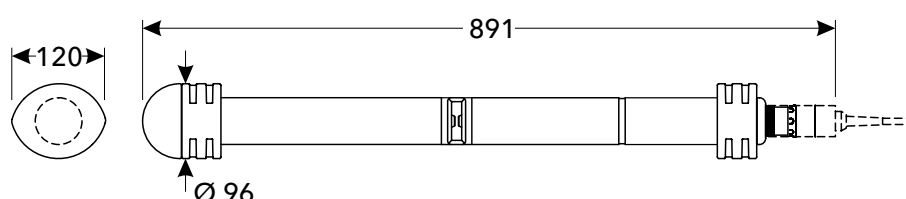
Sensor with maintenance-free ultrasonic cleaning for measurement of nitrate and nitrite directly in the process – optimized for municipal wastewater treatment systems

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



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

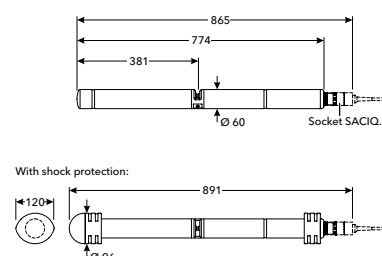
Model	NiCaVis® 701 IQ NI	NiCaVis® 705 IQ NI		
Measuring method	Spectral Measurement in the UV Range (200–390 nm)			
Measuring gap (optical layer thickness)	1 mm	5 mm		
Application (optimized for)	Municipal wastewater:	Municipal wastewater:		
Measuring range and Resolution	Inlet:			
	NO ₃	0.0 ... 300.0 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:		
		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
		COD _{total}	0 ... 4.000 mg/l	1 mg/l
	COD _{dissolv}	0 ... 4.000 mg/l	1 mg/l	
	TOC	0 ... 2.500 mg/l	1 mg/l	
	DOC	0 ... 2.500 mg/l	1 mg/l	
	BOD	0 ... 2.500 mg/l	1 mg/l	
	SAC _{254 total}	0 ... 3.000 1/m	1 1/m	
	UVT _{254 total} *	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.

NiCaVis® 701 IQ NI, NiCaVis® 705 IQ NI



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

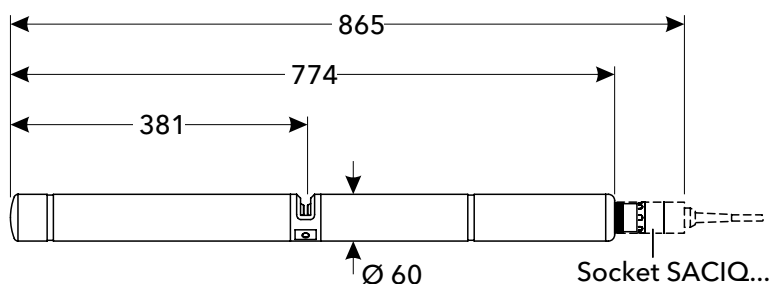


Optical nitrate sensor UV 70x IQ NO_x

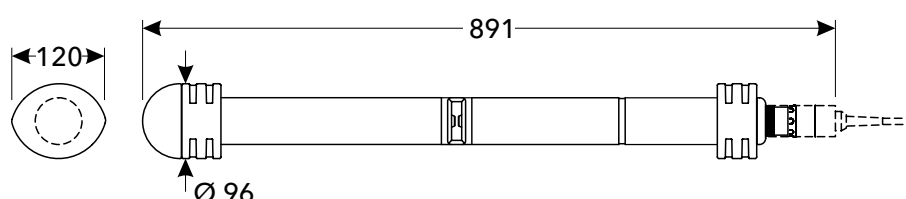
Low-cost probe with integrated ultrasonic cleaning for the maintenance-free and reagent-free measurement of nitrate

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

UV 701 IQ NO_x, UV 705 IQ NO_x



With shock protection:



Technical Data

Model	UV 701 IQ NO _x	UV 705 IQ NO _x
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	0.0 ... 100.0 mg/l 0.1 mg/l
	NO _x -N 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 NO _x	Optical nitrate (NO _x) 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 NO _x	Like UV 701 IQ NO _x , but to measure low concentrations	481035



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: 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} 0.0 ... 5,000 1/m 1 1/m SAC _{254 dissolv} 0.0 ... 3,000 1/m 1 1/m UVT _{254 total} * 0.0 ... 100.0 % 0.1 % UVT _{254 dissolv} * 0.0 ... 100.0 % 0.1 % TSS Aeration: COD _{dissolv} 0 ... 12,500 mg/l 1 mg/l DOC 0 ... 12,500 mg/l 1 mg/l SAC _{254 total} 0.0 ... 5,000 1/m 1 1/m SAC _{254 dissolv} 0.0 ... 3,000 1/m 1 1/m UVT _{254 total} * 0.0 ... 100.0 % 0.1 % UVT _{254 dissolv} * 0.0 ... 100.0 % 0.1 % TSS Effluent: COD _{total} 0 ... 4,000 mg/l 1 mg/l COD _{dissolv} 0 ... 4,000 mg/l 1 mg/l TOC 0 ... 2,500 mg/l 1 mg/l DOC 0 ... 2,500 mg/l 1 mg/l BOD 0 ... 2,500 mg/l 1 mg/l SAC _{254 total} 0.0 ... 3,000 1/m 1 1/m SAC _{254 dissolv} 0.0 ... 3,000 1/m 1 1/m UVT _{254 total} * 0.0 ... 100.0 % 0.1 % UVT _{254 dissolv} * 0.0 ... 100.0 % 0.1 % TSS	Inlet: 0 ... 20,000 mg/l 1 mg/l 0 ... 12,500 mg/l 1 mg/l 0 ... 20,000 mg/l 1 mg/l 0 ... 12,500 mg/l 1 mg/l 0 ... 8,000 mg/l 1 mg/l 0.0 ... 5,000 1/m 1 1/m 0.0 ... 3,000 1/m 1 1/m 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.00 ... 15.00 g/l 0.01 g/l Aeration: 0 ... 12,500 mg/l 1 mg/l 0 ... 12,500 mg/l 1 mg/l 0.0 ... 5,000 1/m 1 1/m 0.0 ... 3,000 1/m 1 1/m 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.00 ... 20.00 g/l 0.01 g/l Effluent: 0.0 ... 800.0 mg/l 0.1 mg/l 0.0 ... 800.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 600.0 1/m 0.1 1/m 0.0 ... 600.0 1/m 0.1 1/m 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.0 ... 4,500 mg/l 1 mg/l	Effluent: 0 ... 4,000 mg/l 1 mg/l 0 ... 4,000 mg/l 1 mg/l 0 ... 2,500 mg/l 1 mg/l 0 ... 2,500 mg/l 1 mg/l 0 ... 2,500 mg/l 1 mg/l 0.0 ... 3,000 1/m 1 1/m 0.0 ... 3,000 1/m 1 1/m 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.0 ... 900.0 mg/l 0.1 mg/l	Effluent: 0.0 ... 800.0 mg/l 0.1 mg/l 0.0 ... 800.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 500.0 mg/l 0.1 mg/l 0.0 ... 600.0 1/m 0.1 1/m 0.0 ... 600.0 1/m 0.1 1/m 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 % 0.0 ... 100.0 % 0.1 %

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

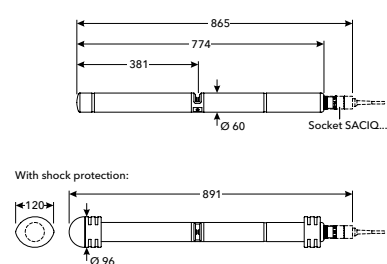
Certifications CE

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

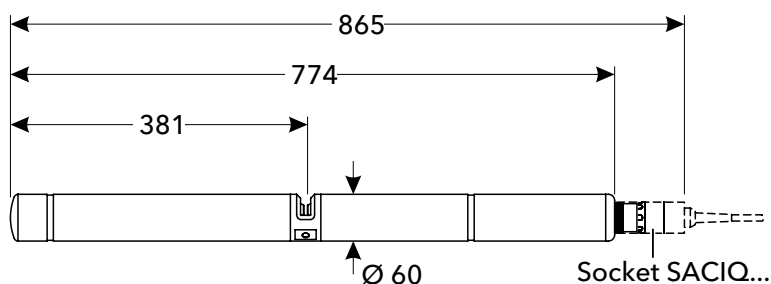


Optical SAC and UVT sensor UV 70x IQ SAC

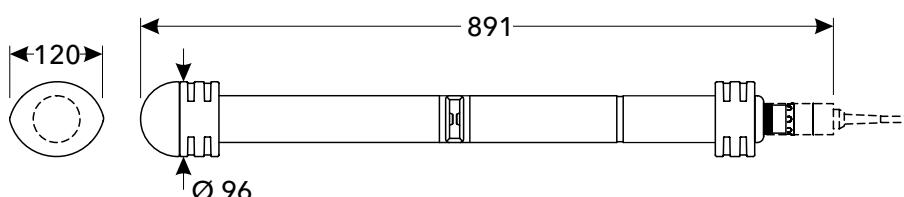
Low-cost probe (integrated ultrasonic cleaning, turbidity compensation) for the maintenance-free and reagent-free SAC measurement according to DIN 38404 C3

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	0.0 ... 800 mg/l
	TOC 0.0 ... 20,000 mg/l	0.0 ... 500.0 mg/l
	DOC 0.0 ... 12,500 mg/l	0.0 ... 500.0 mg/l
	BOD 0.0 ... 8,000 mg/l	0.0 ... 500.0 mg/l
	SAC ₂₅₄ total 0.0 ... 3,000 1/m	0.0 ... 600.0 1/m
	SAC ₂₅₄ dissolv 0.0 ... 3,000 1/m	0.0 ... 600.0 1/m
	UVT ₂₅₄ total* 0.0 ... 100.0 %	0.0 ... 100.0 %
	UVT ₂₅₄ dissolv* 0.0 ... 100.0 %	0.0 ... 100.0 %
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.

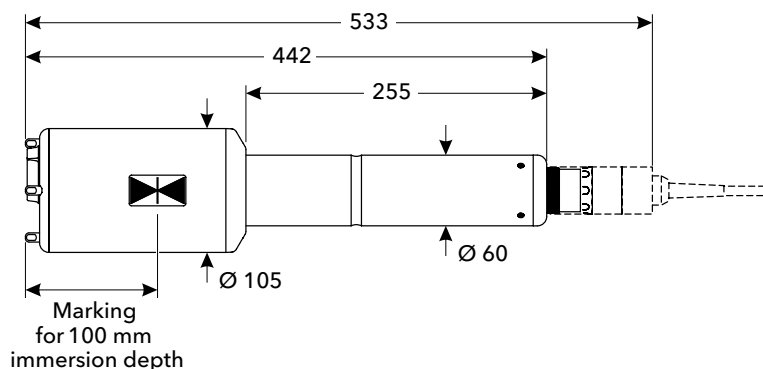
Model	Description	Order No.
UV 701 IQ SAC	Optical SAC and UVT sensor (254 nm) to measure higher concentrations with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately)	481036
UV 705 IQ SAC	Like UV 701 IQ SAC, but to measure lower concentrations	481038



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		

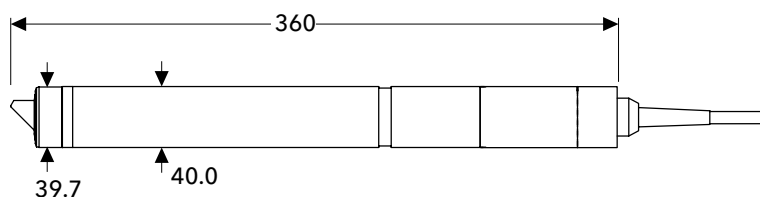
Model	Description	Order No.
IFL 700 IQ	Digital ultrasonic sensor with automatic cleaning to measure the sludge level	481200
IFL 701 IQ	Digital ultrasonic sensor to measure the sludge level	481201

Digital IQ fixed cable sensors for dissolved oxygen

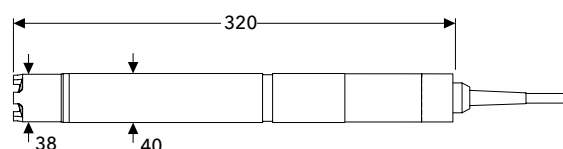
Optical or electro-chemical: The IQ fixed cable sensors for dissolved oxygen provide reliable measuring values for your single parameter measuring point

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			

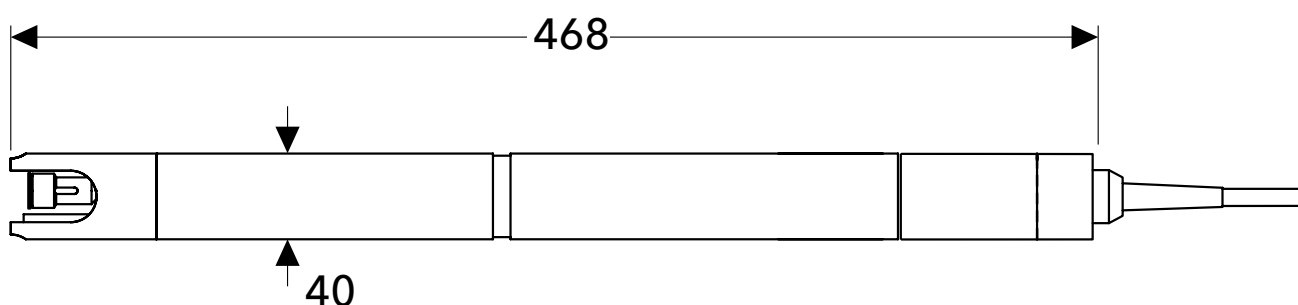
Model	Description	Order No.
FDO® 700 IQ F	Optical oxygen sensor, calibration-free, for DIQ/S 181/(24V), with 10 m fixed cable for DIQ/S 181/(24V)	201656
FDO® 701 IQ F	Optical oxygen sensor, calibration-free for DIQ/S 181/(24V), with 10 m fixed cable and fast response time, for DIQ/S 181/(24V)	201658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



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

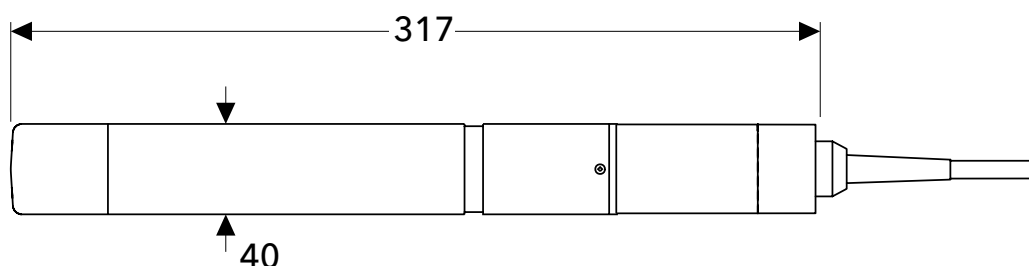
Model	Description	Order No.
SensoLyt® 700 IQ F	Robust digital pH/ORP meter for pH/ORP measuring chains SensoLyt® SEA/DWA/ECA/PtA, can be connected to DIQ/S 181(/24 V), with 10 m fixed cable	109177



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

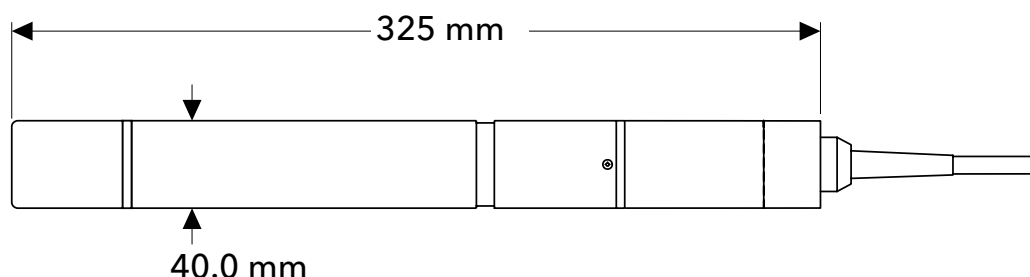
Model	Description	Order No.
TetraCon® 700 IQ F	Digitale 4 electrode conductivity measuring cell for strongly contaminated wastewater, can be connected to DIQ/S 181(/24V), with 10 m fixed cable	302507



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 SiO₂; ppm SiO₂ 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 SiO₂; ppm SiO₂ 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 SiO₂; ppm SiO₂ Factory calibration with SiO ₂ g/l TSS Calibration by user, (TSS regulations in compliance with DIN 38414)	
Cleaning System	Ultrasonic 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

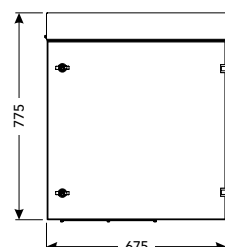


Orthophosphate Analyzer Alyza IQ

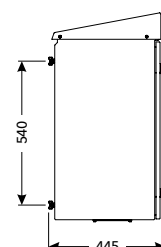
To control precipitant dosing and to monitor the outlet of a wastewater treatment plant with the IQ SENSOR NET (Systems 2020 and 282/284)

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

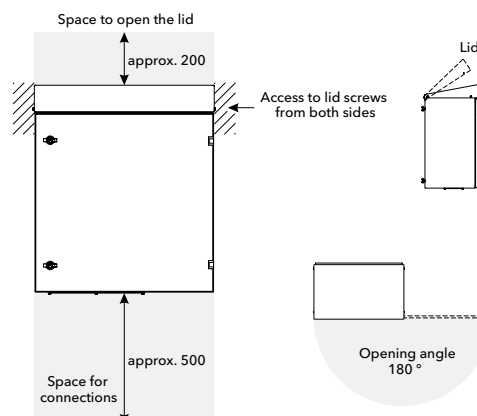
Front view:



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 PO ₄ /1-1	Reagents for Alyza IQ PO ₄ -X1X with MR 1	827550
R-Set PO ₄ /1-2	Reagents for Alyza IQ PO ₄ -X2X with MR 2	827551
SC-Set PO ₄ /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 PO ₄ /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 PO ₄ /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

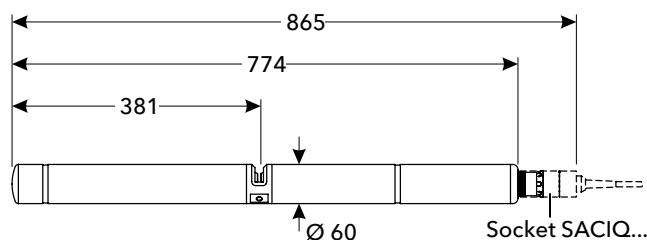


NiCaVis® optical sensors for surface water monitoring

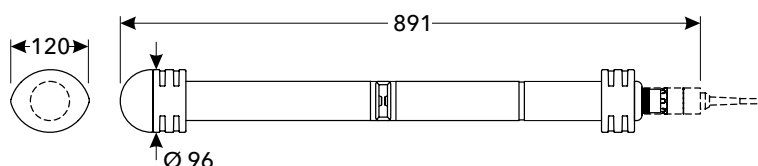
Multiparameter-sensor with maintenance-free ultrasonic cleaning technology for the reagent-free measurement of nitrate, nitrite (optional) and Carbon parameters in rivers and lakes.

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
	NO ₃ -N	0.00 ... 50.00 mg/l	0.01 mg/l	0.00 ... 50.00 mg/l
	NO ₂		0.1 mg/l	0.0 ... 100.0 mg/l
	NO ₂ -N		0.01 mg/l	0.00 ... 25.00 mg/l
	COD	0.0 ... 800.0 mg/l	0.1 mg/l	0.0 ... 800.0 mg/l
	TOC	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l
	DOC	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l
	BOD	0.0 ... 500.0 mg/l	0.1 mg/l	0.0 ... 500.0 mg/l
	SAC ₂₅₄ total	0.0 ... 600.0 1/m	1 1/m	0.0 ... 600.0 1/m
	SAC ₂₅₄ diss.	0.0 ... 600.0 1/m	1 1/m	0.0 ... 600.0 1/m
	UVT ₂₅₄ total*	0.0 ... 100.0 %	0.1 %	0.0 ... 100.0 %
	UVT ₂₅₄ diss.*	0.0 ... 100.0 %	0.1 %	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

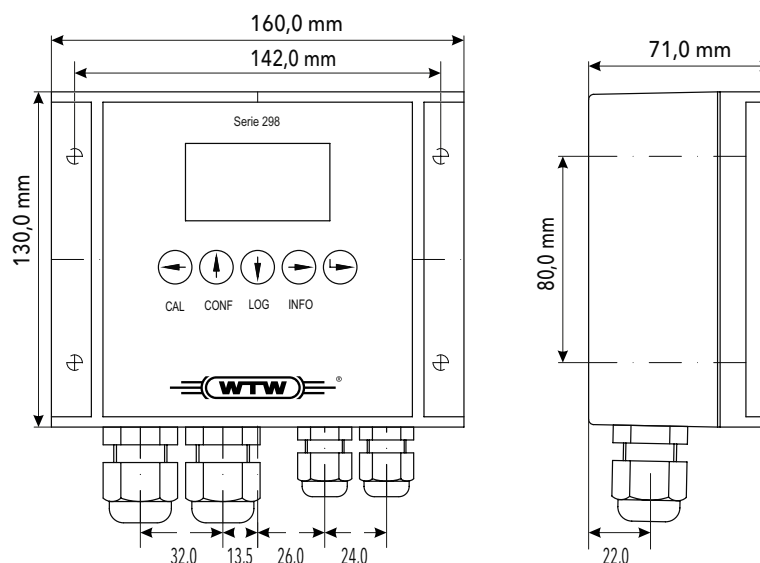
Analog controllers



pH 298, Oxi 298, LF 298 and CI 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	CI 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 menu			
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
CI 298 Pt1000	Analog controller to measure chlorine, 230 V (and 115 V) and Pt1000	801254

24V versions available upon request

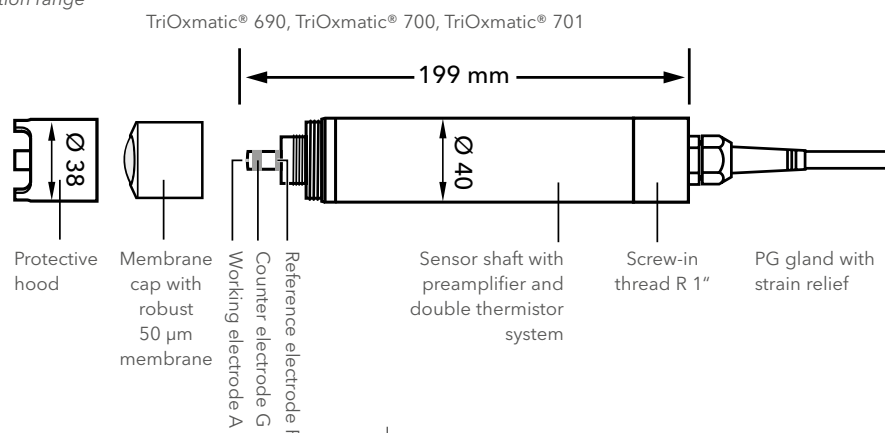


Analog electrochemical oxygen sensors

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



Technical Data

Model	TriOxmatic® 690	TriOxmatic® 701
Measuring principle	Amperometric	
Measuring Range (25 °C, depends on respective controller)		
Concentration	O₂ 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	O₂ 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/ POM sensor head, Protection hood 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	

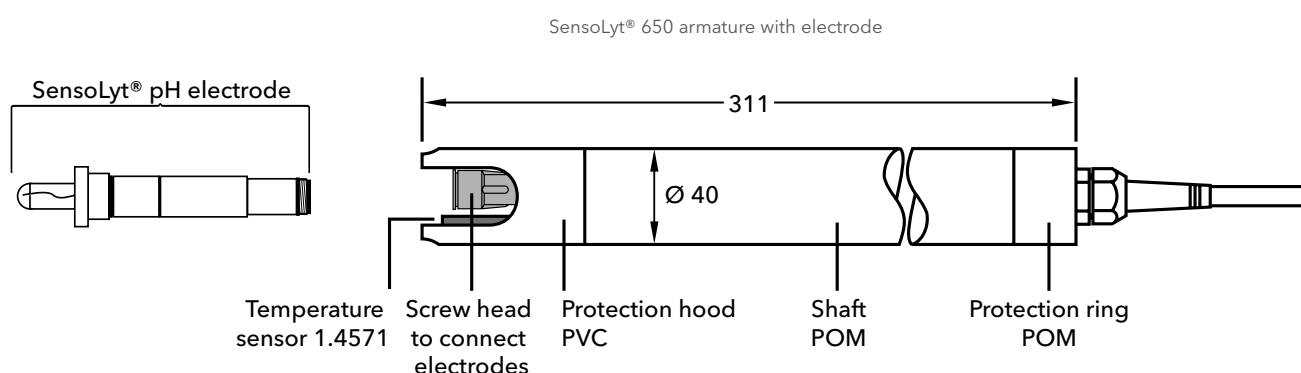
Model	Description	Order No.
TriOxmatic® 690-7	Universal oxygen sensor without self diagnosis, with normal response time, cable length 7 m	201690
TriOxmatic® 690-15	Like TriOxmatic® 690-7, but cable length 15 m	201692
TriOxmatic® 690-SO	Like TriOxmatic® 690-7, but cable length freely selectable	201693V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



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*



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

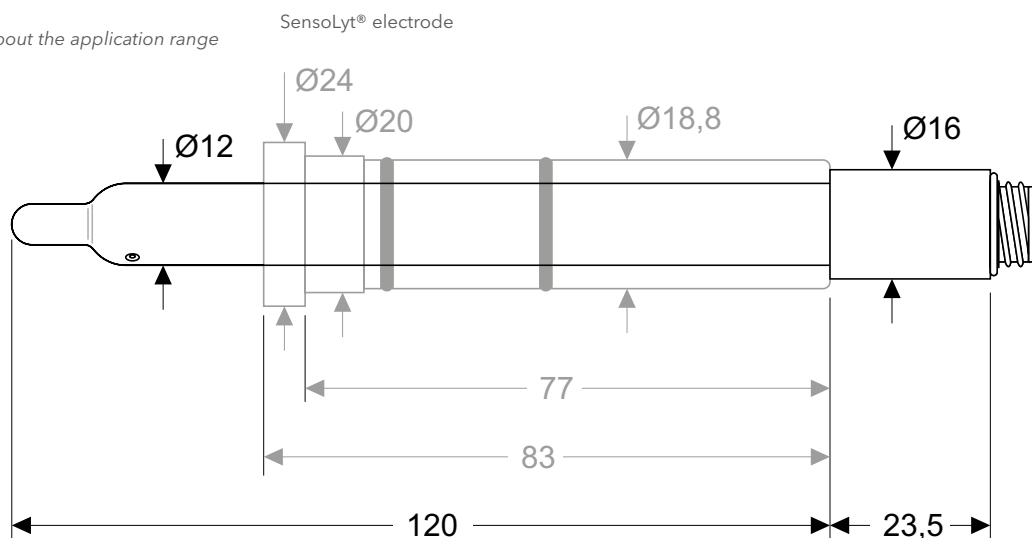
Model	Description	Order No.
SensoLyt® 650-7	pH/ORP armature with high-impedance signal transmission and integrated temperature sensor, cable length 7 m	109195



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



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 unarmored, to be installed by example in flow cells	109100
SensoLyt® EC	Like model ECA, but unarmored, to be installed by example in flow cells	109102
SensoLyt® DW	Like model DWA, but unarmored, to be installed by example in flow cells	109103
SensoLyt® Pt	Like model PtA, but unarmored, to be installed by example in flow cells	105412

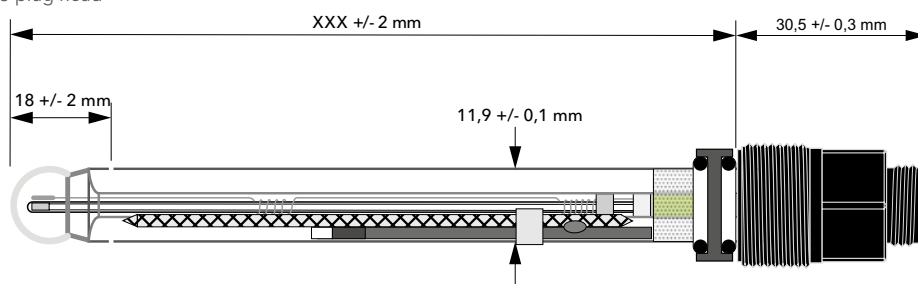


Analog pH/ORP electrodes (ProcessLine® series)

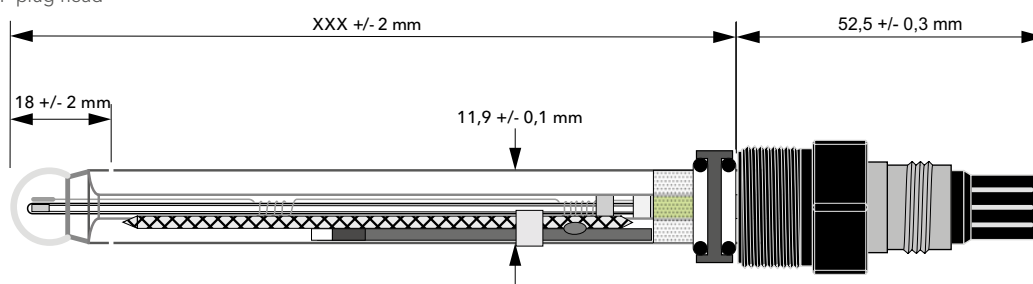
ProcessLine® (PL) electrodes for all applications: To be installed in a flow cell or in a retractable armature

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



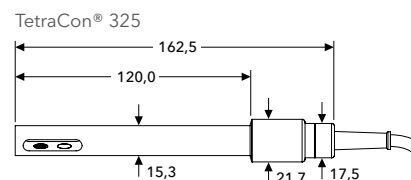
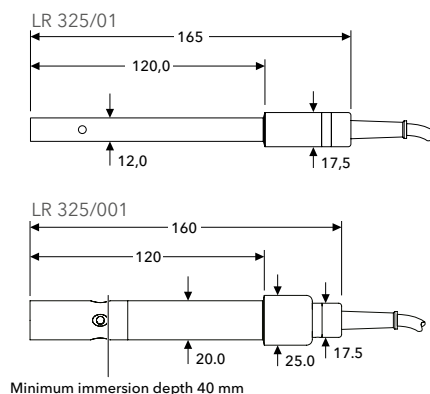
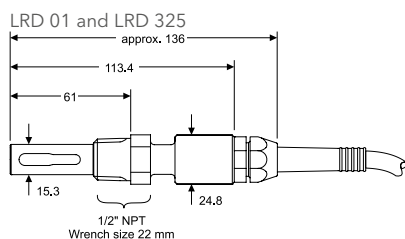
Technical Data

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

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



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					

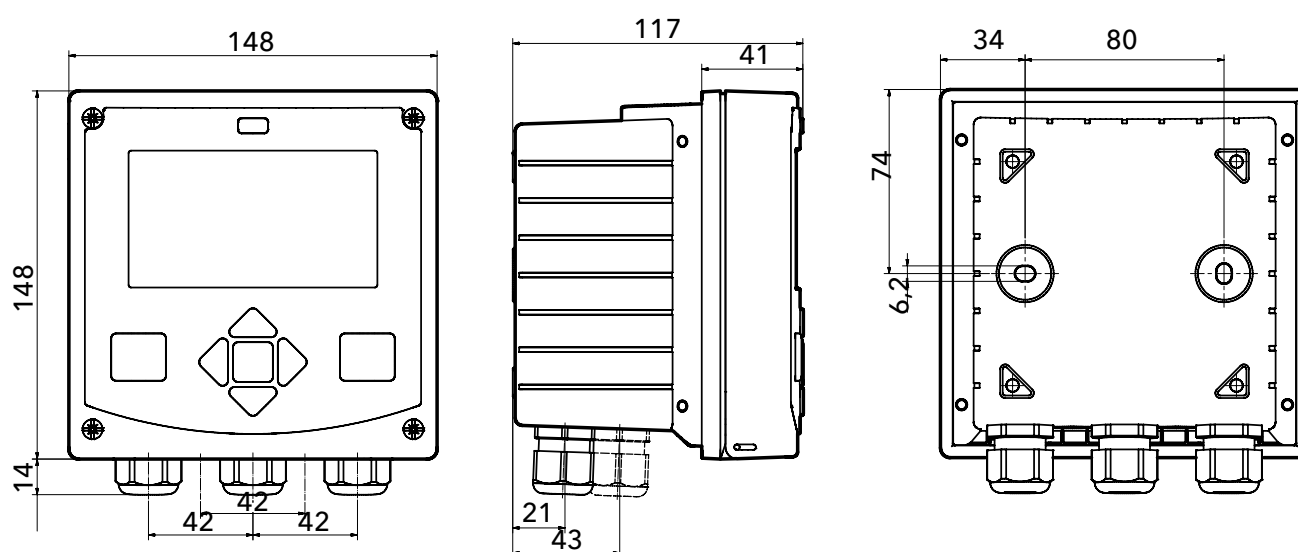
Model	Description	Order No.
TetraCon® 325	4 electrodes measuring cell, with integrated temperature sensor, cell constant K=0.475 cm ⁻¹ , cable length 1.5 m	301960
TetraCon® 325-3	Like TetraCon® 325, but cable length 3 m	301970
TetraCon® 325-6	Like TetraCon® 325, but cable length 6 m	301971
LRD 01-1,5	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	Conductivity measuring cell for ultrapure water, with integrated temperature sensor, cell constant K=0.1 cm ⁻¹ , Glass flow cell	301961
LR 325/001	Conductivity 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

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

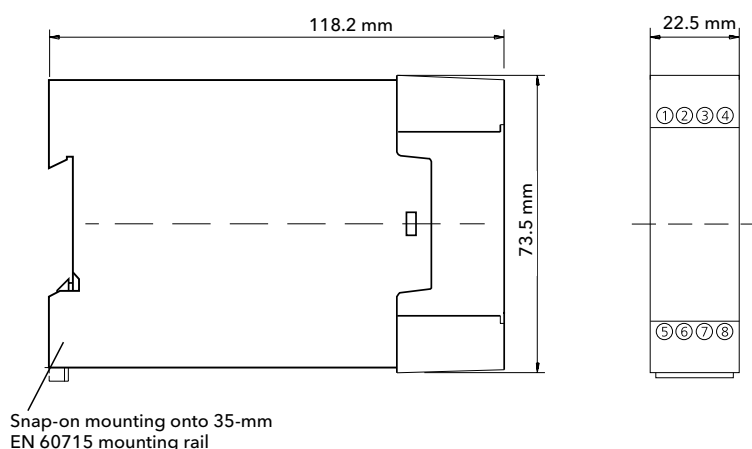
Isolated amplifier for EX area



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 $\geq 18\text{ V}$
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

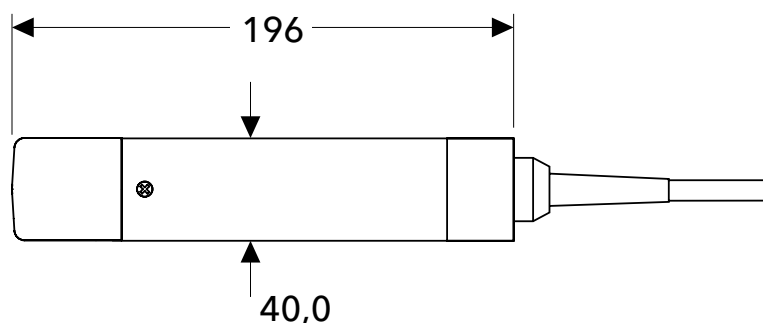
Model	Description	Order No.
WG21A7	Isolated amplifier	109 446 EX
WG21A7 Opt. 336	Isolated amplifier, with auxiliary voltage 24 V AC/DC	109 447 EX
WG21A7 Opt. 470	Isolated amplifier, with HART® communication	109 448 EX
WG21A7 Opt. 336,470	Isolated amplifier, with auxiliary voltage and HART® communication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



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

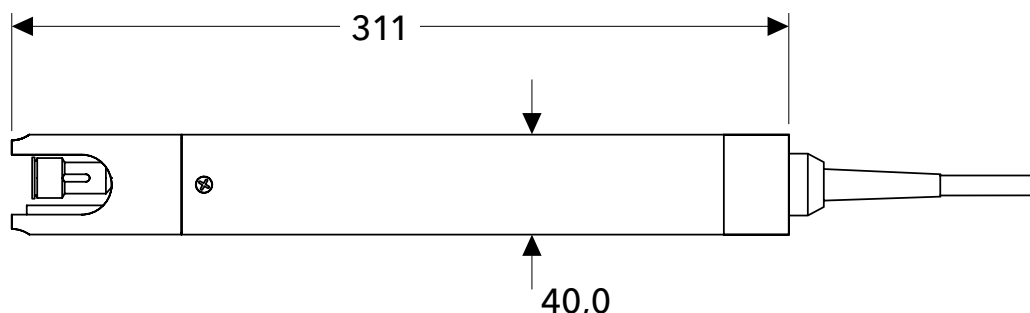
Model	Description	Order No.
TetraCon® 700-1,5 EX	Analog 4 electrodes conductivity measuring cell with integrated temperature sensor and 1.5m cable with open wires	302314EX
TetraCon® 700-7 EX	Like above, but with 7 m cable and open wires	302316EX
TetraCon® 700-15 EX	Like above, but with 15 m cable and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



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

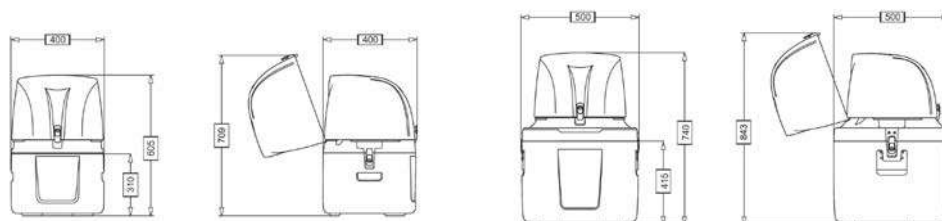
Model	Description	Order No.
SensoLyt® 650-7 EX	Analog pH/ORP aramture for explosion-endangered area (Ex ib IIC T6 Gb X), connectable to StratosProA201XpH-0(-1). Electrodes need to be ordered separately	109195EX
SensoLyt® SEA EX	pH electrode for explosion-endangered area (only when connected to SensoLyt® 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



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)

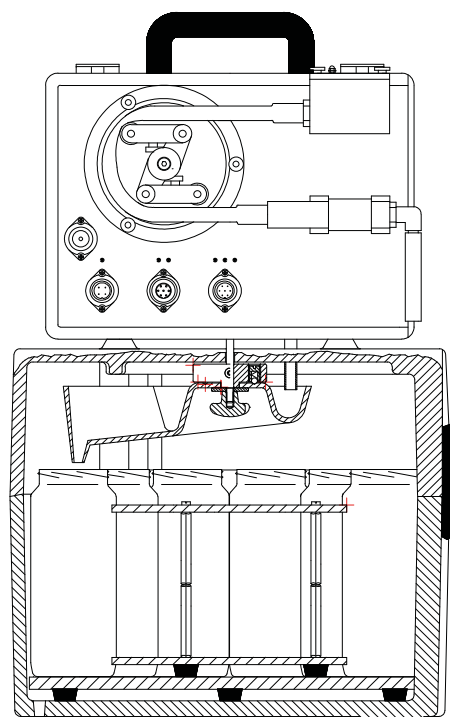
Model	Description	Order No.
PB-M-S/1	Version with 1 x 13 l collection container (PE)	503250
PB-M-L/R24	Version with 24 x 1 l sample bottles (PE)	503280



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	

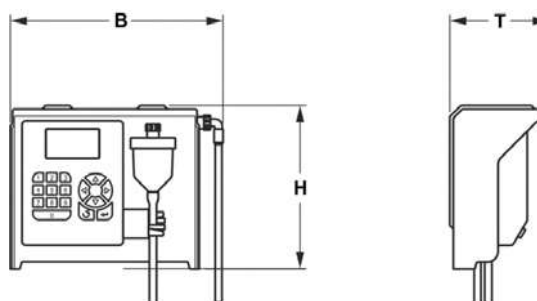
Model	Description	Order No.
PB 25 S	Version with 12 x 1 l sample bottles	000103
PB 25 S/24	Version with 24 x 0.5 l sample bottles	000105

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)

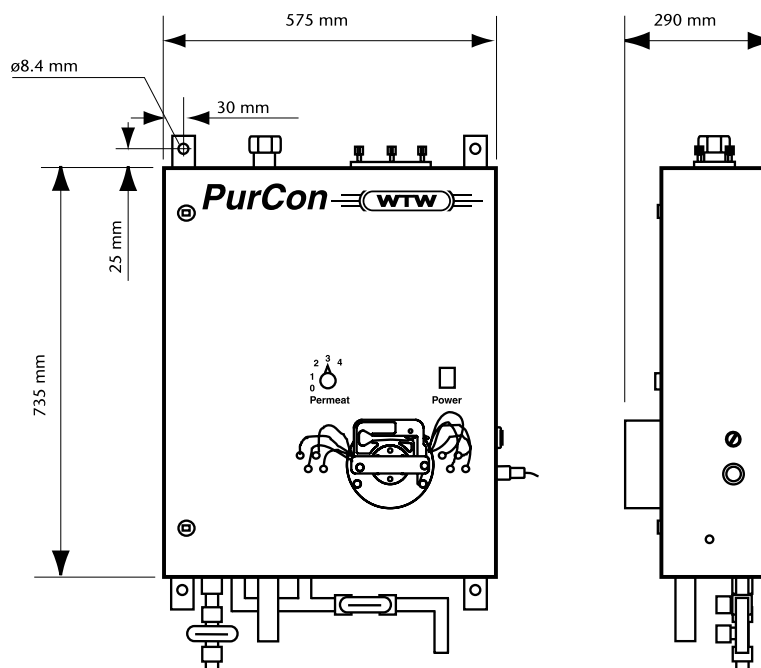
Model	Description	Order No.
PB-W/230V	Compact sampler for wall mounting (230 V)	503200
PB-W/115V	Compact sampler for wall mounting (115 V)	503201



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 set 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



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

All names are registered trademarks or trademarks of Xylem Inc. or one of its subsidiaries. Technical changes reserved.

© 2017 Xylem Analytics Germany Sales GmbH & Co. KG.

999265US

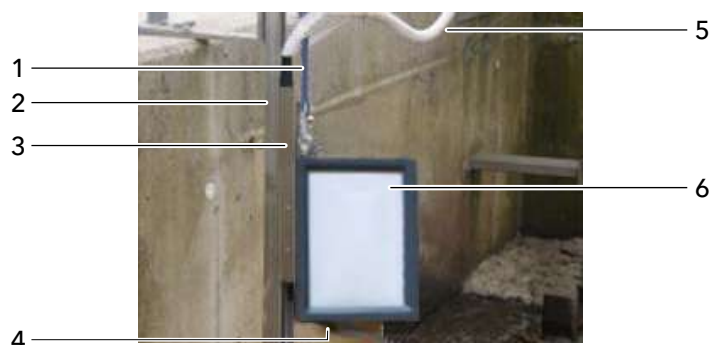
www.xylemanalytics.com

January 2020

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 in ² (1413 cm ²)
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 attachment 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



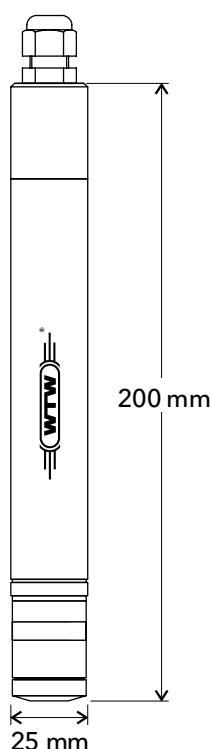
Analog chlorine sensors

For free and total chlorine

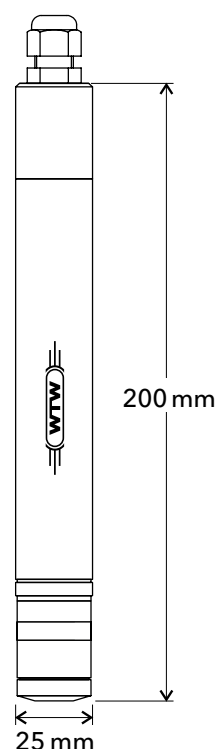
The electrochemical WTW chlorine sensors can be applied for measurements in swimming pools and drinking water. Directly connectable to the controller CI 298.

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

FCML 412 N



TCML N

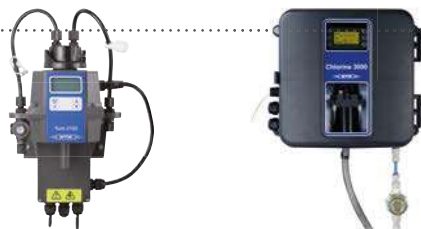


Technical Data

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

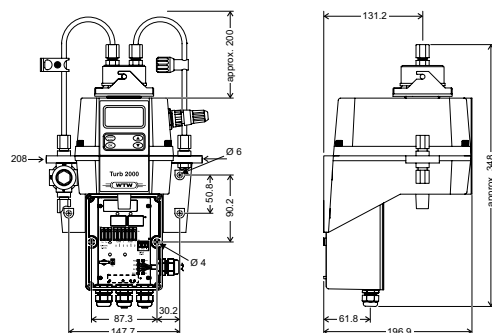
Drinking Water Analyzer



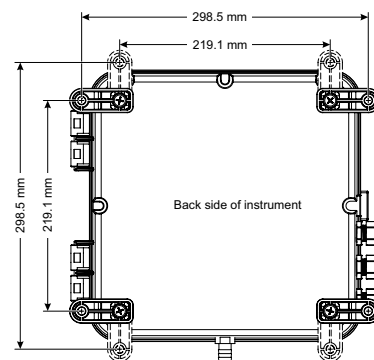
The analyzers for turbidity, free and total chlorine work according to standard procedures and thus yield reliable values across a large measuring range!

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 Not recommended for outdoor use. Altitude up to 2000 meters. Up to 95 % RH (non-condensing)					Operational temperature: + 5 ... + 40 °C
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 infrared 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

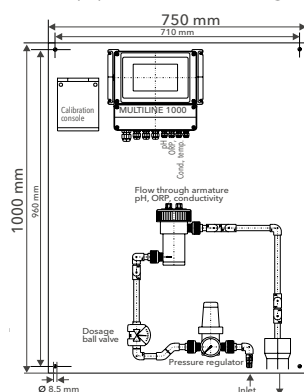
Drinking water panels



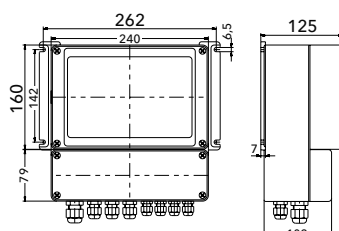
The premounted drinking water panels for multi-parameter or chlorine are user-friendly and deliver reliable measuring values

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

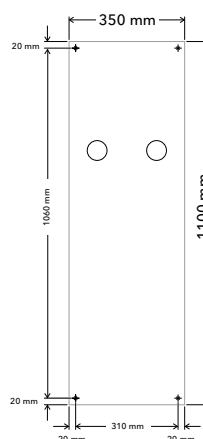
Basic equipment of the drinking water panel 8X-yyyyy



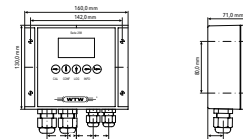
MULTILINE 1000



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.

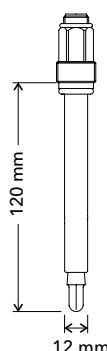
Model	Description	Order No.
MULTILINE 1000 230VAC	Multi-parameter monitor to connect up to any 16 sensors, power supply 230 VAC	480200
Drinking water panel	Ready-to-use panel to measure pH, ORP, Cond, Chlorine and Turbidity (Turb 2000); X: with or without flow; yyyy: coding dependent on parameter selection; 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

Drinking water sensors

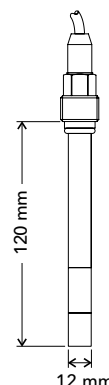
For measurement of pH/ORP, D.O. and conductivity at drinking water monitoring. Sensor can directly be connected to the series 298 or to the MULTILINE 1000.

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

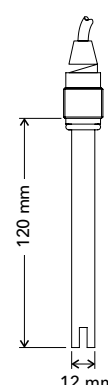
SenTix® ML 70 / ORP



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

Xylem Watermark



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 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@Xylem.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



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 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

All names are registered tradenames or trademarks of Xylem Inc. or one of its subsidiaries. Technical changes reserved.
© 2018 Xylem Analytics Germany Sales GmbH & Co. KG. 999277US

April 2020