Xylem Solutions

Wastewater and Drinking Water

2017-2018

xylem
Let's Solve Water

2017/10/01

Innovative Solutions for Challenging Problems

Xylem, is committed to providing our customers with solutions to their most challenging problems through the use of our expertise and innovative technology.

As part of that commitment, Xylem continues to develop and launch new innovative product lines, building upon our proven sensor and analytics technology. We take pride in improving and setting new standards in the markets that we serve.

If you want to know more about Xylem, please visit www.xylem-analytics.asia

Content

Welcome to Xylem Inc.

Company Overview

Xylem is a leading water technology company committed to "solving water" by creating innovative and smart technology solutions to meet the world's water, wastewater and energy needs.

In a world of ever-growing challenges, Xylem delivers innovative water technology solutions throughout the cycle of water.

Our technological strength across the life cycle of water is second-to-none. From collection and distribution to reuse and return to nature, our highly efficient water technologies, industrial pumps and application solutions not only use less energy and reduce life-cycle costs, but also promote sustainability.

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		Municipal Wastewater					Environmental/ Engineering Consultants			In	
		Influent	Clarifier	Aeration	Disinfec-tion	Sludge Treatment	Sampling	Water Flow	Water Quality	Influent	Sedimen-tation
Laboratory Analytics	Page #										
Dissolved Oxygen	8-9	✓	✓	✓			✓		✓		
BOD	10-11	✓		✓			✓		✓		
EC	16-17	✓	✓				✓		✓	✓	
pH/ORP/ISE	12-15	✓	✓	✓			✓		✓	✓	
Turbidity/SS	18-19	✓	✓	✓		✓	✓		✓		
Multi Parameter	16-17	✓	✓	✓			✓		✓	✓	
TOC Analyzer	44-51	✓		✓					✓	✓	
Photometry	22-23	✓	✓	✓	✓		✓		✓		
Piston Burette/Titration	24-29										
Online Analysis	Page #										
Dissolved Oxygen	38	✓		✓					✓		
Ammonia/Nitrate	40-43	✓		✓					✓		
Chlorine	42	✓		✓	✓				✓		
pH/ORP/ISE/EC	39	✓	✓	✓		✓			✓	✓	
Turbidity/SS/Sludge	39-42	✓	✓	✓		✓		✓	✓		✓
COD/BOD/UVT/SAC	41	✓	✓	✓	✓				✓	✓	
Phosphate	43	✓	✓	✓					✓		
TOC Analyzer	48-49	✓	✓	✓	✓				✓	✓	
Level/Flow	46-47	✓			✓	✓		✓	✓	✓	
Sampler	44-45	✓	✓	✓	✓	✓	✓		✓	✓	

dustrial/Pulp and Paper				Drinking Water		Food and Beverage			Petro/Chemical Biofuels		Power Industry		
Biological Treatment	Effluent	Water Treatment	Power gen/cool-ing	Pre Treatment	Filtration/ Disinfec-tion	Water Treatment	QC	Biological Waste-water Treatment	QC	Water Quality Monitor-ing	Water Supply	Cooling	Generator
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Featured Products

MultiLine® & inoLab® – Wireless Multi Channel Meters Pg 8

- Bench top and handheld
- Wireless sensors
- pH, ORP, dissolved oxygen, turbidity parameters available
- Galvanic isolation - No interference of measuring signals
- Calibration records and additional information are stored in the sensors
- Smart sensor evaluation

Spectrophotometer UV-VIS Reagent Free COD Nitrate Nitrite Pg 22

- Easy to use: place cuvette, read measurement value
- More than 250 test programs for water and general lab analytics
- Cell and reagent test kits with barcode for automatic program selection
- Automatic cuvette and measurement range detection for rectangular cuvettes
- Top reliability due to menu guided comprehensive- AQA
- Measurement "Light" on the road with car battery use
- USB and Ethernet-connections for easy update, print to PDF or printer, storage and data export

Titroline 7800 – Multi-Functional Auto-Titrator Pg 27

- High accuracy with temperature compensated pH electrodes
- Titration & Karl-Fisher switchable
- Conductivity sensor connectable
- Two parameters display

Portable Automated Sampler Pg 46

- Robust PE, double-walled, insulated housing for temperature control
- Easy tube replacement for minimal downtime
- Highly accurate sample volume using two captive sensors in the peristaltic pump for volume control
- User-friendly, simple programming and calibration from sampler or PC
- Long battery life - up to 550 samples per battery charge
- Data recovery via USB and does not require direct transfer to a laptop
- Non-volatile data memory for up to 5 years, so you never have to worry about losing your data if power is lost
- "Mini" PM option has smaller footprint

IQ Sensor Net, Controllers and Sensors Pg 32

- 3-year warranty
- Ultrasonic cleaning
- Lightning protection
- Modular expansion from 1 to 20 sensors; ability to extend network with up to 3 additional modules
- One 120V power supply
- Up to 48 output channels (mA/relays) are possible
- One cable for power AND communications
- Factory calibrated optical DO cap
- USB interface (can also be used as a security feature)
- System redundancy for backup control

Digital Optical UV Spectral Sensors Pg 41

- The chemical-free spectral measurement allows a precise determination of the COD and nitrate level.
- Whether influent, biological tank or effluent, the self-cleaning sensors CarboVis provides:
- High measurement reliability
- Low operating costs
- Simple handling
- Maximum durability

Online Single and Multi-Parameter Systems Pg 43

The TresCon® analyzer system is the perfect solution for highly precise online measurement of NH4, NO3, NO2, SAC, PO4 and Ptot. With the TresCon multi-parameter analyzer, up to 3 measuring parameters can be detected. Thanks to the modular setup of the system, you will have maximum flexibility when combining the parameters. Also, a later expansion by more measuring modules is therefore no problem. The economical solution for single parameter measuring points is the TresCon® UNO. With this analyzer, you can measure all parameters, except for total phosphorus, at a low cost.

Aurora Online TOC Pg 49

- Accurate, real-time monitoring and analysis of natural organic matter (NOM) in influent and effluent streams
- Water-tight, Dust-tight Housing for indoor or outdoor installation
- Reagent-less Electrochemical Oxidation
- Non-dispersive infrared (NDIR) detection
- Easy to maintain – no need for costly service contracts
- Intuitive, easy-to-use software
- Large, color touchscreen display

Online TOC 9210p

Dissolved Oxygen DO Measurements

Every species on our planet depends on water and oxygen. For aquatic species, adequate dissolved oxygen is of prime importance to their continued survival. Since dissolved oxygen levels are directly related to good water quality, the two are highly interdependent. Many factors can affect DO levels, and an understanding of these levels in order to make informed decisions concerning wastewater treatment operations, hypoxic zones, aquaculture facilities or large-scale ecosystems is essential.

Benchtop Meter Dissolved Oxygen Measurement inoLab® Oxi 7310

inoLab Oxi 7310

inoLab Oxi 7310

inoLab Oxi 7310P
Built-in printer

The inoLab® Oxi 7310 is the perfect benchtop meter with secure and convenient menu-controlled operation via a graphic display for the measurement of dissolved oxygen with the proven, galvanic oxygen sensors, the universal CellOx® 325, the self-stirring StirrOx® G for BOD measurements and DurOx® 325 for training purposes. With automatic documentation according to GLP/AQA, it supports the traceability - not only in the environmental lab. For this, the serial number of the sensor can be saved. On request also available with an optional built-in printer.

Measurement range	
DO Con	: 0.00~20.00 mg/L; 0.0~90.0 mg/L
Saturation	: 0.0~200.0 % ; 0~600 %
Pressure	: 0.0~200.0 mbar; 0~1,250 mbar
Temperature	: 0~50.0 °C
Accuracy	
DO Con	: Meas value ±0.5 %
Saturation	: Meas value ±0.5 %
Temperature	: ±0.1 K
Temperature compensation	
Auto Compensation (0~40 °C)	
Weight & dimensions	
240(W) × 190(D) × 80(H) mm 800g (phosphorus N/A)	

Wireless Optical IDS Dissolved Oxygen Sensors FDO® 925-P

The FDO® 925 is especially suited for lab and process thanks to its compact size. The flow-free, easy to clean beveled membrane allows it to be used in containers with low sample volumes. Also, low oxygen concentrations below 1 mg/l can be shown exactly.

WTW's proven FDO® 925 is now available as sustainable plug head version. The universal plug head fits the sensor with wireless functionality – disturbing cables are no longer required. Furthermore it can be connected to AS/IDS-x cables with lengths of up to 100 m. With this new technology WTW significantly expands the range of applications and the measuring comfort of its optical dissolved oxygen sensors.

Measurement range	
Concentration	: 0.00…20.00 mg/l ±0.5 % of value
Saturation	: 0.0 … 200.0 % ±0.5 % of value
Partial pressure	: 0.0 to 400 hPa ±0.5 % of value
Temperature	: 0 … 50.0 °C ± 0.2 °C

Multi-parameter Portable Meter MultiLine® Multi 3510 IDS

The Multi 3510 IDS compact portable multi-parameter instrument for applications with digital IDS pH/ORP Electrodes, dissolved oxygen sensors, conductivity cells or turbidity sensors. Calibration records and additional information are stored in the sensor. Well laid-out menus make the operation safe and easy. With a wide range of electrodes almost every application including depth measurement down to 100 m will be covered in the field and in the laboratory. The delivery also contains the MultiLab® Importer software for data acquisition via Excel®.

Measurement range

DO Con : 0.00~20.00 mg/L
Saturation : 0.0~200.0 %
Pressure : 0.0~200 hPa
Temperature : 0~50 °C

Power supply

1.5V 4x AA batteries
1.2V NiMH rechargeable battery four (optional)

Weight & dimensions

80(W) × 180(D) × 55(H) mm
400g

Electrode dimensions

Ø15.3 × 150(L) mm

Oxygen Portable Meter ProfiLine Oxi 3000 Series

Dissolved oxygen measurement - really simple: The Oxi 3000 series are an easy to use, robust and waterproof portable meter for the measurement of dissolved oxygen, i.e. in surface waters, in wastewater treatment plants and in fish farming applications. It is suitable for galvanic oxygen sensors of the CellOx® and DurOx® series; the adjustable salinity compensates for the salt content when measuring sea water and allows correct measured values. The results can be displayed either as saturation or concentration.

Measurement range

DO Con : 0.00~19.99 mg/L; 0.0~90.0 mg/L
Saturation : 0.0~199.9 %; 0~600 %
Temperature : -5.0~105.0 °C

Power supply

Oxi 3205 : N/A
Oxi 3310 : 200 points (Manual) / 500 points (Auto)

Weight & dimensions

80(W) × 180(D) × 55(H) mm
400g

DO Electrodes

CellOx 325

DurOX

StirrOX G

FDO 925
*JIS K0102

inoLab, ProfiLine series DO electrode specifications

Model	CellOx 325 (Membrane)	DurOX (Membrane)	StirrOx G (Membrane)	FDO 925* (Optical)
Use	General (Spot sampling)	General (Spot sampling)	BOD measurement	General (Spot sampling)
Measurement range	0~50 mg/L	0~50 mg/L	0~50 mg/L	0.00~20.00 mg/L
Features	DO, Saturation, Pressure	Low flow rate (2.5~5 cm/sec)	BOD Built-in stirrer	No calibration No stirring needed

Portable Dissolved Oxygen Meter AM40 Meter

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The meter is the ideal choice for determination of the oxygen content in surface water, sewage and for application in wastewater treatment. The meter in connection with the sensor indicating the mass concentration of dissolved oxygen in aqueous solutions in mg/l and the oxygen saturation index (%-saturation) . With automatic temperature compensation.

Measurement range

DO Con : 0 ... 20 mg/l;
Saturation : 0 ... 200 %;
Temperature : -10 ... 100 °C
Ambient temperature -10 ... 55 °C

Power supply

(3 x AA, IEC R6, LR6, 1.5 V)

Weight & dimensions

200 x 95 x 40 mm (WHD)
290 g incl. batteries

Biochemical Oxygen Demand

BOD Measurements/Respiration

The inoLab® Oxi 7310 is the perfect benchtop meter with secure and convenient menu-controlled operation via a graphic display for the measurement of dissolved oxygen with the proven, galvanic oxygen sensors, the universal CellOx® 325, the self-stirring StirrOx® G for BOD measurements and DurOx® 325 for training purposes. With automatic documentation according to GLP/AQA, it supports the traceability - not only in the environmental lab. For this, the serial number of the sensor can be saved. On request also available with an optional built-in printer.

Multiparameter Benchtop Meter

inoLab Multi 9000 Series

inoLab Multi 9310 IDS

inoLab Multi 9620 IDS

inoLab Multi 9630 IDS

WTW's benchtop meters can safely determine and reliably document biochemical oxygen demand (BOD). For this, a series of dilutions is prepared depending on the BOD, where the start and end values as well as the value of the dilution water are determined with WTW meters and sensors.

The inoLab® Multi IDS series are digital multi-parameter benchtop meters for IDS sensors. Our digital IDS meters are now ready for radio measurement. Benefit from wireless communication between lab meter and sensor!

The **IDS** concept from WTW: **I**ntelligent, **D**igital **S**ensors for standard parameters pH, conductivity, dissolved oxygen and turbidity. The IDS system is based on two components: digital sensors and corresponding field and benchtop meters. The outstanding innovation: The measurements are processed in the sensor, not in the meter. And in addition: As of now all IDS benchtop meters support wireless measurement.

Multi 9310
1 Measurement Channel DO/BOD, pH, ORP, conductivity and ISE
Multi 9620
2 Measurement Channel
Multi 9630
3 Measurement Channel

Measurement range	
pH	: 0.000~14.000 pH
ORP	: -1,200.0~1,200.0 mV
DO	: 0.00~20.00 mg/L
Conductivity	: 10 µS/cm~2,000 mS/cm

Weight & dimensions	
9310	: 240(W) × 190(D) × 80(H) mm Approx 0.8 kg
9310P	: 290(W) × 190(D) × 80(H) mm Approx 1.0 kg
9620/9630	: 180(W) × 80(D) × 55(H) mm Approx 0.4kg

Sensors for the Determination of BOD

BOD determination with galvanized or optical oxygen sensors according to DIN EN 1899-1 and DIN EN 1899-2 – with portable and benchtop devices.

Method	Usable sensors								
CellOx® Galvanic oxygen sensor							•	•	•
StarrOx® Galvanic oxygen sensor									•
Optical IDS dissolved oxygen sensors	•	•	•	•	•	•			

WTW's benchtop meters can safely determine and reliably document the biochemical oxygen demand (BOD). For this, a series of dilutions is prepared depending on the BOD, where the start and end values as well as the value of the dilution water are determined with WTW meters and sensors. With the conventional benchtop meters type inoLab® Oxi 7310 you can measure with the self-stirring StirrOx® G or with the CellOx® 325 and the stirring attachment RZ 300. The opticial oxygen sensor FDO® 925 can be used for all digital meters; it will also require the stirring attachment RZ300, just like the CellOx® 325.

Meters for the Determination of BOD

OxiTop Series

WTW OxiTop® systems are easy-to-use meters for BOD self-monitoring. OxiTop®-C measuring systems can execute anaerobic and aerobic examinations across the entire spectrum of biodegradability and evaluate them on the computer.

Complete packages of 6 or 12 samples are available and ready for immediate use. Flexible, customisable and scalable, based on pressure measurement (no mercury). Simplifies handling, no need for dilution series or multiple bottles. Data security with built-in memory – classic 5 measurements/days or up to 360 points and 99 days graphical results with Control systemsSuitable for routine BOD5 and other special applications – compliant to multiple international methodologies and standards. Incubators, accessories and consumables also available.

Measurement
Respiration/Biogas Determination
Measurement period
5 days (OxiTop IS) 30 mins~90 days (with OxiTop® Control OC 110)
Measurement range
0~4,000 mg/L 0~400,000 mg/L (Control OC 110)
Pressure mode
500~1,350 hPa (with OxiTop® Control OC 110)

OxiTop Control 12-inch (Measuring system: Sensor head, sample container, stirrer, controller)

OxiTop IS12 type (Measuring system: Sensor head, sample container, stirrer)

Model	OxiTop	OxiTop Control				
	IS6 / IS12	6 / 12	B6 / B6M / B6M 2.5	A6 / A12	S6 / S12	AN6 / AN12
Product image						
Application	BOD measurement Sample sealed in vessel for 5 days measuring pressure change		Soil respiration The soil samples were sealed in, to monitor the change of pressure in the head portion	OECD / aerobic applications Sample containing a non-biodegradable material, (Max 90 days) Biogas determination		Biogas determination monitor the pressure change of the gas produced by the anaerobic decomposition
Number of samples	IS6 : 6 IS12 : 12	C6 : 6 C12 : 12	B6 : 6 B6M : 6 B6M 2.5 : 6	A6 : 6 A12 : 12	S6 : 6 S12 : 12	AN6 : 6 AN12 : 12
Sample vessel	Amber Bottle 510 ml	Amber Bottle 510 ml	B6 : 500 ml Duran Bottle B6M : 1.0 L B6M 2.5 : 2.5 L	Transparent Bottle A6 : 1,000 ml A12 : 250 ml	Amber Bottle 510 ml	Transparent bottle AN6 : 1,000 ml AN12 : 250 ml
Measuring head	OxiTop	OxiTop-C	OxiTop-C	OxiTop-C	OxiTop-C	OxiTop-C
Stirrer	IS6 :IS6 IS12 : IS12	C6 : IS6 C12 : IS12	–	A6 : IS6-Var A12 : IS12	S6 : IS6 S12 : IS12	AN6 : IS6-Var AN12 : IS12
Controller	–	OC100	OC110	OC110	OC110	OC110
Software & cable	–	–	•	•	•	•
CO_2 absorbent	•	•	•	•	•	•
Nitrification inhibitor	•	•	–	•	•	•
Overflow flask	164/432 ml	164/432 ml	–	–	–	–
Stirrer bar	IS6 : 6 Pieces IS12 : 12 Pieces	C6 : 6 Pieces C12 : 12 Pieces	–	A6 : 6 Pieces A12 : 12 Pieces	S6 : 6 Pieces S12 : 12 Pieces	AN6 : 6 Pieces AN12 : 12 Pieces
Stirrer bar remover	•	•	–	•	•	•

Biochemical Oxygen Demand Test

When properly used, the BOD test provides a reliable characterization of wastewater. It can be expected to be a standard for regulatory agencies for many years even though its use as a control tool is limited by the 3 or 5 day wait required for the test (and sometimes 20 days!). Various methods (based on short-term monitoring and extrapolation) of quickly estimating the probable results of the BOD test on a sample have been devised and the interested reader is advised to consult appropriate literature but a 'true' BOD test requires time and incubation.

pH pH Measurements

pH determines the acid and base characteristics of water. A pH of 7.0 is neutral; values below 7 are acidic and values above 7 are alkaline. Excessively high or low pH levels are often associated with nutrient deficiencies, metal toxicities, or other problems for aquatic life. High pH makes ammonia more toxic. During algal blooms, photosynthesis increases the water pH, especially in stagnant or slow-moving water.

pH is measured by a sensing electrode for Hydrogen and a reference electrode along with a meter to measure the electrode potential. The YSI pH sensor is a glass bulb filled with a solution of stable pH (usually 7), so the inside of the glass surface experiences constant binding of H+ ions. The outside of the bulb is exposed to a water sample where H+ varies. The resulting differential of H+ creates a potential which is read by the meter versus the stable potential of the reference electrode.

Lab pH Meter inoLab pH 7000 series

inoLab pH 7110

inoLab pH 7310

inoLab pH 7310P
Built-in printer

Simple, easy-to-use lab pH meter for the routine measurement with reproducable measuring results and increased measuring accuracy. The inoLab® pH 7000 series is highly suitable for routine measurements in the lab, where automatic documentation is not a priority. Less keys make operation simple and safe with a smooth, easy to clean surface.

Model	pH7110	pH7310 / pH7310P
Measurement range	pH : -2.000~19.999 pH ; -2.00~19.99 pH mV : -1,200.0~1,200.0 mV ; -2,000~2,000 mV Temp : −5.0~105.0 °C	pH : -2.000~20.000 pH ; -2.00~20.00 pH mV : -1,200.0~1,200.0 mV ;-2,000~2,000 mV Temp : −5.0~105.0 °C
Accuracy	pH : ±0.005 pH; ±0.01 pH mV : ±0.3 mV; ±1 mV Temp : ±0.1 K	pH : ±0.004 pH; ±0.01 pH mV : ±0.2 mV; ±1 mV Temp : ±0.1 K
Weight & dimensions	240(W) × 190(D) × 80(H) mm, Approx 1.0kg	pH7310 240(W) × 190(D) × 80(H) mm Approx 0.8kg pH7310P 290(W) × 190(D) × 80(H) mm Approx 1.0kg

Lab pH/ORP/Ion Meter
inoLab pH/ION 7320

Precise pH/ISE benchtop meter with enhanced ISE methods for concentration measurement with ion selective electrodes.

Measurement range

pH	: -2.000~20.000 pH
mV	: -999.9~999.9 mV; ; -2,000~2,000 mV
Temperature	: -5~105 °C
Con	: 0.000~10.000 mg/L ; 0.00~100.00 mg/L ; 0.0~1,000.0 mg/L ; 0~2,000 mg/L

Accuracy

pH	: ±0.004 pH; ±0.01 pH
mV	: ±0.2 mV; ±1 mV
Temperature	: ±0.1 K

Weight & dimensions

250(W) × 230(D) × 70(H) mm
1.6kg

Portable pH/ORP Meter
pH/ION 331

pH/ISE pocket meter for pH, mV and concentration measurements.

Measurement range

pH	: -2.00~19.999 pH
mV	: -1,200.0~1,200.0 mV ; -2,500~2,500 mV
Temperature	: -5~105 °C
Con	: 0.000~9.999 mg/L ; 10.00~99.99 mg/L ; 100.0~999.9 mg/L ; 1,000~999,999 mg/L

Accuracy

pH	: ±0.005 pH; ±0.01 pH
mV	: ±0.3 mV; ±1mV
Temperature	: ±0.1 K

Weight & dimensions

80(W) × 55(D) × 180(H) mm
400g

Handheld pH/ORP Meter ProfiLine pH 3000 Series

Easy and robust portable pH/mV meter for routine measurement - secure and reliable pH measurement due to repeatable results.

The ProfiLine pH 3000 Series is the right choice for all who are looking for a simple meter for portable pH measurements. A clear keypad with only 6 keys and the automatic AutoRead function for repeatable measured values make pH measurement safe and prevent errors. The anti-skidding keypad can be operated with gloves as well. The large display is clear and easy to read.

Measurement range

pH	: -2.00~19.999 pH
mV	: -1,200~1,200 mV ; -2,500~2,500 mV
Temperature	: -5.0~105.0 °C

Accuracy

pH	: ±0.1 pH(~19.9pH) ; ±0.01 pH(~19.99pH) ; ±0.005 pH(~19.999pH)
mV	: ±0.3 mV (±1,200mV) ; ±1 mV (±2,500mV)
Temperature	: ±0.1 °C

Memory

pH3110	: N/A
pH3310	: 200 points (Manual) /5,000 points (Auto)

Interface

USB Connection (pH3310 only)

Handheld Ion Meter 3310 pH/ISE

The pH/ION 3310 effortlessly delivers precise measuring results. The 1 to 5-point calibration for pH and the 2 to 7-point ISE calibration (also non-linear) as well as a GLP-supporting documentation meets all the requirements of modern metrology. The USB interface is used for data transfer, but can also be used as a power supply in the lab.

Measurement

Ion Electrodes

Measurement range

0~1,999 mg/L

Power supply

4x AA batteries

Weight & dimensions

80(W) × 55(D) × 180(H) mm, Approx 400g
Electrodes: 145(L) × 11(Ø) mm

Portable pH Meter pHotoFlex® pH

pHotoFlex® pH: portable LED photometer combined with full value pH measurement for environmental monitoring, fish hatcheries, extensive routine and water analytics.

Light source

LED

Reproducibility

0.01 NTU or < 0.5 % of measured value

pH/ORP

pH 0~16 with automatic temperature control (ATC)

Accuracy

Photometry: <2 nm wavelength accuracy, 0.005 abs.
Reproducibility pH: ±0.01 pH

Power supply

4x AA batteries for approx. 3,000 measurements

Weight & dimensions

86(W) × 236(D)×77(H) mm
600g

Portable pH/MV/ISE Meter AM40 Meter

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The TM 40 has an automatic temperature compensation for the pH measuring as well as an adjustable reference temperature with measurements without temperature sensor. For calibration a manual or automatic two point calibration routine can be used. Other possible applications of the device are the measurements of redox (ORP) or ISE-potential relative to the standard hydrogen electrode to DIN 38404.

Measurement range

Range: pH 0 ... 14; - 1999 ... 1999 mV
Temperature:- 10 ... 100 °C
ISE: 0 ... 30000 ppm
Resolution: 0.01 pH; 1 mV; 0.1 °C

Power supply

(3 x AA, IEC R6, LR6, 1.5 V)

Weight & dimensions

200 x 95 x 40 mm (WHD)
290 g incl. batteries

Portable Meters for MEMOSENS® Electrodes

HandyLab® 7 Series

SI Analytics

The new mobile pH measuring devices by SI Analytics with MEMOSENS® technology offers increased safety and a user-friendly interface.

Function	HL700	HL 750	HL 750EX	HL 780
MEMOSENS® pH , ORP	•	•	•	•
Analog pH, ORP	•	•	•	•
Temp	•	•	•	•
Explosion proof Ex-Zone 0/1	–		•	–
PC Software HandyLab® Pilot	–	•	•	•
Micro USB-B	–	•	•	•
Data logger (Memory)	–	5,000	5,000	10,000
Lithium battery	–	•	–	•

Scale	
MEMOSENS® pH	: -2.000~+16.000 pH, -2,000~+2,000 mV, -50~250 °C
MEMOSENS® ORP	: -2,000~+2,000 mV, -50 ~+250 °C, ΔmV (Offset) -700~700 mV
Analog pH	: -2~16pH, below 2-3 digit Resolution
Analog ORP	: -1,300~+1,300
Temperature	
Con	: 2 x Ø 4 mm
NTC 30 kΩ	: -20~+120 °C Pt 1000: -40~+250 °C
Accuracy/Reproducibility	: ±0.3°C/0.2 °C
Weight & dimensions	
132(W) × 156(H) × 30(D) mm	
500g	

Electrodes for IDS / Wireless IDS Digital Meters

MEMOSENS® Process Electrodes

MEMOSENS® Electrodes

SI Analytics

Our MEMOSENS® program contains pH and redox electrodes. They are compatible to all at the market available measuring devices based on the MEMOSENS® protocol.

Features

- Complete galvanic isolation
- Resistant to environmental influences
- Radical improvement in measuring point reliability
- Lifecycle memory makes predictive maintenance possible
- MEMOSENS® is an open system
- All MEMOSENS® sensors and devices from the manufacturers involved are compatible with each other

Model	A7781	FLA93-MF	PL 83	SL 83	Pt 8281	PL 89	SL 89
Parameter	pH, Temp	pH, Temp	pH, Temp	pH, Temp	ORP, Temp	ORP, Temp	ORP, Temp
Length (mm)	120, 225	120, 225	120, 225	120, 225, 325, 425	120	120	120, 225
Use	General	Low temperature	High temperature	High alkalinity	Autoclave	High temperature	High temperature Autoclave
Temp Item	-5~+80 °C	-30~+100 °C	0~+130 °C	0~+140 °C	-5~+100 °C	0~+130 °C	0~+140 °C
System	Silamid®	-	Silamid®	Silamid®	Silamid®	Silamid®	Silamid®
Range/material	0~14pH Ceremic	0~14pH Platinum	0~14pH Hole junction	0~14pH Ceremic	KPG annular gap junction	Ceremic	Ceremic
Max (Bar)	12	6 (3 bar pressure variation)	12	12	12	12	12
ATEX Cert	All MEMOSENS® process electrodes are ATEX certified						

Type	pH sensor options					
	SenTix 41	SenTix 81	SenTix L	SenTix SP	SenTix HWS	SenTix Mic-D/B
						
Scale	0~14 pH			2~13 pH	0~14 pH	
Temperature item	-5~80 °C	0~100 °C	-5~100 °C	0~80 °C	-5~100 °C	-5~100 °C
Connector	Epoxy	Glass		Epoxy	Glass	
Internal solution	Gel	3M KCL (Ag N/A)	3M KCL (Ag N/A)	Spare chip membrane	3M KCL (Ag N/A)	3M KCl (Ag)
Junction type	Ceremic	Platinum		Pin hole	Sleeve	Platinum
Connector	–			BNC	DIN-BNC	
Feature	SenTix 41, pH electrode, Single Junction, 3 in 1, Gel electrolyte, Epoxy shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ	SenTix 81, pH electrode, self-flushing platinum single junction, 3 in 1, Refillable, Glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ	SenTix L, Single Junction, Combination, Spear tip membrane, Epoxy shaft, 1 meter cable, BNC connector	SenTix SP, pH electrode, Double Junction, 3 in 1, Platinum junction, 170 mm length, glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ	SenTix HWS, pH electrode, Double Junction, 3 in 1, ground joint junction, 170 mm length, glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ	SenTix Mic-B/D, pH electrode, Double Junction, 3 in 1, Platinum junction, 170 mm length, Micro electrode, glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ
Use	High accuracy	General use	Labratory measurement	Food (Needle type)	Precision measurement	Low volume samples

Type	pH combination electrode		ORP combination electrodes			
	Sentix Sur	SenTix MIC-D	SenTix ORP	SenTix Ag	SenTix Au	SenTix PtR
						
Scale	2~13 pH	0~14 pH	–			
Temperature item	0~50 °C	-5°~100 °C	0~100 °C	-5~100 °C		
Material	Glass		Glass			
Internal solution	Referid®	3M KCL (Ag N/A)	3M KCL	ELY / ORP / Ag	3M KCL	
Junction type	KPG	Platinum	Platinum	Silver	Gold	Platinum
Connector	DIN-BNC		AS/DIN/BNC			
Feature	Sentix Sur, pH electrode, Single Junction, Combination, Flat glass membrane, Glass shaft, 1 meter cable, BNC Connector	SenTix MIC-D pH electrode, Triple Junction, Iodine/ Iodide reference, 3 in 1, Refillable, Micro electrode, Glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ	The scale is comparable with that of pH measurement. Typical areas of use are the monitoring of the disinfection effect, the determination of ORP potentials in biochemical reactions, measuring in waters of different quality and more. The platinum electrodes can be used universally, the gold electrode is especially suited for strongly oxidizing media without the presence of chloride. The silver electrode is intended for argentometry.			
Use	General use	Labratory measurement	General use	Argentometry	Oxidisation	General use

FIOLAX® Ampoule pH Buffer

SI Analytics

The exactness of the pH measurement is mainly dependent on the accuracy of calibration. This again highly depends on the reliability of the buffer.

Hermetically sealed in the glass ampoule and sterilized with hot steam, same as a pharmaceutical product, the buffer solutions free of preservation agent have an extremely long shelf life and guarantee continuously error-free characteristics.

Buffer solutions in the unique double-end ampoules offer a particularly high degree of reliability and measuring accuracy.

Features

- Reliability and measuring safety
- Extremely long storage times, thanks to hot-steam sterilization
- Without preservative agent
- A maximum of calibration safety

250mlPE bottles:
pH 4.01, 7.00, 10.01

Multiparameter Benchtop Meter inoLab Multi 9000 Series

inoLab Multi 9310 IDS

inoLab Multi 9620 IDS

inoLab Multi 9630 IDS

inoLab® benchtop devices offer the correct solution for pH, ORP, dissolved oxygen and conductivity measurements in the lab.

The new inoLab® Multi 9310 IDS is highly suitable for digital measurements of pH, ORP, dissolved oxygen (optical), BOD, conductivity and turbidity in the lab. Use the new wireless modules together with the new IDS plug head sensors, be independent from cables and measure i.e. conveniently under laboratory hoods or laminar flow benches. The IDS technology allows optimized measurements and efficient documentation in the simplest manner. A USB interface or an optionally installed printer allow the documentation via the computer or directly on the meter.

Multi 9310

1 Measurement Channel
DO/BOD, pH, ORP, conductivity and ISE

Multi 9620

2 Measurement Channel

Multi 9630

3 Measurement Channel

Measurement range

pH	: 0.000~14.000 pH
ORP	: -1,200.0~1,200.0 mV
DO	: 0.00~20.00 mg/L
Conductivity	: 10 µS/cm~2,000 mS/cm

Weight & dimensions

9310	: 240(W) × 190(D) × 80(H) mm Approx 0.8 kg
9310P	: 290(W) × 190(D) × 80(H) mm Approx 1.0 kg
9620 / 9630	: 180(W) × 80(D) × 55(H) mm Approx 0.4kg

Multi-parameter Portable Meter MultiLine 3000 Series

High-quality portable digital IDS multi-parameter instrument with a universal measurement input for starting with digital measurement technology.

The Multi 3510 IDS compact portable multi-parameter instrument for applications with digital IDS pH/ORP electrodes, dissolved oxygen sensors, conductivity cells or turbidity sensors. Calibration records and additional information are stored in the sensor. Well laid-out menus make the operation safe and easy. With a wide range of electrodes almost every application including depth measurement down to 100 m will be covered in the field and in the laboratory.

Multi 3510

1 Measurement Channel
DO/BOD, pH, ORP, conductivity and ISE

Multi 3620

2 Measurement Channel

Multi 3630

3 Measurement Channel

Measurement range

pH	: 0.000~14.000 pH
ORP	: -1,200.0~1,200.0 mV
DO	: 0.00~20.00 mg/L
Conductivity	: 10 µS/cm~2,000 mS/cm
Turbidity	: 0.0~4,000.0 FNU/NTU

Weight & dimensions

80(W) × 180(D) × 55(H) mm, 400g

Multi-Parameter Sensors MPP930

MPP930

MPP IDS – the digital multi-parameters with Multi 3430 digital display

Multi-parameter probes for simultaneous measurement of up to three parameters from the following selection: Dissolved oxygen (optical), pH or ORP, conductivity as well as turbidity. A built-in pressure sensor delivers the depth. Every sensor measures the temperature required for its compensation on its own. All probes are available in kits with sensors. The MPP 930 IDS can measure up to 3.

Model

Multi-Parameter Electrodes MPP910/MPP930

Use

Spot sampling and short term logging

Sensor

MPP910	: 1 port
MPP930	: 3 ports

Measurement range

DO(Optical)	: 0~20 mg/L
pH	: 0~12
ORP	: -1,250~1,250 mV
Conductivity	: 1 µS/cm~2 S/cm
Depth	: 0.5~100 m
Temperature	: 0~50 °C

Weight & dimensions

(MPP910)	: 443(L) × 40(Ø) mm, Approx 355g
(MPP930)	: 400(L) × 69.5(Ø) mm, Approx 1.1kg

Benchtop EC/Cond Meter inoLab Cond 7000 Series

The new inoLab® Cond 7310 is highly suitable for all conductivity precision measurements connected with automatic documentation according to GLP/AQA in quality labs in all industries. It works with all modern WTW conductivity measuring cells to cover all applications. For the documentation, the serial number of the used sensor can be entered. Upon request, the measured values can be put out via the optional built-in printer.

Model	Cond 7110	Cond 7310 / Cond 7310P
Measurement range	Conductivity : 0.0 µS/cm~1,000 mS/cm Temperature : -25.0~125.0 °C Salinity : 0.0~70.0 ppt TDS : 0~1,999 mg/L Spec res : 0.000~199.9 MΩ cm	Conductivity : 0.0 µS/cm~2,000 mS/cm Temperature : -5.0~105.0 °C Salinity : 0.0~70.0 ppt TDS : 0~2,000 mg/L Spec res : 0.000~2,000 MΩ cm
Accuracy	Conductivity : Meas value ±0.5 % Temperature : ±0.1 K	
Weight & dimensions	240(W) × 190(D) × 80(H) mm Approx 1.0kg	Cond 7310 : 240(W) × 190(D) × 80(H) mm Approx 0.8 kg Cond 7310P : 290(W) × 190(D) × 80(H) mm Approx 1.0kg

inoLab Cond 7110

inoLab Cond 7310

inoLab Cond 7310P
Built in printer

Conductivity Cells

	Conductivity meters inoLab	ProfiLineSeries compatable sensors
Model	TetraCon 325	LR325/01
		
Use	General Use (Spot sampling)	Pure water measurement
Measuring range	1 µS/cm to 2,000 mS/cm	0.001 µS/cm to 200 µS/cm
Features	4 electrode graphite cell	2 electrode stainless steel measuring cell, flow vessel

Handheld EC/Cond Meter ProfiLine Cond 3000 Series

The versatile Cond 3310 is designed for conductivity measurements in changing media with different 2 and 4 pole measuring cells. With its large memory and its waterproof USB interface, this meter is ideal for the capture of large data volumes, e.g. for pump tests including date, time and ID number. Via the interface, the data can be transferred to the computer and processed as needed.

Measurement range

Conductivity : 0.0~1,000 mS/cm
Temperature : -5.0~105.0 °C
Salinity : 0.0~70.0 ppt
Spec res : 0.00~20 MΩ cm (Cond3210, 3310 only)
TDS : 0~1,999 mg/L (Cond3210, 3310 only)

Memory

Cond3110 : N/A
Cond3310 : 200 points (Manual) / 5000 points (Auto)

Interface

USB Connection (Cond3310 only)

Portable Cond/Salinity Meter LF40 Meter

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The TM 40 has an automatic temperature compensation for the pH measuring as well as an adjustable reference temperature with measurements without temperature sensor. For calibration a manual or automatic two point calibration routine can be used. Other possible applications of the device are the measurements of redox (ORP) or ISE-potential relative to the standard hydrogen electrode to DIN 38404.

Measurement range

Range: EC 0 ... 200 µS/cm; 0 ... 2000 µS/cm; 0 ... 20 mS/cm; 0 ... 500 mS/cm TDS: 0 ... 200 mg/l; 0 ... 2000 mg/l; 0 ... 20 g/l; 0 ... 500 g/l; salinity: 0 ... 70 g/kg;
Temperature:- 10 ... 100 °C

Power supply

(3 x AA, IEC R6, LR6, 1.5 V)

Weight & dimensions

200 x 95 x 40 mm (WHD)
290 g incl. batteries

Benchtop Turbidity Meter Turb 555

Professional turbidity meters for the lab from 0.01 – 10.000 NTU according to drinking water standard, for quality, goods receiving and production inspections.

Measurement range

NTU : 0~10,000
EBC : 0~2,450
Nephelos : 0~67,000 t

Reproducibility

0.01 NTU or ±1 % of the measured value

Accuracy

0 … 1,000 : 0.01 or ±2 % of the value
1,000….4,000 : ±5 % of the value
4,000 …10,000 : ±10% of the value

Power supply

AC100~240V±10% / 47~63 Hz

Weight & dimensions

252(W) × 290(D) × 100(H) mm
Approx 1kg

Portable Turbidity Meter Turb 430T

Portable nephelometric with highest precision according to DIN ISO / US EPA for water analytics, quality control and process monitoring.

Measurement ranges

NTU 0 … 1,100 / 0~1,100
FNU 0 … 1,100

Reproducibility

0.01 NTU or < 0.5 % of measured value

Measurement ranges

NTU: 0~1,100
FNU: 0~1,100

Accuracy

±0.01 NTU or ±2 % of the measured value

Power supply

4x AA batteries for approx. 3,000 measurements

Weight & dimensions

86(W) × 236(D) × 77(H) mm
600g

Economical Portable Turbidity Meter Turb 355

Small portable turbidity meter as per DIN ISO / US EPA for nephelometric measurements in quality control and environmental monitoring.

Measurement ranges

NTU 0 … 1,100
FNU 0 … 1,100

Reproducibility

0.05 NTU or ±1 % of the measured value

Resolution

N 0.01 NTU in the range 1 … 9.99
0.1 NTU in the range 10,0 … 99,9
1 NTU in the range 100 … 1,000

Accuracy

0~500 NTU/FNU: ±0.1 NTU/FNU or ±2 % of measured value
500~1,100 NTU/FNU: ±3 % of the measured value

Power supply

4x AAA batteries for approx. 1,500 measurements

Portable Turbidity Meter WQ770B

The Global Turbidity Meter is a highly accurate device with a fully submersible sensor for in-situ environmental or process monitoring. The meter is provided with a padded carrying case and 25' of marine grade cable, with lengths up to 100' available upon request.

Measurement ranges

Sensor=0-50 NTU and 0-1000 NTU; Meter=0-50 NTU or 0-1000 NTU selectable

Output

4-20mA (Sensor, both ranges), LED screen (Meter)

Cable Length

Sensor=25 ft standard (optional to 500 ft)

Accuracy

+ 1% of full scale

Operating Voltage

10-36 VDC @ 40 MS (Sensor); Internal 9VDC battery (Meter)

Weight & dimensions

Body= 1 1/2 x 8.5 inches (3.8 x 21.6 cm) (Dia x Length)
1lb (454 g) (Sensor); 2 lbs (907 g) (Meter+sensor)

Portable Suspended Solids TSS 711

ROYCE TECHNOLOGIES®

The Royce Model 711 Portable Suspended Solids/ Interface Level Analyzer is a rugged, waterproof instrument designed for the rigors of remote sampling. The meter provides reliable operation in waste treatment plants, rivers, lakes and other aqueous systems. The meter will read in either grams per liter when in the suspended solids mode or relative density percentage while in the interface level mode of operation.

Measurement range
0.01~10 grams per liter (10 to 10,000 mg/L)
Reproducibility
±1 % of reading or ±20 mg/L, whichever is greater
Accuracy
±5 % of reading or ±100 mg/L, whichever is greater
Power supply
Standard 9V batteries
Weight & dimensions
7"(L) x 3.2"(W) x 1.5"(D) Approx 1kg

Swing Samplers

Global Water

Swing Samplers for collecting water samples.

- Hinged end for easy sample collection
- Pole extends up to 12 feet

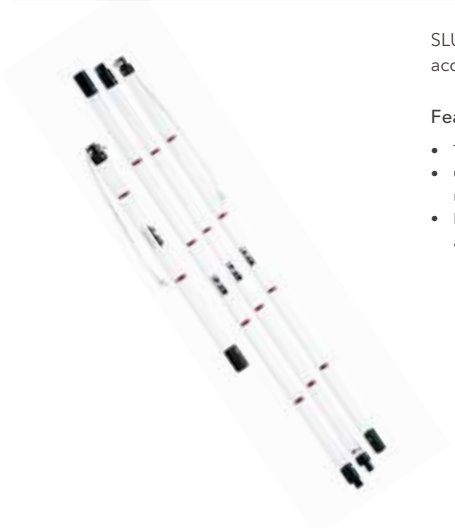
Long Handled Dippers

Long handle polyethylene dipper for taking water samples.

- Strong but lightweight
- Inert high density polyethylene

Sludge Samplers SLUDGE JUDGE

Global Water



SLUDGE JUDGE® Sludge Samplers for taking accurate readings of settled solids.

Features

- Take accurate readings of settled solids
- Combine sections to achieve the sampling length needed
- Ideal for sewage treatment plants, chemical plants, and food processing facilities

The Sludge Judge® sludge samplers are designed to take accurate readings of settled solids, 5 % or less, in a variety of liquids, to any depth. The sludge samplers are ideal for sewage treatment plants, chemical plants, and food processing facilities - anywhere that accurate sample levels of settled solids in non-caustic materials are needed. The sludge sampler holds approximately 3 oz. per foot (89 ml per 0.31 m). The Sludge Judge® comes in 5 ft (1.53 m) sections of 3/4 inch (1.90 cm) plastic pipe with screw-type connectors.

Spectrophotometer photoLab® 7100 VIS COD Plus

photoLab® 7100 VIS of 320~1,100 nm supports fastest and affordable routine analysis via barcoded test kits for round and rectangular cuvettes. More than 250 methods are available for waste/drinking water, food & beverage industry as well as production, environmental monitoring or fish farming.

Measurement
Multiparameter
Measurement range
0.5~11 mg/L
Wavelength range
320~1,100 nm COD_{Mn}: 525 nm
Technology
Monochromator with reference beam

Spectrophotometer photoLab® 7600 UV-VIS COD Reagent Free

The spectrophotometer photoLab® 7600 UV-VIS combine routine analysis with spectral analysis and pioneering procedure OptRF.

For the standard parameters COD, nitrate and nitrite, a spectrum in the UV range is evaluated by means of complex algorithms which are based on reference spectra. The result is put out directly as concentration reading, without the use of reagents.

Measurement
Multiparameter
Measurement range
0.5~11 mg/L
Wavelength range
190~1,100 nm COD_{Mn}: 525 nm
Technology
Monochromator with reference beam

Filter Photometer photoLab® S6- S12 COD 6-12 Wavelengths

The photoLab® S6&12 filter photometer with 6 & 12 wavelengths combines lab precision with highest comfort and highest speeds for extensive water analytics.

Approx. 100 methods are detected automatically. So, it can be used in water analytics as well as galvanization and in the food industry.

Measurement
Multiparameter
Measurement range
0.5~11 mg/L
Wavelength range
190~1,100nm COD_{Mn}: 525 nm
Technology
Monochromator with reference beam

The Spectral Sensors of WTW

Carbon and nitrogen parameters can be measured easily and without the use of chemicals by means of the optical method of the UV-VIS and UV sensors. Steps such as sampling and sample preparation, which usually take a lot of time, are omitted. Another plus is the integrated, maintenance-free ultrasound cleaning process, which minimizes the manual cleaning effort for almost all applications.

InoLab Benchtop pH/ORP & ISE InoLab 7110 / 7310 / 7320

InoLab 7320P

InoLab 7310

The WTW InoLab line includes the 7110 (single channel), 7310 and 7310P (single channel) and 7320 and 7320P (dual channel) instruments providing easy-to-use and calibrate instruments ideal for the laboratory.

Parameter

pH, ORP (mV), ISE (Ammonia, Ammonium, Bromide, Cadmium, Calcium, Chloride, Iodide, Copper, Cyanide, Floride, Lead, Nitrate, Potassium, Silver/Sulfide, Sodium), Temp

pH

Scale : -2.0~20.0; -2.00~20.00; -2.000~19.999
Resolution : 0.1; 0.01; 0.001
Accuracy : ±0.1; ±0.01; ±0.05 (Sample temp 15~35 °C)

ORP (mV)

Scale : -1,200~1,200.0; -2,500~2,500
Resolution : 0.1; 1.0
Accuracy : ±0.3; ±1.0 (Sample temp 15~35 °C)

ISE

(mol/l, mmol/l, ppm, %) Scale: 0.000~9.999; 10.00~99.99; 100.0~999.9; 1,000~999,999 Resolution: 0.001; 0.01; 0.1; 1 (µmol/l) Scale: 0.000~9.999; 10.00~99.99; 100.0~999.9; 1,000~9,999 Resolution: 0.001;

Temp

Scale : -5~105 °C
Resolution : 0.1
Accuracy : ±0.1

pHotoFlex® STD Phosphate and Nitrogen Set TNP-A

These rugged, waterproof, multiparameter colorimeters are ideal for laboratory and field testing. The instruments feature a large, backlit display, waterproof rating, data logging with the ability to export data to a computer using LSdata software, user-defined programs and a 2-year warranty.

Plus CR 3200 thermoreactor for thermal digestion with 2x12 round cuvettes with 8 fixed/8 user-defined programs with temperatures of up to 170 °C and AQA.

pHotoFlex® set

N.P : pHotoFlex® STD
N.P : Reagent and Thermoreactor

Light source

LED

Measurement range

Nitrogen Ntot1
TC (LR): 0.5 to 25.0 mg/L (Digestion 120 °C / 248 °F, 30 min)

Nitrogen Ntot2
TC (HR) : 10 to 150 mg/L (Digestion 120 °C / 248 °F, 30 min)

Phosphate PO_4-1
TP: 0.007 to 0.800 mg/L PO_4-P; 0.02 to 2.45 mg/L PO_4

Phosphate PO_4-2
TP: 0.06 to 5 mg/L PO_4; 0.02 to 1.63 mg/L PO_4-P

photoLab® 7100 Phosphate and Nitrogen Set TNP-7100

The spectral photometer photoLab® 7100 VIS with AQA and IQ LabLink combines secured water analysis with uncomplicated special and spectral analytics.

CR 3200 thermoreactor for thermal digestion with 2x12 round cuvettes with 8 fixed / 8 user-defined programs with temperatures of up to 170 °C and AQA.

7100 set

N.P : photoLab® 7100
N.P : Reagent and Thermoreactor

Technology

Monochromator with reference beam

Measurement range

Nitrogen Ntot1 TC (LR):
0.5 to 25.0 mg/L (Digestion 120 °C / 248 °F, 30 min)

Nitrogen Ntot2 TC (HR) :
10 to 150 mg/L (Digestion 120 °C / 248 °F, 30 min)

Phosphate PO_4-1 TP:
0.007 to 0.800 mg/L PO_4-P; 0.02 to 2.45 mg/L PO_4

Phosphate PO_4-2 TP:
0.06 to 5 mg/L PO_4; 0.02 to 1.63 mg/L PO_4-P

Photometry

Spectrophotometer photoLab® photoLab® 7100VIS / photoLab® 7600VIS

photoLab® 7100

photoLab® 7600

Model	photoLab® 7100 (VIS)	photoLab® 7600
Wavelength range	Spectral photometer VIS 320~1,100 nm	Spectral photometer (VIS) 190~1,100 nm
Lamp	Tungsten-Halogen	Xenon
Accuracy/reproducibility	±1 nm; < 0.5 nm	±1 nm; < 0.5 nm
Scan speed	700~2,000 nm/min in 1, 2, 5, 10 nm steps	700~2,000 nm/min in 1, 2, 5, 10 nm steps
Data memory	5,000 measurements, 40 MB for spectrums and kinetics	
Weight & dimensions	404(W) x 314(H) x 197(H) mm, Approx 4.5kg	

Features

- Easy to use: place cuvette, read measurement value
- More than 250 test programs for water analysis, galvanics and general lab analytics
- Cell and reagent test kits with barcode for automatic program selection
- Automatic cuvette and measurement range detection for rectangular cuvettes
- Top reliability due to menu guided comprehensive Analytical Quality Assurance - AQA
- Measurement "Light" on the road with car battery use
- USB and Ethernet-connections for easy update, print to PDF or printer, storage and data export

Portable Meters for Photometric Meters pHotoFlex®

pHotoFlex®: portable LED photometer for environmental monitoring and extensive water and routine analytics in (mobile) service labs

pHotoFlex® STD
Absorbance measurement

pHotoFlex® pH
Absorbance measurement + pH measurement (Electrodes type)

pHotoFlex® Turb
Absorbance measurement + pH measurement (Electrodes type) Turbidity

Wavelength nm
436, 517, 557, 594, 610, 690 (+860: Turb only) nm

Measurement range
pH (pHotoFlex® STD) : 0~16
Turbidity (pHotoFlex® Turb only) : 0~1,100 NTU/FNU

Power supply
1.5V × 4 (Approx 5,000 measurements)

Weight & dimensions
86(W) × 236(D) × 117(H) mm
600g

Reactor CR2200/3200/4200

CR4200

Thermoreactors for the disintegration of COD, total nitrogen and total phosphorus, including brief and self-programmed high temperature disintegration up to 170 °C.

The high reaction temperature over a defined period of time ensures a complete degradation of the sample. The required temperatures and degradation times for the standard parameters are stored in every WTW thermoreactor. In addition, there are different options for self programming and cuvette numbers available.

CR2200
Max 12 Sample
100~150 °C Temperature range

CR3200
Max 24 Sample
25~170 °C Temperature range

CR4200
Max 24 Sample
25~170 °C Temperature range

Weight & dimensions
245(W) × 292(D) × 180(H) mm
3.6kg

Reagents

PhotoLab® Series
photoLab® 7100
photoLab® 7600

pHotoFlex® Series
pHotoFlex® STD
pHotoFlex® pH
pHotoFlex® Turb

Item	Symbol	Measurement range	Measurement method	photoLab® Series	pHotoFlex® Series
Acidity	-	0.40~8.00 mm ol/L	Indicator	•	
Aluminum	Al	0.02~0.50 mg/L	Chromoaznol S	•	
		0.020~1.20 mg/L	Chromoaznol S	•	
		0.05~0.40 mg/L	Chromoaznol S		•
		0.01~0.25 mg/L	Erio Chromium cyan R		•
Ammoniacal Nitrogen	NH_4-N	0.010~2.000 mg/L	Indo phenol blue	•	
		0.20~8.00 mg/L	Indo phenol blue	•	•
		0.5~16.0 mg/L	Indo phenol blue	•	•
		4.0~80.0 mg/L	Indo phenol blue	•	
		0.010~3.00 mg/L	Indo phenol blue	•	
		0.02~1.50 mg/L	Indo phenol blue		•
		2.0~75 mg/L	Indo phenol blue	•	
		5~150 mg/L	Indo phenol blue	•	
		0.00~0.50 mg/L	Salicylic acid		•
		0.00~2.50 mg/L	Salicylic acid		•
		0~50 mg/L	Salicylic acid		•
Adsorptive organic Halogen	AOX	0.05~2.50 mg/L	Iron (III) thiocyanate	•	
Arsenic	As	0.001~0.100 mg/L	Silver diethyl dithiocarbamate	•	
		0.002~0.100 mg/L	Silver diethyl dithiocarbamate		•
BOD	BOD	0.5~3,000 mg/L	Winkler test	•	
Boron	B	0.050~0.800 mg/L	Losothianin	•	
		0.05~2.00 mg/L	Azomethine H	•	
Bromine	Br	0.020~10 mg/L	DPD	•	
Cadmium	Cd	0.025~1.000 mg/L	Cadion derivative	•	•
		0.002~0.500 mg/L	Cadion derivative	•	
		0.010~0.500 mg/L	Cadion derivative		•
Calcium	Ca	1.0~15.0 mg/L	Glyoxal-bis-hydroxyanil	•	
		5~160 mg/L	Glyoxal-bis-hydroxyanil	•	•
		10~250 mg/L	Phthalein Complexone	•	
Chloride	Cl	5~125 mg/L	Iron (III) thiocyanate	•	•
		2.5~25.0 mg/L	Iron (III) thiocyanate	•	
		10~250 mg/L	Iron (III) thiocyanate	•	•
Residual Chloride (Free Total)	Cl_2	0.03~6.00 mg/L	DPD	•	
		0.05~5.00 mg/L	DPD		•
		0.010~6.00 mg/L	DPD	•	
		0.00~2 mg/L	DPD		•
Chlorine Dioxide	ClO_2	0.020~10.00 mg/L	DPD	•	
		0.02~7.50 mg/L	DPD		•
Chromium (Hexavalent)	Cr^{6+}	0.05~2.00 mg/L	Diphenylcarbazide	•	•
		0.01~3.00 mg/L	Diphenylcarbazide	•	
COD	O_2	4.0~40.0 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	
		5.0~80.0 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	
		10~150 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	•
		15~300 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	•
		50~500 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	•
		25~1,500 mg/L	Chromium sulfate decomposition / Chromium (III)	•	•
		300~3,500 mg/L	Chromium sulfate decomposition / Chromium (III)	•	•
		500~10,000 mg/L	Chromium sulfate decomposition / Chromium (III)	•	•
		5,000~90,000 mg/L	Chromium sulfate decomposition / Chromium (III)	•	•
		10~150 mg/L	Heavy Chromium acid / sulfuric acid	•	•
		20~1,500 mg/L	Heavy Chromium acid / sulfuric acid	•	•
		200~15,000 mg/L	Heavy Chromium acid / sulfuric acid	•	•
COD (Mercury free)	O_2	10~150 mg/L	Chromium acid sulfate decomposition / Chromium acid	•	•
		100~1,500 mg/L	Chromium sulfate decomposition / Chromium (III)	•	•
Copper	Cu	0.05~8.00 mg/L	Cuprizone	•	
		0.05~7.50 mg/L	Cuprizone		•
		0.02~6.00 mg/L	Cuprizone	•	
		0.04~6.00 mg/L	Cuprizone		•
		0.00~5.00 mg/L	Bicinchoninic acid		•
Cyanide	CN	0.010~0.500 mg/L	Barbituric acid / pyridinecarboxylic acid	•	
		0.01~0.30 mg/L	Barbituric acid / pyridinecarboxylic acid		•
		0.002~0.500 mg/L	Barbituric acid / pyridinecarboxylic acid	•	
DEHA	DEHA	0.020~0.500 mg/L	Ferrozin	•	
Fluoride	F	0.04~1.00 mg/L	Alizarin Combrexon		•
		0.10~2.00 mg/L	Alizarin Combrexon	•	
		0.10~1.80 mg/L	Alizarin Combrexon	•	
		0.025~0.500 mg/L	Alizarin Combrexon	•	
		1.0~20.0 mg/L	Alizarin Combrexon	•	
Holm Aldehyde	HCHO	0.02~8.00 mg/L	Sulfuric acid / chromotrophic acid	•	
		0.10~8.00 mg/L	Sulfuric acid / chromotrophic acid	•	
		0.10~7.00 mg/L	Sulfuric acid / chromotrophic acid		•
Gold	Au	0.5~12.0 mg/L	Rhodamine B	•	
		0.5~9.0 mg/L	Rhodamine B		•
Hardness (Total)	$CaCO_3$	5~215 mg/L	Phthalein Complexone	•	•
Hydrazine	N_2H_4	0.005~2.00 mg/L	4- (dimethylamino) - Benz Aldehyde	•	
Hydrogen Peroxide	H_2O_2	2~20.0 mg/L	Titanyl sulfate	•	
		0.25~5.00 mg/L	Titanyl sulfate	•	
		0.015~6.00 mg/L	Neocuproine	•	
Iodine	I	0.050~10.00 mg/L	DPD	•	
Iron (II, III)	Fe	0.05~4.00 mg/L	Triazine	•	
		0.05~3.00 mg/L	Triazine		•
		1.0~50.0 mg/L	2,2'-dipyridine	•	
		0.005~5.00 mg/L	Triazine	•	
		0.010~5.00 mg/L	1,10-phenanthroline phosphorus	•	
		0.02~3 mg/L	1,10-phenanthroline phosphorus		•
Iron (Total)	Fe	0.02~1.8 mg/L	TPTZ		•
Lead	Pb	0.01~5 mg/L	4- (2-pyridylazo) -resorcin	•	•
		0.1~5 mg/L	4- (2-pyridylazo) -resorcin	•	
Magnesium	Mg	5.0~75.0 mg/L	O-cresolphthalein derivative	•	•
Manganese	Mn	0.005~2.000 mg/L	PAN	•	
		0.01~10.0 mg/L	Formaldoxime	•	
		0.02~9.0 mg/L	Formaldoxime		•
		0.10~5.00 mg/L	Formaldoxime	•	•
		0.0~20 mg/L	Over Iodine acid oxidation		•

Item	Symbol	Measurement range	Measurement method	photoLab® Series	pHotoFlex® Series
Molybdenum	Mo	0.02~1.00 mg/L	Bromopyrogallollet	•	•
		0.5~45.0 mg/L	Mercaptoacetic acid	•	
		0~35 mg/L	Thioglycolic acid		•
Monochrome Ramin	Cl_2	0.05~10.0 mg/L	Indo phenol blue	•	
Nickel	Ni	0.10~6.00 mg/L	Dimethylglyoxime	•	•
		0.02~5.00 mg/L	Dimethylglyoxime	•	
		0.10~3.80 mg/L	Dimethylglyoxime		•
Nitrate Nitrogen	NO_3-N	0.10~3.00 mg/L	Resorcinol	•	
		0.10~2.70 mg/L	Resorcinol		•
		0.5~25.0 mg/L	2,6-dimethyl Phenol (DMP)	•	
		0.5~18.0 mg/L	Nitrospectral	•	
		0.5~14.5 mg/L	Nitrospectral		•
		1.0~50.0 mg/L	2,6-dimethyl Phenol (DMP)	•	
		23~225 mg/L	2,6-dimethyl Phenol (DMP)	•	
		0.2~17.0 mg/L	Resorcinol	•	
		0.2~13.0 mg/L	Resorcinol		•
		0.2~20.0 mg/L	Nitrospectral	•	
		0.1~25.0 mg/L	2,6-dimethyl Phenol (DMP)	•	
		0~30 mg/L	Chromotrophate		•
Nitrate Nitrogen	NO_2-N	0.010~0.700 mg/L	Grease reaction	•	
		0.00~0.50 mg/L	Grease reaction		•
		0.002~1.00 mg/L	Grease reaction	•	
		0.01~0.50 mg/L	Grease reaction		•
		1.0~90.0 mg/L	Sulfuric acid Iron (II)	•	
		0.03~0.6 mg/L	Sulfanilic acid / naphthylamine		•
		0.3~3 mg/L	Sulfanilic acid / naphthylamine		•
		0.00~0.3 mg/L	Diazotization		•
Total Nitrogen	TN	0.5~15.0 mg/L	After peroxodisulfuric acid decomposition, nitrospectral	•	•
		10~150 mg/L	After peroxodisulfuric acid decomposition DMP	•	
		0.5~15.0 mg/L	After peroxodisulfuric acid decomposition DMP	•	
		0.5~25 mg/L	Persulfate decomposition - Chromotrophic acid		•
		10~140 mg/L	Persulfate decomposition - Chromotrophic acid		•
Volatile organic acid	–	50~3000 mg/L	Hydroxamic acid / Iron (III)	•	
Dissolved Oxygen	O_2	0.5~12.0 mg/L	Winkler test	•	
Ozone	O_3	0.010~4.00 mg/L	DPD	•	
		0.01~3.50 mg/L	DPD		•
Phenol	C6H5OH	0.002~5.000 mg/L	4-aminoantipium phosphorus	•	
		0.10~2.50 mg/L	MBTH	•	•
Orthophosphoric acid	PO_4	0.5~25.0 mg/L	Molybdenum acid vanadium	•	•
		3.0~100.0 mg/L	Phospho molybdenum blue	•	
		1.0~70.0 mg/L	Phospho molybdenum blue		•
		0.01~5.00 mg/L	Phospho molybdenum blue	•	
		0.20~2.50 mg/L	Phospho molybdenum blue		•
		0.5~30.0 mg/L	Molybdenum acid vanadium	•	
		1.0~100.0 mg/L	Phospho molybdenum blue	•	
		1.0~50.0 mg/L	Phospho molybdenum blue		•
		0.00~0.80 mg/L	Ascorbic acid		•
		0.00~1.60 mg/L	Ascorbic acid		•
Total phosphorus	TP	0.05~5.00 mg/L	Phospho molybdenum blue	•	
		0.05~3.00 mg/L	Phospho molybdenum blue		•
		0.5~25.0 mg/L	Phospho molybdenum blue	•	
		0.5~15.0 mg/L	Phospho molybdenum blue		•
		0.00~1.1 mg/L	Persulfate decomposition / Ascorbic acid		•
pH	pH	6.4~8.8	Phenol red	•	
Potassium	K	5.0~50.0 mg/L	Cargignost / turbidity	•	•
		30~300 mg/L	Cargignost / turbidity	•	•
Silica	SiO_2	0.011~1.600 mg/L	Silico molybdenum blue	•	
		0.11~10.70 mg/L	Silico molybdenum blue	•	•
		1.1~1070 mg/L	Silico molybdenum blue	•	•
		0.0~1.6 mg/L	Heteropolive blue		•
		0~100 mg/L	Silicomybdenum acid		•
Silver	Ag	0.25~3.00 mg/L	Eosin / 1,10-phenanthroline phosphorus	•	
		0.25~2.75 mg/L	Eosin / 1,10-phenanthroline phosphorus		•
Sodium	Na	10~300 mg/L	Iron (III) thiocyanate	•	•
Sulfate	SO_4	5~250 mg/L	Barium sulfate / turbidity	•	•
		50~500 mg/L	Barium sulfate / turbidity	•	
		100~1,000 mg/L	Barium sulfate / turbidity	•	
		25~300 mg/L	Tannic acid	•	
		0~70 mg/L	Barium sulfate - turbidity		•
Sulfide	S	0.02~1.50 mg/L	Dimethyl-p-phenylenediamine	•	
Sub Sulfate	SO_3	1.0~20.0 mg/L	Elman reagent	•	
		0.05~3.00 mg/L	Elman reagent	•	
		1.0~60.0 mg/L	Elman reagent	•	
Surfactant (+ Ion)	CTAB	0.05~1.50 mg/L	Dysarfin blue	•	
Surfactant (- Ion)	MSAS	0.05~2 mg/L	Methylene blue	•	•
Surfactant	Triton	0.10~7.50 mg/L	TBPE	•	•
Tin	Sn	0.10~2.50 mg/L	Pyrocatechol bio red	•	
TOC	TOC	5.0~80.0 mg/L	Peroxodisulfuric acid decomposition / Indicator	•	
		50~800 mg/L	Peroxodisulfuric acid decomposition / Indicator	•	
Lead	Zn	0.025~1.000 mg/L	PAR	•	•
		0.20~5.00 mg/L	PAR	•	•

Selection table titration – piston burettes TITRONIC® and automatic titrators TitroLine®




Application	TITRONIC® 300	TITRONIC® 500	TitroLine® 5000	TitroLine® 7000
Intelligent interchangable units (5, 10, 20 and 50 ml)	1	■	1	■
Manual Titration	■	■	■	■
Dosing	■	■	■	■
Solutions preparation (manually or automatically with con balance)	–	■	–	■
Automatic titration (independent with external software)	2	2	■	■
pH/mV titrations "aqueous" (Alkalinity, hydrochloric acid, citric acid, Kjeldahl…)	–	–	■	■
pH/mV titrations "non aqueous" (TAN/TBN, FFA, titrations with perchloric acid…)	–	–	–	■
Redox titrations (iodometry, permanganometry….)	–	–	■	■
Redox titrations (COD)	–	–	■	■
Halide titrations (chloride, "salt"…)	–	–	■	■
Hydrogen sulphide and mercaptans	–	–	–	■
Sulfurous acid in wine and beverages	–	–	–	■
Bromine number	–	–	–	■
Conductivity Measurement (Smart Sensor (IDS®))	–	–	–	–
pH-stat-applications (enzyme kinetics, soil samples, biotechnology)	–	–	–	■
Water analysis according to KF Volumetric method (10 ppm – 100 %)	–	–	–	–
Water analysis according to KF Coulometric method (1 ppm – 5 %)	–	–	–	–
Sample	–	–	–	■
TitriSoft	■	■	–	■

1) 20~50 mL User selectable cylinder sizes
2) Can be used as titration and dosing burette in automatic titration systems




	TitroLine® 7500 KF	TitroLine® 7500 KF trace	TitroLine® 7750	TitroLine® 7800
	■	■	■	■
	–	–	■	■
	■	–	■	■
	■	–	■	■
	■	■	■	■
	–	–	■	■
	–	–	■	■
	–	–	■	■
	–	–	■	■
	–	–	■	■
	–	–	■	■
	–	–	■	■
	■	■	■	■
	–	–	–	■
	–	–	■	■
	■	–	■	■
	–	■	–	–
	–	–	■	■
	■	■	■	■

Piston Burette

TITRONIC® Piston Burette TITRONIC® 300

SI Analytics

The new burette TITRONIC® 300 not only allows you to perform dosing operations quickly and easily but also accomplishes manual titrating operations without difficulty. The burette can be used with all dosing liquids, solvents and titrants.

The adjustment of any dosing volume and the dosing speed is made simply by pressing a button. For incremental dosing operations, the entry of the volume and the waiting time between the volume increments can be adjusted just as easily and quickly.

Burette capacity	
20 ml~50 ml	
Burette accuracy	
20mL Burette	: ±0.15 mL, Reproducibility: ±0.05 mL Resolution: 0.005 mL
50mL Burette	: ±0.025 mL, Reproducibility:±0.25 mL Resolution: 0.025 mL (EN ISO 8655-6)
Interface	
1× USB-A and 1× USB-B, 2× RS-232-C	
Power	
100~240 V or more, 50/60 Hz, Power30VA	
Weight & dimensions	
135(W) × 310(H) × 205(D) mm 2kg (not including stirrer)	

TITRONIC® Piston Burette TITRONIC® 500

SI Analytics

The TITRONIC® 500 is the perfect piston burette for manual titrations, accurate dosing of small and large volumes and the preparation of solutions.

The TITRONIC® 500 can also be used as automatic dosing (TitroLine® 7000, TitriSoft 3.0) and titration burette (TitriSoft 3.0).

Features

- Intelligent exchangeable units with 5, 10, 20 and 50 ml volume
- Connection of printer and analytical balances
- Complete remote control via RS232 or USB-B interface thanks to the two RS232 ports it is possible to connect up to 16 devices on one RS232 or USB port at ones

Burette capacity	
5 ml, 10 ml, 20 ml, 50 ml	
Burette accuracy	
Accuracy Reproducibility	: ±0.1~0.15 %, : ±0.05~0.07 % (EN ISO 8655-6)
Display	
3.5"-1/4 VGA TFT LCD	
Interface	
2x USB-A and 1x USB-B, 2x RS-232-C	
Power	
90~240V or more, 50/60 Hz, Power30VA	
Weight & dimensions	
153(W) × 45(H) × 296(D) mm 3.5kg (not including stirrer)	

Accessories

TZ 3880	285220530
Manual controller	
TZ 3803	285220590
1,000 ml	
TM 50	285225840
TITRONIC®300 + TitroLine®5000 stirrer	
TZ 3830	285220420
USB Channel expansion hub	
TZ 3835	285220410
USB Channel expansion hub	
TZ 3865	285220440
DIN A4 Printer	
TZ 3863	285220480
112 mm USB-Thermo printer	
TZ 3864	285220710
Printer paper (5 rolls)	

SI Analytics

About us

By developing the glass electrode 75 years ago, SCHOTT laid the foundation for the success of electrochemical measurement. With high-performance pH glasses, innovative electrodes and electrochemical measuring instruments such as pH meters, conductivity meters, oxygen measuring instruments, piston burettes and titrators.

TitroLine® Automatic Titration

TitroLine® Automatic Titration TitroLine® 5000

SI Analytics

This new automatic titrator combines a syringe burette and pH/mV meter plus integrated intelligence. This intelligence carries out the parameterisation of the method for you.

The new Titrator TitroLine® 5000 offers even more features than its predecessor and is even more convenient to use.

Burette capacity

20ml~50ml

Burette accuracy

20mL Burette :±0.15 mL, Reproducibility: ±0.05 mL
50mL Burette :±0.025 mL, Reproducibility: ±0.25 mL

Interface

1x USB-A and 1x USB-B, 2x RS-232-C

Power

100~240V or more, 50/60 Hz, Power 30VA

Weight & dimensions

135(W) × 310(H) × 205(D) mm
2kg (not including stirrer)

TitroLine® Automatic Titration TitroLine® 7000

SI Analytics

TitroLine® 7000 is with its spectrum of benefits the ideal entry into the potentiometric titration and the perfect choice for applications in the field of food, water/waste water and environmental analysis. Thanks to the high-Resolution and precise pH/mV and "dead-stop" measuring interface is it possible to determine a wide range of parameters.

Features

- High Resolution pH/mV measuring interface and measuring input for temperature measurement
- Measuring interface for polarisable electrodes ("dead-stop")
- Available standard methods such as FOS/TAC, alkalinity, total acidity in soft drinks
- Linear and dynamic titration to equivalence point
- Titrations to pH, mV and µA end point
- Manual titrations and dosing tasks are also practicable

Burette capacity

5 ml, 10 ml, 20 ml, 50 ml

Burette accuracy

Accuracy : ±0.1~0.15 %,
Reproducibility : ±0.05~0.07 % (EN ISO 8655-6)

Applications

- Acid and base numbers in oils
- Titrations in glacial acetic acid with perchloric acid
- Hydroxyl, NCO (Isocyanate) number and further specific values
- Determination of the enzyme activity (ex. Lipase)
- pH stat elution of soil sample at pH 4
- Monitoring of the pH value during chemical syntheses

User-defined methods

TL 7000 : 50x

Interface

1×LAN, 2×USB-A, 1×USB-B, 2×RS232

TitroLine® 7800 - The Universal Titrator with IDS® NEW

SI Analytics

The TitroLine® 7800 enhanced the universal features of the TitroLine® 7750 with an additional IDS® measurement input. The TitroLine® 7800 is able to perform a range of trirations from potentiometric titrations to Karl Fisher.

The IDS (intelligent digital sensors) automatically store their unique serial number and calibration data. In addition, they also digitally process the measurement signal.

Burette capacity

5 ml, 10 ml, 20 ml, 50 ml

Burette accuracy

Accuracy : ±0.1~0.15 %,
Reproducibility : ±0.05~0.07 %(EN ISO 8655-6)

Measurement channel

1. (analog) pH/mV with reference electrode input
2. (IDS) IDS Accuracy +/- 1 digit in dependence from the used IDS-electrode

Interface

90~240V or more, 50/60 Hz, Power30VA

Power

1× LAN, 2× USB-A, 1× USB-B, 2× RS232

Weight & dimensions

153(W) × 45(H) × 296(D) mm
2.3kg for basic unit
3.5kg for complete device incl.

Karl Fisher Titrators

TitroLine® 7500 KF

TitroLine® 7750

SI Analytics

The TitroLine® 7500 KF is the volumetric generalist for a wide range of use.

Features

- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value…)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV -format)
- With intelligent interchangeable modules

Specifications
TitroLine® 7500KF
Application
KF volumetry, dead-stop-titrations (SO2, bromine number)

TM 235 KF	285220900
Titriation stand with pump; Scope of delivery: Basic unit with 1 l DURAN ®-reagent bottle TZ 1791, 1 l DURAN®-waste bottle TZ 1792, moisture bottle, tubes and screw threads, power supply TZ 1855 (110 to 240 V)	
TZ 1770	285216677
KF Titration vessel set	
KF 1100	285102030
KF Titration platinum electrode	
TZ 1748	285216560
Stainless Steel support Bar Ø 10 mm	
TZ 1789	285221120
Starter Kit	

TitroLine® 7500 KF Trace

TitroLine® 7500 KF trace

SI Analytics

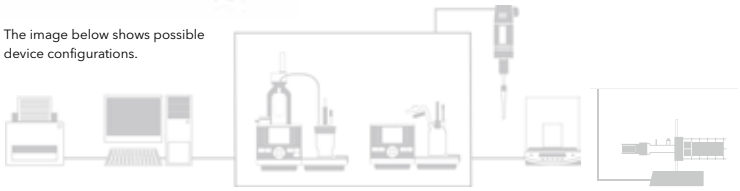
TitroLine® 7500 KF trace is the specialist for low water contents.

Features

- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value…)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV -format)

Measurement range
1 pp~5 %
Titration accuracy
<0.3 % (1 mg Water)
Number of method
50
Display
3.5"-1/4 VGA TFT
Interface
2× USB-A and 1× USB-B, 2× RS-232-C
Weight & dimensions
153(W) × 45(H) × 296(D) mm 2.3kg (not including stirrer)

The image below shows possible device configurations.



Sampler Carousel

TW Alpha plus & TW7400

SI Analytics

TW alpha plus

TW alpha plus sample changer

Now that GLP and ISO 900X have been adopted, the number of samples obtained is constantly rising. The new TW alpha plus from SI Analytics will help you to meet these additional requirements. Our sample changer enables you to titrate in series with automatic sample changing.

Features

- Extremely robust and long-lasting
- Various sample plates from 12~24 positions for standard bechers acc. to DIN
- Sample vessels from 50~400 ml
- Sample plate for CSB vessels acc. to DIN with 24 positions
- Different titration heads
- Connection for cleaning and suction pump but also cleaning in pre-defined vessels or for conditioning of electrodes

TW 7400

Model	TW alpha plus	TW 7400
Number of samples	24x 50 ml beaker, 16x 150 ml beaker, 12x 250 ml beaker, 24x COD beaker	42x 150 ml~250 ml beaker, 48x 100 ml beaker, 72x 50 ml beaker
Use	Various automatic Measurement Applications (Micro-Titration, COD Titration)	42 Sample: Water quality and environmental 72 Sample: pH of the soil, the alkalinity of the sea Water, beverage, 48 Sample: Wine
Weight & dimensions	143(W) × 620(H) × 475(D) mm Sample rack: 450 × 450 × 65(H) mm 10.3kg (sample rack not included)	600(W) × 510(H) × 560(D) mm 21kg

Titration Electrodes

SI Analytics

Application	pH Electrode	Temp Electrode
Acid-base-titrations		
Aqueous, general strong acid and bases	A 7780	A 7780 1M-DIN-ID
Kjeldahl	A 7780	A 7780 1M-DIN-ID
Alkalinity	N 62, N 61	A 162-2M-DIN-ID
Aqueous, difficult applications	IL-pH-A120MF,IL-pH-A170MF	A 162-2M-DIN-ID
Low ionic liquids	IL-pH-A120MF,IL-pH-A170MF	A 162-2M-DIN-ID
Small sample amounts	N 5900 A	A 157-IL-MICRO-pHT-A-DIN-N
Titration with sample changer (100~250 ml vessels) beaker	N 65	A 162-2M-DIN-ID
Titration with sample changer (50 ml vessels, micro) beaker	N 5900 A	–
Non aqueous acid base-titrations		
TAN (ASTM 664)	N 6480 eth	–
OH-No, NCO-No, FFA saponification No. …	N 6480 eth	–
TBN (ISO 3771/ASTM 2896)	N 6480 eis	–
Epoxy value	N 6480 eis	–
Titrations with perchloric acid/acetic acid	N 6480 eis	–
Precipitation titrations		
Halogenides (chloride, "salt")	AgCl 62,AgCl 62 RG	–
Halogenides, sample changer	AgCl 65,AgCl 62 RG	–
Pseudo halogenides (cyanide …)	Ag 6280	–
Detergents	TEN 1100	–
Redox titrations		
General, iodometric permanganometric, cerimetric	Pt 62,Pt 6280	–
Iodine number, peroxid number	Pt 61	–
COD	Pt 61	–
Sample changer, general	Pt 6580	–
Sample changer, COD	Pt 5901	–
Dead stop (SO2 bromine no. …) general	Pt 1200	–
Dead stop (SO2 bromine no. …) sample changer, general and titration vessels	Pt 1400	–
Dead stop (SO2 bromine no. …) sample changer micro	KF 1100	–
KF-titrations	KF 1100	–
Complexometric titrations		
Water hardness (Ca/Mg separated)	Ca 1100 A	–
Water hardness, total	Cu 1100 A	–

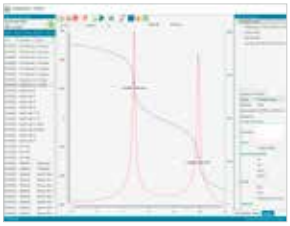
TitriSoft 3.0 – Convincingly simple …

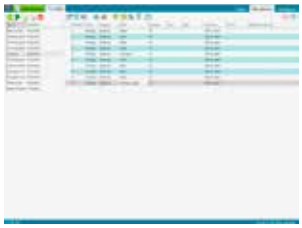
SI Analytics

The TitriSoft 3.0 titration software is the optimum solution for your titration tasks. The software can be used with Windows XP, Vista and 7 and supports your daily work procedures during sample preparation, titration and evaluation of the results. The software has been developed to be clear, logical and user-friendly.

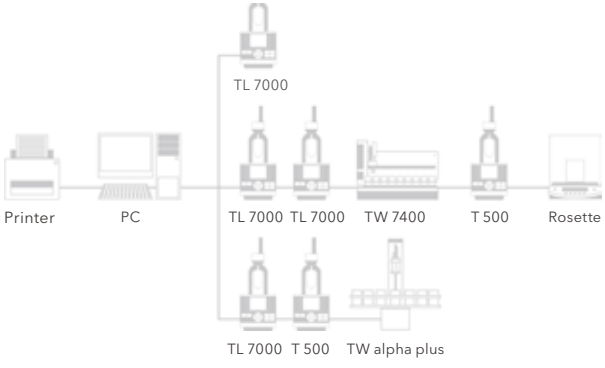
You can connect the titration hardware to any of your PC's available USB-A or serial interfaces. Each of the interfaces allows different combinations of devices (configurations).

To automate a titration procedure the software may be used to control the TitroLine® 7000 in connection with the TW alpha plus sample changer. For more complex titration tasks with sample preparation you can dose with piston burettes followed by titration with a TitroLine® 7000. Of course, you can also use the software for dosing only.





The image below shows possible device



System-wide Process Monitoring & Control


Effluent:
Ammonium, Nitrate, pH,
Conductivity, D.O., Turbidity,
COD, TOC, DOC, BOD, SAC
Back-up Terminal
Final Setting:
Nitrogen, Turbidity, TSS,
pH, Sludge Blanket Level

IQ Sensor Net

WTW's IQ Sensor Net systems for wastewater treatment plant and industrial applications offers nearly unlimited network opportunities – for up to 20 sensors.

The systems are modular system and can "grow" with increasing demands! You can transfer all of your information to your PLC via one single cable and will save in unnecessary investments. Furthermore, you can read all measured parameters on a single display.

	Sensors												
Parameters	**1** TriOxmatic®	**2** FDO®	**3** SensoLyt®	**4** TetraCon®	**5** VisoTurb®	**6** ViSolid®	**7** NitraVis®	**8** CarboVis®	**9** NiCaVis®	**10** VARiON®	**11** AmmoLyt®	**12** NitraLyt®	**13** IFL
Temperature	●	●	●	●	●	●	●	●	●	●	●	●	
DO (electrochemical)	●												
DO (optical)		●											
pH			●										
ORP			●										
Conductivity				●									
Salinity				●									
Turbidity					●								
TSS						●	●	●	●				
Ammonium										●	●		
Nitrate							●		●	●		●	
Nitrite							●		●				
Potassium										●	●		
Chloride*										●	●		
COD (chemical oxygen demand)								●	●				
TOC (total organic carbon)								●	●				
BOD (biochemical oxygen demand)								●	●				
DOC (dissolved organic carbon share of TOC)								●	●				
SAC (spectral absorption coefficient)								●	●				
Interface (Sludge) Level Measurement**													●

*Chloride is used as compensation only and is not a visible parameter on the IQSN system.
Please contact us for more information.

IQ Sensor Net System 2020XT

Customizable configuration, to fit all applications.

Display Unit/Controller

Display unit/Controller

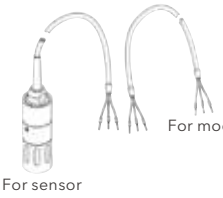
- Displays up to 8 parameter simultaneously

MIQ Module

Module

- Power supply
- Analog output / input
- Interface
- System expansion
- Control (Max 3 modules)

Cable

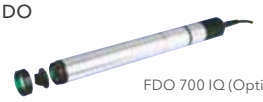


Cable 2

- Low-voltage installation (IQ system is 24 V)
- Cable lengths up to 1 km

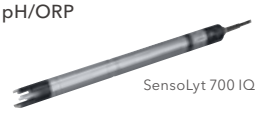
Sensors

DO


FDO 700 IQ (Optical)


TriOxmatic 700 IQ (Membrane)

pH/ORP


SensoLyt 700 IQ

Conductivity


TetraCon 700 IQ

Ammonia/Nitrate


VARiON Plus 700 IQ

Ammonia


AmmoLyt Plus 700 IQ

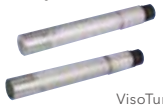
Nitrate


NitraLyt Plus 700 IQ

UV Sensor

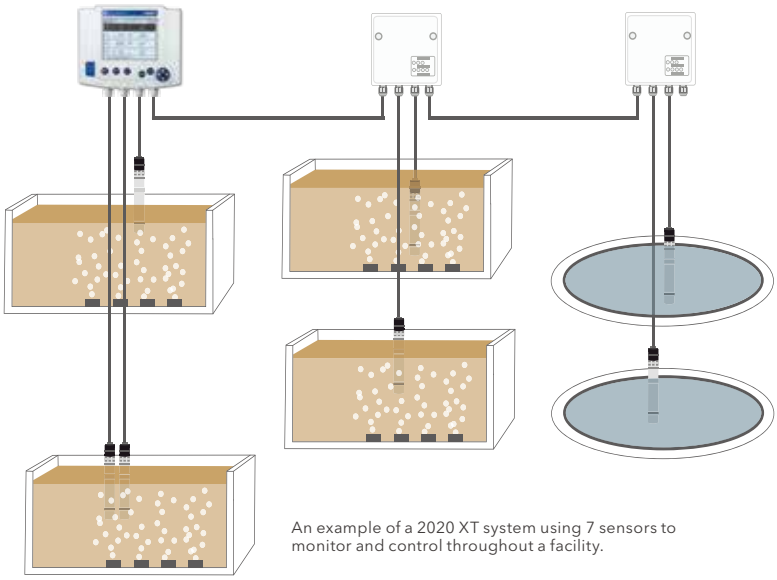

CarboVis 700 IQ
NitraVis 700 IQ
NicaVis 700 IQ
NicaVis 700 IQ NI
UV 700 IQ SAC
UV 700 IQ NOx

Turbidity/SS

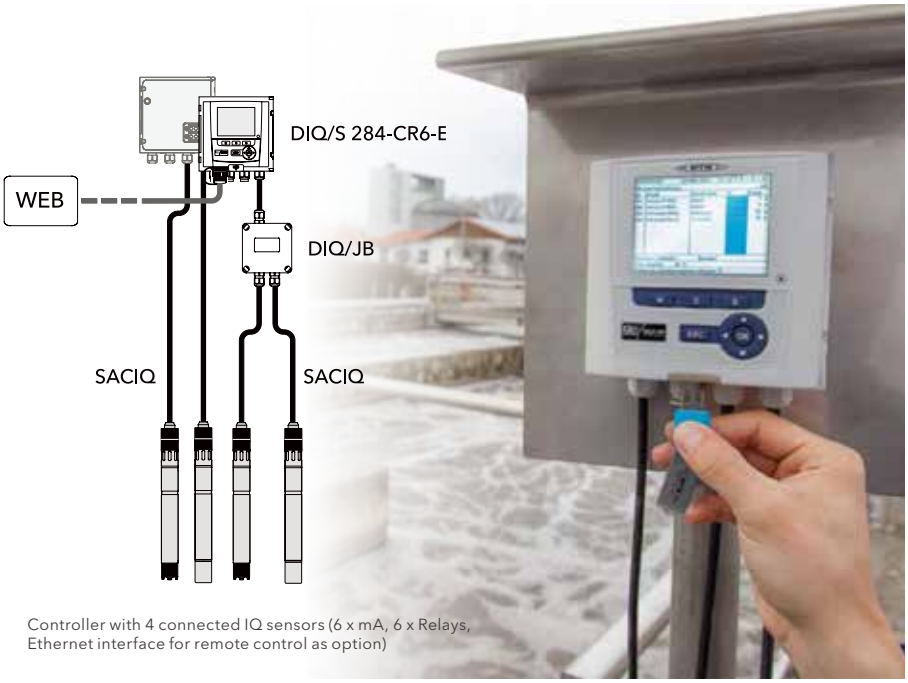

VisoTurb 700 IQ
ViSolid 700 IQ

Sludge Level


IFL 700 IQ



An example of a 2020 XT system using 7 sensors to monitor and control throughout a facility.



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

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

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.

Features

- Safe and easy – multi-functional USB interface for extremely fast data exchange and software updates
- A solution for every application - up to 20 sensors can be connected, all IQ parameters are measurable
- Flexible and ready for the future – the IQ Sensor Net can be expanded as needed thanks to its modular construction

Connectable sensors
up to 20 sensors
Power output and relay
up to 48 x 0(4) … 20 mA and relay (total)
Field bus communication
PROFIBUS-DP, MODBUS RTU, Ethernet/IP, MODBUS TCP
USB interface
for software updates and data backup
Data memory
up to 526.600 data sets
BackUp controller function
Yes
Integrated lightning protection
Yes
EMC protection
Yes

MIQ/MC3 IQ Sensor Net

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

The field busses PROFIBUS DP and Modbus RTU (connected via RS485 interface), PROFINET, EtherNet/IP and Modbus TCP (connected via LAN) ensure a reliable and direct data transfer to the PLC.

Features

- The integrated LAN interface allows the simplest network and internet connection (integrated web server) and remote access
- Connection to the PLC made easy with our profibus DP and MODBUS RTU versions
- Quick software updates and data backup via the standard USB interface

Connectable sensors
up to 20 sensors
Power output and relay
up to 48 x 0(4) … 20 mA and relay (total)
Field bus communication
PROFIBUS-DP, MODBUS RTU, Ethernet/IP, MODBUS TCP, PROFINET
USB interface
for software updates and data backup
Data memory
up to 525.600 data sets
BackUp controller function
Yes
Integrated lightning protection
Yes
EMC protection
Yes

Terminal/controller DIQ/S 282/284 IQ Sensor Net

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

Features

- All parameters available (O2, NH4, NO3, COD, PO4, sludge level, …)
- USB-interface and internal data logger by default
- Convenient and available anytime via Ethernet-interface

Connectable sensors
for DIQ/S 282: 2 for DIQ/S 284: 4
Measurable parameters
6
USB interface
as standard
Internal data logger
as standard
Dimensions
144(W) x 144(H) x 125 (D) mm for CR6(-E): depth 173 mm
Relays
up to 6 (depending on version and expandable with modules)
Analog outputs
up to 6 (depending on version and expandable with modules)
Fieldbusses
optional: PROFIBUS-DP or Modbus (both via RS 485) or Ethernet/IP, Modbus TCP and PROFINET (via RJ 45)
Max. cable length
250 m

Terminal/controller DIQ/S 181 IQ Sensor Net

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

Features

- Low-cost alternative to analog measuring points
- Matching digital IQ fixed cable sensors for pH/ORP, conductivity, O2 and turbidity
- Stable, robust and proven measuring technology

Version
DIQ/S 181(/24V)
Connectable sensors
1 IQ fixed cable sensor
Power outputs and relays
2x (0) 4–20 mA 3x relays
Parameters
pH/ORP, conductivity, O2, turbidity, temperature
Sensor cable length
10 m
Max. cable length
250 m (DIQ/JB and SNCIQ required sold by the meter)
Power supply
Wide range power supply (100-240 VAC) or 24 V
Connectable modules
DIQ/CHV (Cleaning Head Valve)

MIQ Modules for Outputs, Inputs and Communication IQ Sensor Net

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

Features

- 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 lightning protection ensures high operational safety in any weather

Power supply
Directly via IQ Sensor Net
Housing
Polycarbonate with 20 % glass fibre, protection class IP 66
Dimensions
144(W) x 144(H) x (D)52 mm
Cable screw connections
4 cable screw connections M16 x 1,5
IQSN connections
2
Digital outputs
MIQ/2-PR: PROFIBUS-DP MIQ/2-MOD: MODBUS RTU
Analog outputs
MIQ/C6: 6 x 0(4) … 20 mA MIQ/R6: 6 x relays MIQ/CR3: 3 x 0(4) … 20 mA, 3 x Relay
Inputs
MIQ/IC2: 2 x 0(4) … 20 mA

MIQ Modules for System Expansion IQ Sensor Net

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

Features

- Simple system expansion - removal possible from any location
- The two-wire technology or stacking technique makes the installation extremely easy
- The integrated lightning protection ensure high operational safety in any weather

Power supply
directly via IQ SENSOR NET
Housing
Polycarbonate with 20 % glass fiber, protection class IP 66
Dimensions
144(W) x 144(H) x 52(D) mm
Cable screw connections
4 cable screw connections M16 x 1,5
Ambient conditions
Operating temperature: –20 °C … +55 °C Storage temperature: –25 °C … +65 °C
IQSN connections
MIQ/JB (R): 4 MIQ/WL PS: 3
Radio transmission MIQ/WL PS
Frequency: 2.4 GHz ISm-Band Distance: max. module distance 100 m

MIQ Modules for Power Supply IQ Sensor Net

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.

Features

- 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 lightning protection ensures high operational safety in any weather

Power supply	
	Directly via IQ Sensor Net
Housing	
	Polycarbonate with 20 % glass fibre, protection class IP 66
Dimensions	
	144(W) x 144(H) x 52(D) mm
Cable screw connections	
	4 cable screw connections M16 x 1,5
Ambient conditions	
	Operating temperature: –20 °C … +55 °C Storage temperature: –25 °C … +65 °C
IQSN connections	
	3
Power output	
	18 W

Other MIQ-Module IQ Sensor Net

Whether you need compressed air cleaning for sensors or ground cable terminal strips - the modules IQ Sensor Net make this possible, simple installatoin included.

Features

- Simple function expansion - compressed air cleaning is quick and uncomplicated to install
- Simple system expansion – cable extension of ground cables made easy
- Easy mounting - the modular design saves money, time and work

Power supply	
	Directly via IQ Sensor Net
Housing	
	Polycarbonate with 20 % glass fibre, protection class IP 66
Dimensions	
	144(W) x 144(H) x 52(D) mm
Cable screw connections	
	2 cable screw connections M16 x 1,5
Ambient conditions	
	Operating temperature: –20 °C … +55 °C Storage temperature: –25 °C … +65 °C
IQSN connections	
	2
Required air quality	
	Dry, free of dust and oil
Operating pressure	
	5 bar
Connections	
	6 mm hose nozzles

DIQ Modules IQ Sensor Net

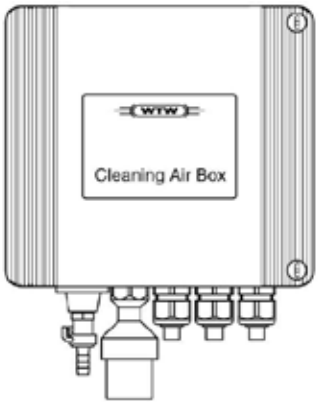
Modules for the flexible expansion of digital IQ Sensor Net systems 181 and 282/284 by additional measuring points or functions - compact design.

Features

- The simple installation - connection and mounting are carried out with terminal boxes and screws
- The flexible system expansion allows you to upgrade at a later date
- Its compact design make it space and cost saving

Power supply	
	Directly via IQ Sensor Net
Housing	
	Polystyrol, protection class IP 66
Dimensions	
	94(W) x 94(H) x 57(D) mm
Cable screw connections	
	DIQ/JB: 4 cable screw connections M16 x 1.5 DIQ/CHV: 2 cable screw connections M16 x 1.5
Ambient conditions	
	Operating temperatures: –20 °C … +55 °C Storage temperature: –25 °C … +65 °C
IQSN connections	
	DIQ/JB: 4
Required air quality	
	DIQ/CHV: Dry, free of dust and oil
Operating pressure	
	DIQ/CHV: 5 bar
Connections	
	DIQ/CHV: 6 mm hose nozzles

Cleaning Systems IQ Sensor Net



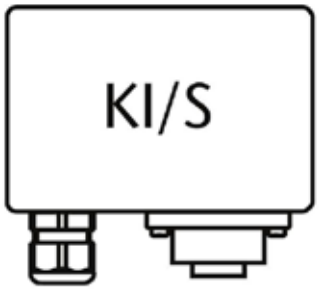
Optional air pressure cleaning for IQ Sensor Net sensors. For heavy pollution. For systems with and without their own compressed air supply.

Features

- Easy installation
- Reliable cleaning
- Saves time and cost

Model	Description
DIQ/CHV	Dual IQ/Cleaning Head Valve, for the automatic, relay-controlled compressed air cleaning in the system 282/284
MIQ/CHV PLUS	Module IQ/Cleaning Head Valve, for the automatic relay-controlled or IQ SENSOR NET controlled compressed air cleaning in the system 282/284, 2020
Cleaning Air Box - 230 VAC	Air pressure compressor to supply cleaning air for different sensors. Power supply 230 VAC. Activation via relay.
Cleaning Air Box - 115 VAC	Air pressure compressor to supply cleaning air for different sensors. Power supply 115 VAC. Activation via relay.
CH	Cleaning head for online sensors with a diameter of 40 mm, delivery includes 15 m compressed air hose

Terminal Boxes and Connecting Cables IQ Sensor Net



Terminal boxes and cables for analog pH/ORP, conductivity or oxygen measurements for cable extension or to connect to the IQ Sensor Net.

Features

- Flexible via connection of analog sensors to the IQ Sensor Net
- Safe measured value transfer also for longer distances
- Simple mounting thanks to the clamping of open cable ends

Model	Description
K 5 S	Coaxial electrode plug, 5 m coaxial cable, S plug (extension cable)
KI/pH-MIQ/S	Active terminal box for the connection of high ohm plug head pH/ORP measuring chains to MIQ measuring systems. Plug/cable combination AS7/S as well as temperature sensor TFK 325/150 required.
KI/LF-0.9/MIQ	Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.917 cm-1.
KI/LF-0.7/MIQ	Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.778 cm-1. To connect lab measuring cells you will need an adapter (303212 ADA/AMPH LAB LF).
KI/LF-0,4/MIQ	Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ meauring sytems and a cell constant of 0.475 cm-1. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).
KI/LF-0.1/MIQ	Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ meauring sytems and a cell constant of 0.04 in-1. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).
KI/LF-0.01/MIQ	Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ meauring sytems and a cell constant of 0.00 in-1. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).
SNCIQ	Special two-pin IQ Sensor Net Cable with shield for safe energy and data transfer within the IQ Sensor Net system. Indicate length in m when ordering.

Connection Cables for IQ Sensors IQ Sensor Net

SACIQ connecting cable, a cable for all sensors. For data transfer and power supply. In combination with sensor waterproof up to 100m.

Features

- One cable for data transfer and power supply
- One connector for all sensors
- Available as regular or sea water edition

Temperature range	
	-35 °C ... + 80 °C
Pressure range	
	106 Pa (10 bar) (cable connected to sensor)
Cable lengths	
	1.5 m, 7 m, 15 m, 20 m, 25 m, 50 m, 75 m, 100 m, special lengths
Material connector	
	Normal model: Stainless steel 1.4571, POM Sea water Model: Titanium Grade 2, POM

Online Digital Electro-chemical Oxygen Sensors TriOxmatic 700IQ

In the analog sensors of the TriOxmatic® series, you will find the ideal solution for your application. In addition to the continuous measuring accuracy, the sensors are equipped with an automatic self diagnosis system, a shorter response time and different cable lengths as options.

Model	700IQ(SW) Seawater	701IQ	702IQ
Measurement range	DO Con: 0.0~60.0 mg/L Saturation: 0~600 %	DO Con: 0.00~20.00 mg/L; 0.0~60.0 mg/L Saturation: 0.0~200.0 %; 0~600 %	DO Con: 0~2,000 µg/L; 0.00~10.00 mg/L Saturation: 0~110 %
Weight & dimensions	700IQ: 360(L) × 40(Ø) mm Approx 660g 700IQ(SW): 360(L) × 59.5(Ø) mm Approx 1,170g	/	/

IQ Digital SENSOR NET XT
Converter (P36) required separately

Online Digital IQ Sensors for Dissolved Oxygen FDO 700IQ

Standard Model

Seawater Model

FDO® sensors are the perfect solution for measuring dissolved oxygen. In addition to being free of calibration and flow, with their 45° membrane, they are also insensitive to air bubbles. Therefore, you will not require any additional installation equipment. The robust design of this sensors allows the use with an overpressure of up to 10 bar. The special membrane has a unique stability and thus ensures stable measured values.

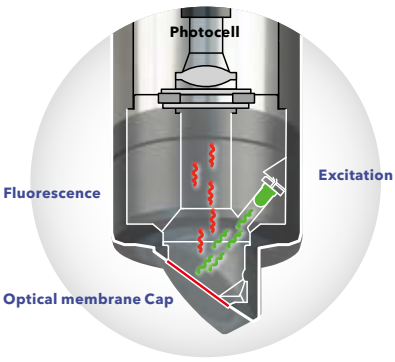
Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ Sensor Net to regulate biological cleaning steps.

FDO 700IQ
FDO 700IQ SW
FDO 701IQ
FDO 701IQ SW

The sea water model (FDO® 700 IQ SW) is optimized for use in special media: All wetted parts are made of titanium and plastic and are therefore extremely resistant to corrosion.

IQ Digital SENSOR NET XT
Converter (P36) required separately

Measurement range (25C)
DO : 0~20.00 mg/L, Saturation : 0~200.0 %
Accuracy
±0.05 mg/L (1 mg/L) ±0.1 mg/L (1 mg/L)
Power supply
Max DC24 V (Supplied via controller)
Weight & dimensions
340(L) × 40(Ø) mm; not incl cable Approx 900g



Optical technology

Online pH/ORP Sensor SensoLyt 700 IQ

SensoLyt®700 IQ – digital pH/ORP armature with integrated preamplifier and temperature sensor as well as lightning protection to be connected to IQ Sensor Net.

By storing calibration values within the sensor, a "pre-calibrated pH-measurement" can be generated. Due to our quick-lock, the sensor can be disconnected and - after laboratory calibration - re-connected at the site easily. Inconvenient calibrations in the field under adverse conditions can be completely eliminated if there is an IQ connection in the lab.

IQ Digital SENSOR NET XT

Converter (P36) required separately

Sensor	
SensoLyt 700IQ	
Material	
SUS 316Ti	
Weight & dimensions	
508(L) × 40(Ø) mm, Approx 970g	
Electrodes	
SEA	Measurement range: pH 2~12 Temperature: 0~60 °C
SEA-HP	Measurement range: pH 4~12 Temperature: 0~60 °C
DWA	Measurement range: pH 0~14 Temperature: 0~60 °C
ECA	Measurement range: pH 2~12 Temperature: 0~60 °C
PtA	Measurement range: ±2,000 mV Temperature: 0~60 °C

Online Conductivity Sensor TetraCon 700 IQ

TetraCon® 700 IQ – digital 4 electrode conductivity measuring cell with flow-free operation, especially with high conductivity This measuring technique has proven itself over the years and offers an interference-free operation, also and foremost at high conductivity values. The 4-electrode measuring cell is very insensitive to contamination. Based on the pressure resistance of up to 10 bars, there is nothing to stop you from mounting into pipes or on lines.

The sea water model includes the sensor for use in special media: All wetted parts are made of titanium and plastic and are therefore extremely resistant to corrosion.

IQ Digital SENSOR NET XT

Converter (P36) required separately

Measurement range	
0.00~20.00 µS/cm	0.0~200.0 µS/cm
0.000~2.000 mS/cm	0.00~20.00 mS/cm
0.0~200.0 mS/cm	0~500 mS/cm
Material	
SUS316Ti (IP68)	
Weight & dimensions	
357(L) × 40(Ø) mm, 660g	

Online Turbidity/TSS Sensor VisoTurb 700 IQ/ViSolid 700 IQ

VisoTurb®: Optical turbidity sensors according to nephelometric principle according to DIN EN 27027 and ISO 7027 for the in-situ use in water/wastewater with ultrasonic cleaning system.

Model	VisoTurb	ViSolid
Measuring procedure	Nephelometric procedure	Nephelometric procedure
Measurement range	NTU : 0.05~4,000NTU SiO_2 : 0.1~4,00 mg/LSiO_2 TSS : 0.0001~400 g/L TSS	SiO_2 : 0.01~300g/L SiO_2 ; 0.001~30 % SiO_2 TSS : 0.003~1,000g/L TSS ; 0.0003~100 % TSS
Dimensions	365(L) × 40(Ø) mm	365(L) × 40(Ø) mm
Weight	Approx 990g	Approx 970g

IQ Digital SENSOR NET XT

Converter (P36) Required separately

Online Ion Selective Ammonium and Nitrate Sensor

Ammonium/Nitrate Sensor

VARiON Plus 700IQ

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

Measurement

Ion Electrodes

Measurement range

Ammonia
NH_4-N : 0.1~100.0 mg/L; 1~2,000 mg/L
NH_4+ : 0.1~129.0 mg/L; 1~2,580 mg/L
K+ : 1~1,000 mg/L (Compensation ranges)

Nitrate
NO_3-N : 0.1~100.0 mg/L; 1~1,000 mg/L
NO_3– : 0.5~450.0 mg/L; 5~4,500 mg/L
Cl– : 1~1,000 mg/L (Compensation ranges)

Accuracy

Meas value ±5 % or ±0.2mg / L whichever is larger

pH points

Ammonium: pH4~8.5, Nitrate: pH4~11

Weight & dimensions

392(L) × 40(Ø) mm
Approx 670g (electrodes only)

Ammonium Sensor

AmmoLyt Plus 700IQ

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

Weight & dimensions

Ion Electrodes

Measurement range

NH_4-N : 0.1~100.0 mg/L; 1~2,000 mg/L
NH_4+ : 0.1~129.0 mg/L; 1~2,580 mg/L
K+ : 1~1,000 mg/L (Compensation ranges)

Accuracy

Meas value ±5 % or ±0.2mg / L whichever is larger

pH points

pH4~8.5

Weight & dimensions

392(L) × 40(Ø) mm
Approx 670g (electrodes only)

Nitrate Sensor

NitraLyt Plus 700IQ

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

Measurement

Ion Electrodes

Measurement range

NNO_3-N : 0.1~100.0 mg/L; 1~1,000 mg/L
NO_3– : 0.5~450.0 mg/L; 5~4,500 mg/L
Cl– : 1~1,000 mg/L (Compensation ranges)

Accuracy

Meas value ±5 % or ±0.2 mg/L whichever is larger

pH points

pH4~11

Weight & dimensions

392(L) × 40(Ø) mm
Approx 670g (electrodes only)

Online Optical Nitrate/Nitrite Sensors

NitraVis 700IQ / NiCaVis 700IQ / NiCaVis 700IQ NI

Spectral measurement of nitrate and suspended solids content without chemicals for all applications needing an accurate nitrate measurement.

The integrated WTW ultrasonic cleaning prevents the attachment of deposits from the very beginning. This ensures comparable and reliable measured values in continuous operation.

IQ Digital SENSOR NET XT
Converter (P36) required separately

UV 700IQI
With the new sensor UV 700 IQ NOx, nitrate is detected via a UV absorption measurement at a wavelength below 250 nm. Turbidity influences are effectively compensated by a reference measurement. This cost-effective probe is especially suited to regulate or control intermittent aeration. Another field of application is the detection of nitrate in rivers.

Item	Optical Spectral					NOx Optical Single Wavelength	
Model	NitraVis 701IQ	NitraVis 705IQ	NiCaVis 705IQ	NiCaVis 701IQ NI	NiCaVis 705IQ NI	UV 701IQ NOx	UV 705IQ NOx
Measurement	Spectral measurement in the UV-VIS range of 200~720 nm					UV absorption measurement	
Measurement range	NO_3-N: 0.01~60.00 mg/L	NO_3-N: 0.01~50.00 mg/L	COD: 0.1~800.0 mg/L TOC: 0.1~500.0 mg/L SAC: 0.1~600.0 m^{-1} NO_3-N: 0.01~50.00 mg/L	COD: 1~12,500 mg/L TOC: 1~20,000 mg/L SAC: 1~5,000 m^{-1} NO_3-N: 0.01~60.00 mg/L NO_2-N: 0.01~30.00 mg/L	COD: 0.1~800 mg/L TOC: 0.1~500 mg/L SAC: 0.1~600 m^{-1} NO_3-N: 0.01~50.00 mg/L NO_2-N: 0.01~25.00 mg/L	NOx-N (Nitrate+Nitrite): 0.1~100.0 mg/L	NOx-N (Nitrate+Nitrite): 0.1~20.0 mg/L
pH range	pH 4~12						
Weight & dimensions	774(L) × 60(Ø) mm, Approx 3.8kg (sensor only), Approx 4.8kg (sensor only)						

Online Optical UV VIS Spectral Sensors CarboVis 700 IQ/NiCaVis 700 IQ

CarboVis® 700 IQ : Spectral sensor with integrated ultrasonic cleaning for the chemical-free measurement of the organic load and suspended solids concentration.

NiCaVis® 705 IQ: Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate and carbon parameters in the wastewater treatment system drain.

The optical measuring method of these sensors allows continuous measuring of carbon and nitrogen parameters directly in the medium. With this procedure, the information of the entire spectrum is evaluated, which allows the simultaneous determination of multiple parameters. At the same time, cross sensitivities of individual parameters among each other and interference such as turbidty are eliminated.

Measurement

Spectral measurement in the UV-VIS range of (200~720 nm)

Measurement range

CarboVis 705 IQ:5 mm
COD : 0.1~800.0 mg/L
TOC : 1~500.0 mg/L
SAC : 0.1~600.0 m^{-1}

CarboVis 701 IQ: 1 mm
COD : 1~12,500 mg/L
TOC : 1~20,000 mg/L
SAC : 1~5,000 m^{-1}

NiCaVis 705 IQ: 5 mm
COD : 0.1~800.0 mg/L
TOC : 1~500.0 mg/L
SAC : 0.1~600.0 m^{-1}
NO_3-N : 0.01~50.00 mg/L

Cleaning

Maintenance-free WTW ultrasonic cleaning

IQ SENSOR NET system

282/284 and 2020

Online Optical UV sensors UV 700 IQ SAC

UV 700 IQ SAC: Low-cost probe (integrated ultrasonic cleaning, turbidity compensation) for the maintenance-free and reagent-free SAC measurement according to DIN 38404 C3.

With the new sensor UV 700 IQ SAC, you can determine the spectral absorption coefficient at 254 nm directly and without chemicals. Turbidity influences are compensated by a reference measurement at 550 nm.

Measuring method

UV absorption measurement 254 nm

Measurement range

UV 705 IQ SAC : 5 mm
AC : 0.1~600.0 m^{-1}
UVT : 0.0~100.0 %

UV 701 IQ SAC: 1 mm
CSAC : 0.5~3,000.0 m^{-1}
UVT : 0.0~100.0 %

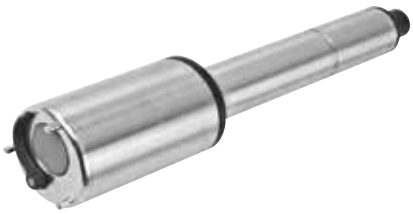
Cleaning

WTW ultrasonic cleaning

IQ SENSOR NET system

282/284 and 2020

Online Digital IQ Sensor to Determine the Sludge Level IFL700 IQ



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

Detailed echo profile presentation on the display.

Maintenance-free cleaning system.

IQ Digital SENSOR NET XT
Converter (P36) required separately

Measuring method

Ultrasound echo measurement (ultrasonic)

Measurement range

0.40~15.00 m

Weight & dimensions

442(L) x 105(Ø) mm (Max) /
IFL 700 IQ: 3.9kg, IFL 701 IQ: 3.7kg

Online Drinking Water Turbidity Meter Turb 2000 Series

The TURB 2000 Series – nephelometric turbidity meter with large measuring range, with integrated bubble trap and white light according to US EPA 180.1 The nephelometric turbidity meter TURB 2000 can be used for nearly all applications thanks to its large measuring range. By using white light and the respective standards, the meter meets all requirements of the US EPA 180.1 as well as those of the EN ISO 7027.

Model	2000/2020 Model	2100/2120 Model
Measuring range	0 … 1000 NTU	
Resolution	Selectable up to 0.0001	
Measurement range	0~1,000NTU / 0.0001NTU	
Accuracy	700~2,000 nm/min in 1, 2, 5, 10 nm steps	
Power supply	5,000 measurements, 40 MB for spectrums and kinetics	
Weight	Approx 2.5kg	

Drinking Water Analyzer Chlorine 3000

Chlorine 3000 - photometric analyzer with large measuring range and high resolutions for free and total chlorine with DPD method according to US EPA.

Method	
DPD	
Measurement range	
0~10.00 mg/L	
Resolution	
0.01 mg/L	
Accuracy	
±0.03 mg/L or 5 % (up to 6 mg/L), (higher value)	
Sample flow rate	
0.2 L/min	
Power supply	
AC100~240 V, 47~63 Hz, 150 VA	
Weight & dimensions	
326(W) × 129(D) × 311(H) mm, 2.5kg	

Process Chlorine electrodes CL/CS/CP series

The special construction of the ProcessLine electrodes brings them very close to the optimum for liquid electrolyte electrodes with respect to their accuracy, stability, rapid response and long working life. The Chlorine electrodes cover a wide array of applications including drinkig water, procees and swimming pool both recrecrational and commercial.

Model	CL	CS	CP
Shaft	plastic, Ø 25 mm	plastic, stainless steel, Ø 25 mm	plastic, stainless steel, Ø 25 mm
Immersion length	120 mm	120 mm	120 mm
Measuring principle	amperometric 2-electrode system	amperometric working potentiostatic 3-electrode system	amperometric working potentiostatic 3-electrode system
Measuring range	CL4, CL4H: 0,005 ... 2 mg/l CL4N: 0,05 ... 20 mg/l	CS4, CS4H: 0,005 ... 2 mg/l CS4N: 0,05 ... 20 mgl/l	CP2, CP2H: 0,005 ... 2 mg/l CP2N: 0,05 ... 20 mgl/l
pH range	pH 6 ... 8	pH 4 ... 12	pH 4 ... 12
pH dependency	in correlation with the dissociation curve of HOCl; pH 7.2 ... 7.4 recommended	about 10 % slope reduction per pH unit	about 10 % slope reduction per pH unit
Flow rate	30 l/h recommended	30 l/h recommended	30 l/h recommended
Temperature range	0 ... 45 °C (temperature compensated)	0 ... 45 °C (temperature compensated)	0 ... 45 °C (temperature compensated)
Pressure	< 1 bar	< 0.5 bar	< 0.5 bar
Application	swimming pools, drinking water, sea and process water	swimming pools, drinking and process water	swimming pools, drinking and process water
Electrical connection	CL4: 4 ... 20 mA, 2-wire connection	CS4: 4 ... 20 mA, 2-wire connection	CP2: 4 ... 20 mA, 2-wire connection

Online Single and Multi-parameter Measuring Systems TresCon

The TresCon® analyzer system is the perfect solution for highly precise online measurement of NH_4, NO_3, NO_2, SAC, PO_4 and Ptot. With the TresCon multi-parameter analyzer, up to 3 measuring parameters can be detected.

Temperature

0~40 °C

Power Supply

230VAC±10 % 50 Hz
115VAC±10 % 50~60 Hz

Weight & Dimensions

845(W) × 245(D) × 952(H) mm, Approx 27 kg
(analysis module not included)

Measurement range		
	mg/L	µmol/L
NO_3-N	0.1~60	0~4,000
NO_3	0.1~250	0~4,000
SAC	0.1~200 m^{-1}	

Analyzer/module for ammonium TresCon OA110

Measurement

Gas-sensitive NH_3 electrode

Measurement range 1		
	mg/L	mmol/L
NH_4-N	0.1~1000	0.01~71.00
NH_4	0.1~1280	0.01~71.00
Measurement range 2		
	mg/L	mmol/L
NH_4-N	0.05~10	0.005~0.71
NH_4	0.05~12.8	0.005~0.71

Analyzer for Nitrate/SAC TresCon ON210 / OS210

Measurement

4-beam photometer

Measurement range 1		
	mg/L	µmol/L
NO_3-N	0.1~60	0~4,000
NO_3	0.1~250	0~4,000
SAC	0.1~200 m^{-1}	

Analyzer/module for Total Phosphorus TresCon ON510

Measurement

???? (Diazotization)

Measurement range 1		
	mg/L	mmol/L
NO_2-N	0.005~1.200	0.40~90
NO_2	0.020~4.000	0.40~90

WTW Analyzer TresCon® analyzer/ module for orthophosphate

Analyzer/module for Orthophosphate TresCon OP210

Measurement

Phosphate

Measurement range 1		
	mg/L	µmol/L
PO_4-P	0.05~3.00	1.5~100
PO_4	0.15~9.00	1.5~100
Measurement range 2		
	mg/L	µmol/L
PO_4-P	0.1~10.0	3~320
PO_4	0.3~30.0	3~320
Measurement range 3		
	mg/L	µmol/L
PO_4-P	0.1~25.0	3~800
PO_4	0.3~80.0	3~800

Online Orthophosphate Analyzer P700 IQ

Controller 2020XT

The P 700 IQ orthophosphate analyzer is another component for the IQ Sensor Net (System 2020 XT). It can be integrated into new and existing systems just as easily as a sensor. The measuring principle is based on the photometric yellow method (molybdate vanadate), which has been a proven measuring method for orthophosphate.

Measurement

Measuring range A: 0.05 … 15.00 mg/L PO_4-P
Measuring range B: 1…50 mg/L PO_4-P

Measurement range

A: 0.05~15.00 mg/L PO_4-P
B: 1~50 mg/L PO_4-P

Weight & dimensions

825(H) x 686(W) x 438(D) mm
Approx 30kg

Sample Preparation System PurCon

The perfect online sample preparation - continuous, safe, low-maintenance. Yields samples free of suspended solids and bacteria.

Permeat performance levels

Max. 3.6 l/h, adjustable in 4 steps

Sample extraction

Approx 400~1,500 L/hw

Weight & dimensions

575(W) × 220(D) × 735(H) mm
Approx 36kg

Expert Level Measurement

Hydrostatic Water Level Measurement

Expert™ Hydrostatic Submergible Level Transmitters are developed to deliver stable and exact level measurement even in very harsh environments. Expert™ works flawlessly with a minimum of maintenance.

Features

- Designed in enforced housing material
- Extremely wide measuring range from 0 to 300 m
- The transmitters are delivered with a predefined but re-programmable measuring range
- Easy installation
- PUR insulation and constructed for 1,000kg tensile strength

Model	Expert 700	Expert 7070	Expert 7070T	Expert 1400	Expert 7060	Expert 3400
Application	Water Wells	Water Wells and Water Storage and Processing	Water Wells and Water Storage and Processing	Water Wells and Water Storage and Processing	Wastewater and process water	Drinking, waste and process water
Body	AISI 316L	AISI 316L	AISI 316L	AISI 316	PP	PPS
Diaphragm	AISI 316L	AISI 316L	AISI 316L	Ceramic	AISI 316	Ceramic
Features	Outer diameter Ø 16 mm	Outer diameter Ø 22 mm	Outer diameter Ø 22 mm	Outer diameter Ø 22 mm	Outer diameter Ø 60 mm	Outer diameter Ø 50 mm
Output	Analog 4-20 mA	Analog 4-20 mA, voltage or Modbus	Analog 4-20 mA, Voltage or Modbus	Analog 4-20 mA	Analog 4-20 mA, voltage or Modbus	Analog 4-20 mA

Shuttle®

Ultrasonic Level Transmitters

MJK's Shuttle® measures, displays, transmits and controls levels for about the same price as the competitors' stripped-down transmitters, plus you get the high quality product you expect from MJK. With MJK's cabled sensor it is easy to locate the display, where it can be useful, and the large display allows viewing from a distance. It has a one-step measurement start-up procedure that is easy to follow and easy to modify set-up of all functions, controls and signal management features. The advanced on-board software ensures accurate and reliable operation even in difficult applications.

Features

- Tanks in storm flow installations
- Lift stations
- Tanks at sewage plants
- Tanks in drinking water facilities
- Tanks and basins in process and food industries
- Sludge containers
- Many types of solids levels
- Level measurement in open channels, flumes and weirs

Range
In liquids: 0~10 cm to 0~25 m / 0~4 in. to 0~80 ft. In solids: 0~4 m to 0~10 m / 0~4 in. to 32 ft.
Frequency
30 kHz, 40 kHz or 50 kHz
Temperature range
-20 to +60 °C / -4 °F to +140 °F
Temperature compensation
Built-in -20 to +60 °C / -4° to +140 °F
Spread
3°, 6° or 7°
Material
Depends on the sensor model
Enclosure
IP 68 / NEMA 6P (submersible to 10 m / 30 ft. of water)
Max. cable length
250 m

MagFlux® Electromagnetic Flow Meter

MagFlux Electromagnetic Flow Meters deliver very stable and accurate flow measurements in any conductive liquid in a pressurized closed pipe system. MagFlux Flow Meters have no moving parts and have no hydraulic influence on the flow in the pipe system.

The measurement method used is very accurate over a wide measurement range. We have developed an outstanding sensor measuring method for MagFlux. An individual sensor calibration code adapts the converter automatically to communicate with the sensor. The calibration code includes calibration data, nominal diameter and sensor features. Once the calibration code is entered, the MagFlux Flow Meter is ready to operate. The calibration code means there is no need to make difficult adjustments in the field.

Model		Sensor 7100	Sensor 7200
Application		Process fluids	Wastewater, Process fluids
Sizes	Min.	DN15	DN20
	Max.	DN1000	DN1400
Precision (≥0.2m/s)		0.25 %	0.25 %
Fluid flow speed		0.2~10 m/s (0.6~30 ft./s)	0.2~10 m/s (0.6~30 ft./s)
Flange	EN	EN-1092-1	EN-1092-1
	ANSI	B 16.5	B 16.5
	AWWA	C207-01	C207-01
	AS	2129-2000, 4087-2004	2129-2000, 4087-2004
Liner		PTFE	Hard rubber
Housing		Epoxy painted steel	Epoxy painted steel
Electrodes		1.4571 /AISI 316 Ti	1.4571 /AISI 316 Ti
Enclosure rating		IP67 / 68	IP67 / 68
Reversible flow direction		•	•
Build-in liquid earth electrode 3)		•	•

MagFlux® Q Electromagnetic Flow Meter

MagFlux® Q Electromagnetic Flow Meter, created in ABS plastic, designed with an optimized construction which secures optimal performance. MagFlux® Q provides you very stable and highly accurate flow measurements in conductive liquids, especially at low fl ow velocity.

MagFlux® Flow Sensors are available in the sizes DN 50, DN80, DN 100 and DN150 with standard construction lengths and EN flanges.
MagFlux® Flow Meters can be installed either with the converter compact mounted on.

Model		Sensor 7100
Application		potable water; waste water and process fl uids, aquaculture,
Sizes	Min.	DN50
	Max.	DN150
Precision (≥0.2m/s)		Better than ± 0,25 % @ 0,25-8 m/s
Fluid flow speed		0.2~10 m/s (0.6~30 ft./s)
Flange	EN	EN-1092-1
Liner		ABS
Housing		ABS
Electrodes		Hastelloy C
Enclosure rating		IIP 67, NEMA 4, Standard IP 68, NEMA 6P (10m Wc, using the Gel potting kit 579035) - Remote Converter
Reversible flow direction		•
Build-in liquid earth electrode 3)		•

WTW ProSample Automated Sampler

Portable Samplers

The ProSample series of fully automated portable samplers is an extension of YSI's process monitoring and control equipment offering for wastewater, surface water and industrial treatment markets. They assist with regulatory compliance and process optimization in various stages through these processes.

Lightweight and easy to use, the samplers come with a proprietary peristaltic pump for highly accurate sampling based on time, flow or weather event. Once an event occurs, or during normal operation, the log data is easily extracted from the sampler via a USB and can be taken to a PC for further evaluation. The ProSample series provides a unique combination of userfriendly design and unmatched technology.

Features

- Robust PE, double-walled, insulated housing for temperature control
- Easy tube replacement for minimal downtime
- Spring-loaded roller bearings in peristaltic pump providing longer tubing life, up to 20 % longer than competition
- Highly accurate sample volume using two captive sensors in the peristaltic pump for volume control
- User-friendly, simple programming and calibration from sampler or PC
- Long battery life - up to 550 samples per battery charge
- Data recovery via USB and does not require direct transfer to a laptop
- Non-volatile data memory for up to 5 years, so you never have to worry about loosing your data if power is lost
- "Mini" PM option has smaller footprint

Applications

- Stormwater
- Wastewater treatment (municipal and industrial)
- Pre-sedimentation
- Post-sedimentation
- Industrial pre-treatment

ProSample Technical Specifications

Sampling method peristaltic pump	20~10,000 mL (flow proportional)
Accuracy	Single sample volume accuracy on peristaltic pump is +5 % or +5 mL
Suction height	Maximum 6.5 m (21.33 ft) at 1,013 h Pa
Pumping speed	>0.5 m/s (1.64 ft/s) at suction height up to 5 m (16.4 ft) at 1,013 Pa; pump capacity can be adjusted electronically
Calibration	Automatic (adjustable) or manual
Material (housing)	PE (polyethylene)
Material (tubing)	PVC, L =5 m (16.4 ft), ID=10 mm (0.39 in) maximum, hose length = 30 m (98.43 ft)
Dimensions (D x H)	P = 500 x 740 mm (19.8 x 29.1 in) PM = 400 x 650 mm (15.74 x 23.82 in)
Weight	P= 15kg (33 lbs) PM = 9kg (19.8 lbs)
Measuring interval	Range A: 5 minutes (adjustable) or greater; Range B: 10 minutes or greater
Communications	Mini-USB, RS232, Connection via USB and PC (YSIConnect must be installed on PC)

Memory	Up to 3,000 entries, non-volatile data memory for up to 5 years
Data log	Stores sampling and malfunction data, bottle changes, messages, external signals
Signal inputs	Analog: (2) 4-20 mA
Digital	(8) Flow, event, 1 input can be programmed independently
Operating temperature	0 to 50 °C (32 to 122 °F)
Sample temperature	0 to 40 °C (32 to 104 °F)
Power supply	12 V/ 7.2 Ah lead storage battery (maintenance free, leak proof) 115V or 230V operation by means of battery charger in buffer mode
Certifications, standards	CE sampling according to ISO 5667-10, EN 16479
Programming	12 user-defined selectable programs
Keypad	Graphic display (128 x 64 pixels), back lit
Climate control	Insulated sample compartment - insulation thickness of 20 mm (0.78 in)

FSS – Sampling System Portable Sample

Global Water

FSS Sampling System

A unique water monitoring package that includes an easy to use lightweight composite/discrete water sampler, an open channel flow monitor and dual displays and outputs with a data recorder that is both Windows™ and Windows™ CE compatible. System has over 20 pre-programmed flume and weir tables for ease of use and flexibility. The peristaltic pump prevents sample contamination. The FSS is portable and can easily be set up to take samples based on flow rates such as a stream monitoring application.

Accessories & Parts

DA0000
Water Temperature Sensor
DB0000
pH Sensor
DFH000
Turbidity Sensor
DCC500
Conductivity Sensor
DD0500
Optical D.O., 25 ft cable

WS701R – Refridgerated Sampling Systems Portable Sample

Global Water

WS701R

This economical refrigerated Sampler allows you to take individual time-weighted composite samples or full-bottle discrete grab samples in the supplied 2 gallon polyethylene sample bottle. Sample size control allows individual time-weighted samples or full-bottle discrete samples. Sample interval control allows you to set the time between individual composite samples or enable the external trigger mode. Start delay timer allows multiple units to be set for concurrent sampling or to delay the start of sampling after an event for a more representative sample.

Features

- Easy transport-quick disconnect pickup hose conveniently stored inside the enclosure
- Durable-heavy duty wheels and retractable handle built in
- Improved battery life-enclosed battery compartment with smart battery charger
- Rugged construction for harsh environments

WQMS Water Quality Monitoring System Water Quality

Global Water

Allows you to monitor multiple water quality parameters with a fully integrated, easy to use, economical system.

System Includes:
Multichannel datalogger (7 analog channels and 2 digital channels) for data recording, four of our rugged 4-20 mA water quality sensors for measuring water temperature, pH, conductivity, and dissolved oxygen. You can select up to 3 more analog sensors and up to 2 digital sensors to monitor additional parameters.

WQMS Features

- Monitor temperature, DO, pH, conductivity, and 5 additional parameters at the same time
- High quality, rugged sensors
- Battery powered for remote locations
- User-friendly Windows™ and Windows CE-based PDA software included
- Four sample modes: timed, 10 times per second, logarithmic, and exception composite samples
- Both USB and serial communication ports
- Rugged, lockable, weather resistant enclosure

Aurora 1030C TOC Analyzer

Aurora 1030C

The Aurora 1030 TOC Analyzer combines OI Analytical's innovative concurrent sampling technique with ACT II combustion to quickly and accurately process aqueous samples. Direct connectivity of the Aurora eliminates the need for a PC in the laboratory and provides remote instrument control from anywhere on the network. A microprocessor within the Aurora regulates temperatures, controls timing sequences, performs data calculations, and provides continuous system diagnostics. The standard electronic pressure control (EPC) automatically adjusts system pressures from method to method, even within a single sequence.

Features

- Wide operational range, 50 ppb C to 30,000 ppm C
- TC/TIC/TOC/NPOC/standard measurements
- Optional analysis module for total nitrogen (TNb)
- ACT II Dual Pack Advanced Combustion Technology reactor (patent-pending) that meets or exceeds requirements of USEPA, ASTM, and Standard Methods
- Reactor design for enhanced performance, reduced maintenance, and extended reactor and catalyst life
- Totally automated system for aqueous and particulated samples

Operating principle	
High temperature (680 °C) catalytic combustion	
Scale	
100 ppb C~30,000ppm C	
Accuracy · reproducibility	
±2 % FS or 2 % relative, whichever is greater, 3.0 %	
Method compliance	
USEPA, CEN, USP, EUP, ASTM, ISO, DIN, STD Method	
Autosampler	
88 position rotary autosampler designed to fit directly underneath Aurora 1030C analyzer	
Power	
100~240 VAC, 50/60 Hz, 950 W	
Weight & dimensions	
430(W) × 460(D) × 610(H) mm 17.2kg, 36.3kg (Auto-sampler)	

Aurora 1030CW TOC Analyzer

Aurora 1030W

The Aurora 1030W TOC Analyzer processes aqueous samples for analysis of the total organic carbon (TOC), total inorganic carbon (TIC), and non-purgeable organic carbon (NPOC) content of the samples. Using heated persulfate oxidation technology, samples containing 2 ppb to 30,000 ppm of organic carbon can be analyzed. The supports Aurora 1030W USEPA-approved methods, Standard Methods, ASTM, DIN/ISO/CEN, USP, and EU Methods. Depending upon the protocol employed, up to 300 samples per 24-hour period can be analyzed, and in excess of 100,000 samples per year.

Applications

OI Analytical has been an innovator in TOC instrumentation since 1972. Hundreds of laboratories and industrial facilities rely on our TOC analyzers for their water quality monitoring applications.

- Drinking Water
- Pharmaceutical Cleaning Validation
- Municipal Wastewater
- Ground Water / Surface Water
- Process Water
- Boiler Feed Water & Condensate
- Metal Plating Solutions
- Ultrapure Water

Features

- Wide operational range (2 ppb~30,000 ppm)
- Supports TC/TIC/TOC/NPOC analysis techniques and standard measurements
- Parallel reaction chamber option available for high-throughput concurrent sample processing
- Upgradeable allowing performance of combustion and wet heated persulfate TOC analysis techniques on a single instrument
- Laboratory and at-line configurations available for process monitoring

Operating principle	
Heated sodium persulfate oxidation	
Scale	
2 ppb C~30,000 ppm C	
Accuracy · reproducibility	
±2 % FS or 2 % relative, whichever is greater, 3.0 %	
Method compliance	
USEPA, CEN, USP, EUP, ASTM, ISO, DIN, STD Method	
Autosampler	
88 position rotary autosampler designed to fit directly underneath Aurora 1030C analyzer	
Power	
100~240 VAC, 50/60 Hz, 950W	
Weight & dimensions	
425(W) × 495(D) × 420(H) mm 15.4kg, 34.5kg (Auto-sampler)	

Method	TW alpha plus
Standard Method 5310C	Drinking water, Wastewater
USEPA 415.3	Drinking water
USP / EU 2.2.44	Purified water
ASTM D 4779	Ultra purewater
ASTM D 4839	Wastewater, Seawater
ISO 8245	Drinking water, Wastewater
EN 1484	Surface & Ground Waters, Potable Water

On-line TOC Analyzer 9210p

The 9210p provides water and wastewater facilities with a dynamic, real-time analysis of natural organic matter (NOM) levels in influent and effluent streams. Fast, accurate results enable facility operators to rapidly adjust the treatment process and more precisely control coagulation, flocculation, and the formation of disinfection by-products, helping the facility to stay in compliance and reduce costs.

The 9210p Online Water Analysis Package includes everything you need for fast, accurate, real-time TOC analysis: the 9210p Online TOC Analyzer, 6-port stream selector, process gas module, 2 sample inlets, and wall-mount installation kit and reagent rack.

In 2006, OI Analytical began work on a project to develop a Total Organic Carbon Analyzer (TOCA) for use on the International Space Station. The successful culmination of the project came on November 14th, 2008, with NASA's launch of the Space Shuttle Endeavor carrying the TOCA for installation in the water recycling system on board the space station. The TOCA is used to analyze the organic carbon level in water that has been processed and purified ensuring it is safe for human consumption.

Operating principle
Heated sodium persulfate oxidation
Measurement range
0.050 to 25 / 5 to 250 ppm carbon
Accuracy · reproducibility
+5 %
Method compliance
SM 5310 C, USEPA 415.3 (Drinking Water) SM 5310 C (Wastewater)
Measurement techniquer
Non-dispersive infrared (NDIR) detection
Power
24VDC (Optional 24VDC power supply allows operation with 90~250VAC 50/60 Hz source)
Weight & dimensions
48.3(H) x 31.1(W) x 31.1(D) cm 19"(H) x 12.25"(W) x 12.25"(D) 11kg

Features

- Accurate, real-time monitoring and analysis of natural organic matter (NOM) in influent and effluent streams
- Handles up to 6 process streams
- Use standard reagents – no need for expensive proprietary chemicals
- Easy to maintain – no need for costly service contracts
- Proven, reliable heated sodium persulfate oxidation
- Compliant with USEPA Method 415.3 and SM5310C
- Intuitive, easy-to-use software
- Large, color touchscreen display

WTW Online offers a comprehensive range of water quality parameters from the standard physio-chemical through to the optical determination of carbon and nitrogen parameters to the range of chemical analysers for nutrient based determination.

Core product lines

- Online and portable water quality instruments
- UV/Vis, spectrophotometers

Global Water
a xylem brand

Global Water, founded in 1990, is a manufacturer, distributor, and systems integrator of water instrumentation serving the water, wastewater, and environmental markets.

Core product lines

- Water level and flow
- Samplers
- Water quality

O·I·Analytical

Offers analytical instruments that detect, measure, analyze and monitor chemicals in liquids, solids and gases and products used to digest, extract and separate components of chemical mixtures.

Core product lines

- TOC, Online/Labratory
- Purge and Trap
- Flow solutions

SI Analytics®

The manufacturer of titrators, viscosity measuring systems, extensive line of glass capillary viscometers, SCHOTT® Instruments high-performance laboratory and process electrodes as well as meters for the measurement of pH, dissolved oxygen and conductivity for food and beverage, pharmaceutical and other demanding markets.

Core product lines

- Titration
- Water quality sensors and monitoring equipment
- Viscometry

ROYCE TECHNOLOGIES®

Primary global supplier of high quality monitoring and control instrumentation and sensors specifically designed for municipal and industrial wastewater treatment applications. Other markets in which Royce might be found are mining, pulp and paper manufacturing, chemical processing, aquaculture, and the power and steam generating industries.

Core product lines

- Online and portable water quality instruments

YSI

YSI's environmental products provide high quality, high resolution data to better understand and manage our water resources. YSI Life Science and laboratory products are considered the gold standard for QC applications. They are used for process control, research and industrial applications by food and beverage, environmental, biofuels, biotech and pharmaceutical customers.

Core product lines

- Life Science analysers
- Water qulaiity sensors and instruments

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 innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. 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, backed by a legacy of innovation.

For more information on how Xylem can help you, go to www.xylem-analytics.asia

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