# Data sheets

## Controller and Modules

## Sensors and Analyzers

## Analog Controllers and Sensors (pH/ORP, Cond, O$_2$)

## ATEX Devices

## Samplers
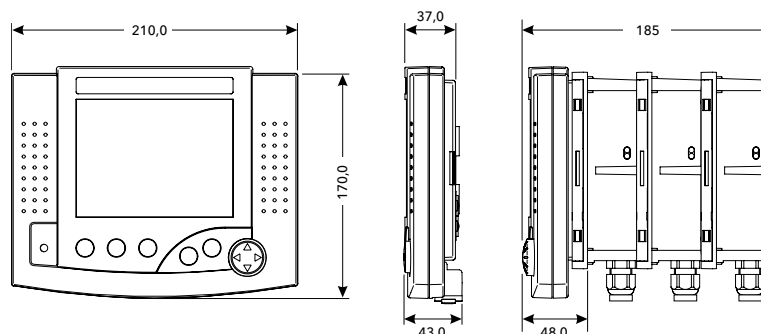
## Sample preparation

## Drinking Water

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# IQ Sensor Net Terminal/Controller

**MIQ/TC 2020 3G** – The heart of every IQ Sensor Net system 2020, a multi-parameter system for up to 20 sensors with USB interface, remote maintenance and remote communication.

**Terminal IQ** – the costeffective supplement without Controller function.

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

## Technical Data

| Model | Terminal-/Controller MIQ/TC 2020 3G | Terminal IQ |
|---|---|---|
| MIQ Module Coupling at Rear | Combined mechanical and electrical connection, for rapid coupling to MIQ modules | |
| USB interface | USB-A (host) | |
| Display | Graphic display; resolution: 320 x 240 pixel; visible area: 4.49 x 3.39 in. (114 x 86 mm), black/white, backlit | |
| Control Functions/Function Keys | 5 operating keys:    3 master keys for functions: Measurement (M), calibration (C), set/system settings (S), 2 keys for: confirmation/switching menu O.K. (OK), Escape (ESC). 4-directional button for rapid selection of software functions and input of alphanumeric values | |
| Controller | Yes | No |
| Controller-BackUp | Yes | No |
| Conditions | None | Requires a MIQ/TC 2020 3G(XT) in the system |
| Datalogger | Data memory for up to 525,600 data sets | No, but all data can be downloaded on USB |
| Electric Supply | Directly via the IQ Sensor Net when coupled to MIQ module | |
| Ambient Conditions | Operating temperature:    -4 °F … 131 °F (-20 °C … +55 °C)<br>Storage temperature:    -13 °F … 149 °F (-25 °C … +65 °C) | |
| Housing Material | ASA (Acrylonitrile-Styrene-Acryloesterpolymer) | |
| Protection Rating | IP 66 / corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM.. | |
| Dimensions (W x H x D) | 8.27 x 6.69 x 1.57 in. (210 x 170 x 40 mm) | |
| Weight | Approx. 1.98 pounds (0.9 kg) | |
| Certifications | ETL, cETL (conforms with relevant UL and Canadian standards), CE | |
| Electromagnetic Compatibility | EN 61326-1, Class B; FCC Class A | |
| Integrated Overvoltage Protection | According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component | |
| Connection Characteristics | Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds) | |
| Warranty | 3 years for defects of quality | |

| Model | Description | Order No. |
|---|---|---|
| MIQ/TC 2020 3G | Module IQ terminal/controller, configurable as a controller (fixed installation) or as a terminal with redundant controller function for system 2020, with USB interface, can be coupled to any IQ Sensor Net module | 470020 |
| Terminal IQ | Like MIQ/TC 2020 3G, but without Controller(BackUp) function | 470021 |
| MIQ/TC 2020 3G-CR3 | Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/CR3 combined output module with 3 analog outputs (0/4-20 mA) and 3 relay outputs, MIQ/PS wide range power supply | 470022 |
| MIQ/TC 2020 3G-C6 | Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/C6 output module wit 6 analog outputs (0/4-20 mA), MIQ/PS wide range power supply | 470024 |
| MIQ/TC 2020 3G-EF | Starter set consisting of MIQ/TC 2020 3G terminal/controller, MIQ/MC3 controller with fieldbus protocols, MIQ/PS wide range power supply | 470026 |

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# IQ Sensor Net Controller MIQ/MC3

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

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

Fieldbus connector (option)

Front view:

Side view:

Rear view:

## Technical Data

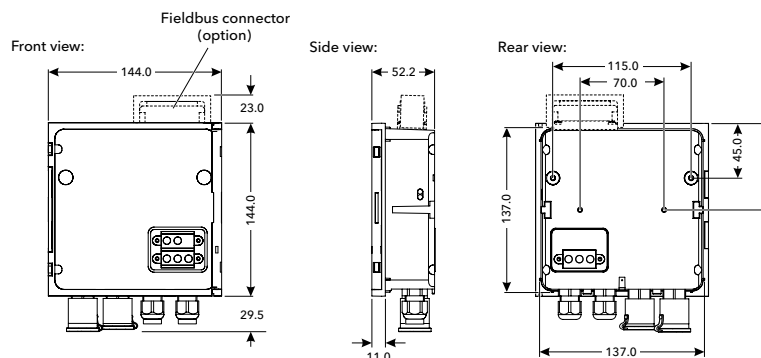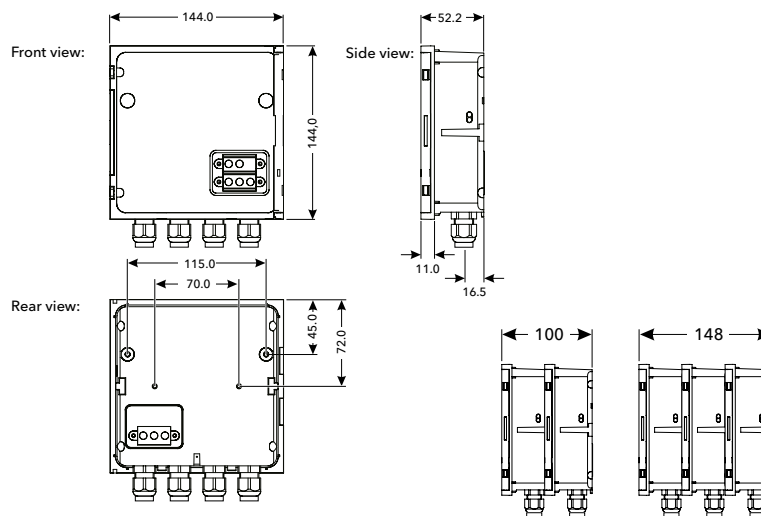| Model | Controller MIQ/MC3 |
|---|---|
| MIQ Module Coupling at Front | Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules |
| MIQ Module Coupling at Rear | Combined mechanical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

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

# IQ Sensor Net MIQ modules for power supply

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

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



Front view:

Side view:

Rear view:

## Technical Data

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

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

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# IQ Sensor Net MIQ modules for outputs, inputs and communication

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

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



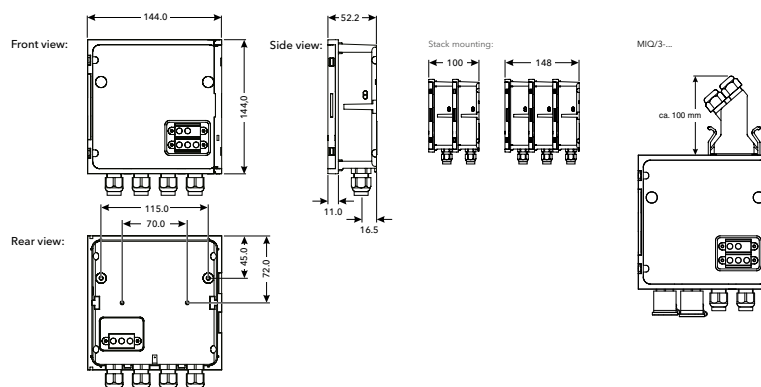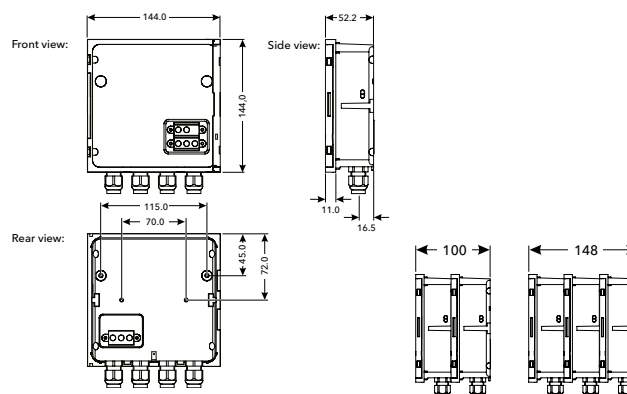Front view:  Side view:  Stack mounting:  MIQ/3-...

Rear view:

## Technical Data

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

| Model | Description | Order No. |
|---|---|---|
| MIQ/3-MOD | Module IQ with MODBUS RTU / RS 485 connection (output module, digital) | 471026 |
| MIQ/3-PR | Module IQ with PROFIBUS-DP connection (output module, digital) | 471027 |
| MIQ/R6 | Module IQ / relay 6 with 6 relay outputs (output module, analog) | 480013 |
| MIQ/CR3 | Module IQ / current relay 3, with 3 power and 3 relay outputs output module (analog) | 480014 |
| MIQ/C6 | Module IQ / Current 6 with 6 power outputs (output module, analog) | 480015 |
| MIQ/IC2 | Module IQ / input Current 2 with 2 inputs for 0/4 - 20 mA signals (input module); every populated power input counts as an IQ sensor | 480016 |

# IQ Sensor Net MIQ modules for system expansion

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

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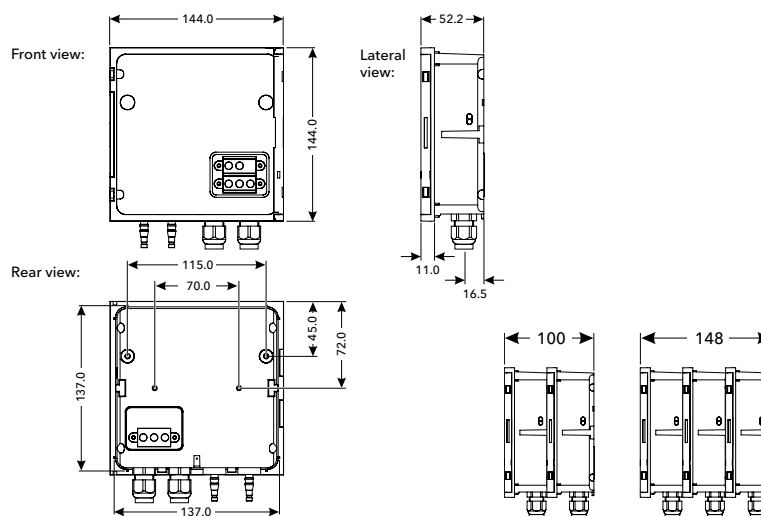


## Technical Data

| Models | MIQ modules MIQ/JB(R) | MIQ modules MIQ/WL PS (SET) |
|---|---|---|
| **MIQ Module Coupling at Front** | Combined mechanical and electrical connection for rapid docking and removal of the MIQ/TC 2020 3G Terminal/Controller (configurated as Terminal) and for docking additional modules | |
| **MIQ Module Coupling at Rear** | Combined mechanical and electrical connection, for rapid coupling to MIQ modules, up to 3 modules as a stack mounted unit possible | |
| **Cable Feeds** | 4 screw cable glands M 16 x 1.5 | |
| **Terminal Connections** | Screw terminal strips<br>Terminal area for solid conductors: 0.2 ... 4.0 mm²<br>Terminal area for flexible conductors: 0.2 ... 2.5 mm²<br>accessible by opening cover | |
| **IQ Sensor Net Terminal Connections** | Terminal connections for the IQ Sensor Net are available on each module and can be used as required:<br>    - for connecting sensors<br>    - as an input/output or for looping through/branching of the IQ Sensor Net cable | |
| **Other Functions** | Two LEDs, yellow and red, for monitoring the operating voltage of the IQ Sensor Net; IQ Sensor Net connection, Integrated local identity function; Integrated switchable terminal resistor (SN terminator) | |
| **Electric Supply** | Directly via the IQ Sensor Net | |
| **Ambient Conditions** | Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C) | |
| **Housing Material** | PC – 20 % GF (polycarbonate with 20 % fiberglass) | |
| **Protection Rating** | IP 66 | IP 67 |
| | corresponding to NEMA 4X (not for direct conduit connections). Conduits need to be connected with flexible adapters (CC-Box), respectively with adapters CC-PM.. | |
| **Dimensions (W x H x D)** | 5.67 x 5.67 x 2.05 in. (144 x 144 x 52 mm) | |
| **Weight** | Approx. 1.1 pounds (0.5 kg) | |
| **Certifications** | ETL, cETL (conforms with relevant UL and Canadian standards), CE | |
| **Electromagnetic Compatibility** | EN 61326-1, Class B; FCC Class A | |
| **Integrated Overvoltage Protection** | According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component | |
| **Connection Medium Cable** | IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating):<br>2-wire with shield; 2 x 0.75 mm²; Filler cord for easy connection of shield: 0.75 mm²; pressure resistant to 10 bar | |
| **Connection Characteristics** | Energy and data transfer via 2 wire technique; resistant to reversed polarity; Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds) | |
| **Connection Medium Radio** | Radio with a coverage of 109 yds (100 m) | |
| **Connection Characteristics** | Data transmission, separate power supply necessary for each island | |
| **Warranty** | 3 years for defects of quality | |

| Model | Description | Order No. |
|---|---|---|
| **MIQ/JB** | Modul IQ/Junction Box, for system branching, for system 2020 and 282/284, 4 free IQ Sensor Net connections | 480008 |
| **MIQ/JBR** | Modul IQ / Junction Box Repeater, for system branching, for system 2020 and 282/284, with active signal preparation | 480010 |
| **MIQ/WL PS SET** | 2 MIQ/WL PS radio modules, preconfigured as master and slave, ready to operate | 480025 |
| **MIQ/WL PS** | 1 MIQ/WL PS radio module, preconfigured as a slave to expand a radio network | 480023 |

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999211US                          January 2020

# IQ Sensor Net MIQ module for compressed air cleaning

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

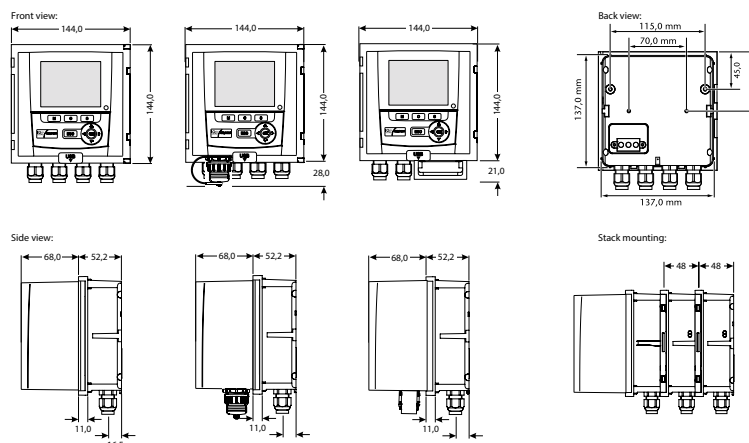*We would like to inform you about the application range on our website*

Front view:

Lateral view:

Rear view:



## Technical Data

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

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

# IQ Sensor Net DIQ 282

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

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

Front view:

Back view:

Side view:

Stack mounting:

## Technical Data

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

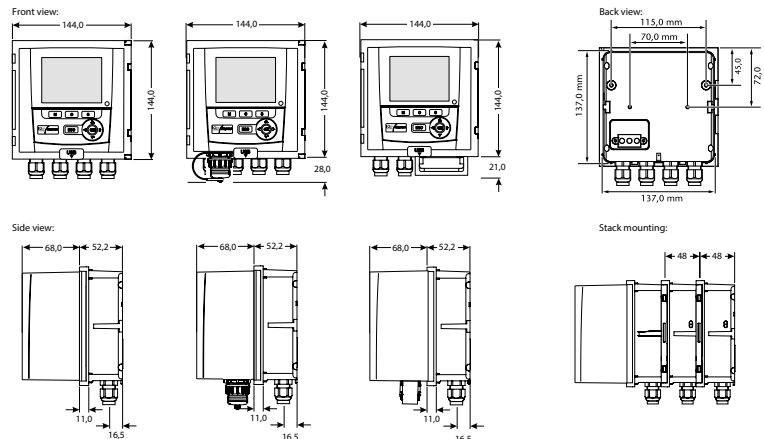| Model | Description | Order No. |
|---|---|---|
| **DIQ/S 282-CR3** | Controller for up to 2 IQ sensors, with 3 Relays, with 3 mA-outputs, 100 … 240 VAC | 472110 |
| **DIQ/S 282-PR** | Like above, but with PROFIBUS-interface (RS 485), 100 … 240 VAC | 472111 |
| **DIQ/S 282-MOD** | Like above, but with 3 Relays, with MODBUS-interface (RS 485), 100 … 240 VAC | 472112 |
| **DIQ/S 282-CR3-E** | Like above, but with 3 Relays, with 3 mA-outputs, with Ethernet-interface (RJ 45) for network connection, 100 … 240 VAC | 472113 |
| **DIQ/S 282-EF** | Like above, but with 3 Relays, with Ethernet-interface (RJ 45) for network connection and fieldbuses (Ethernet/IP, Modbus TCP, PROFINET), 100 … 240 VAC | 472114 |

*All versions available for 24 V AC/DC*

# IQ Sensor Net DIQ 284

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

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

Front view:

Back view:

Side view:

Stack mounting:

## Technical Data

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

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

*All versions available for 24 V AC/DC*

a **xylem** brand

# IQ Sensor Net System 281

The System 281 – digital and economic single parameter measuring unit of the IQ Sensor Net. For pH/ORP, $O_2$, turbidity, TSS, conductivity or sludge level with the latest IQ Sensor Net technology.

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

DIQ/S 281-CR2(/24V)

DIQ/S 281-MOD

DIQ/S 281-HART

## Technical Data

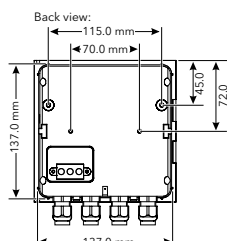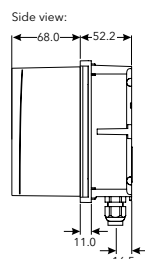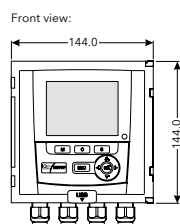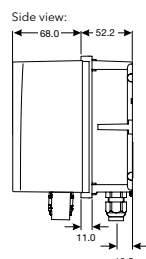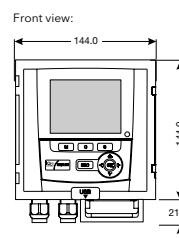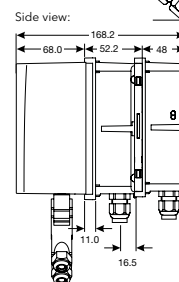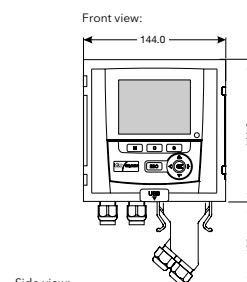| Controller | DIQ/S 281-CR2 | DIQ/S 281-CR2/24V | DIQ/S 281-MOD | DIQ/S 281-HART |
|---|---|---|---|---|
| **Max. number of sensors** | 1 | | | |
| **IQ Sensor Net connections** | 1 | | | |
| **Communication** | 2 x (0) 4 … 20 mA, 2 x Relays | | MODBUS RTU, 2 x Relays | HART, 2 x Relays |
| **Display** | Graphic TFT Display; Resolution: 320 x 240 pixel; backlit | | | |
| **Control Functions/ Function Keys** | 5 operating keys: measurement (M), calibration (C), set/system settings (S), 3 master keys for functions: 2 keys for: confirmation/switching menu O.K. (OK), escape (ESC) Arrow keys for rapid selection of software functions and input of alpha-numeric values (up), (down) | | | |
| **Electric Supply** | 100 … 240 VAC (50/60 Hz) | 24 V AC/DC | 100 … 240 VAC (50/60 Hz) | |
| **Modules** | DIQ/JB, DIQ/CHV and MIQ/WL PS SET | | | |
| **Cable Feeds** | 4 screw cable glands M 16 x 1.5 (expansible to M 20 if required) | | | |
| **Terminal Connections** | Screw terminal strips; Terminal area for solid conductors: 0.2 … 4.0 mm² Terminal area for flexible conductors: 0.2 … 2.5 mm²; accessible by opening cover | | | |
| **USB interface** | USB-A for software updates | | | |
| **Ambient Conditions** | Operating temperature: -4 °F … 131 °F (-20 °C … +55 °C); Storage temperature: -13 °F … 149 °F (-25 °C … +65 °C) | | | |
| **Housing Material** | PC – 20 % GF (polycarbonate with 20 % fiberglass) | | | |
| **Protection Rating** | IP 67 / corresponding to NEMA 4X (not for direct conduit connections). | | | |
| **Weight** | Approx. 1,2 kg (2.6 pounds) | | | |
| **Certifications** | CE | | | |
| **Electromagnetic Compatibility** | EN 61326-1, Class A; FCC Class A | | | |
| **Integrated Overvoltage Protection** | According to EN 61326-1 enhanced overvoltage protection for the entire system | | | |
| **Connection Medium Cable** | IQ Sensor Net cable SNCIQ or SNCIQ/UG (underground cable with additional PVC coating): 2-wire with shield; 2 x 0.75 mm²; filler cord for easy connection of shield: 0.75 mm²; pressure resistant to 10 bar | | | |
| **Connection Characteristics** | Power supply and data transmission on these wires; resistant to polarity reversal with respect to switched shield and inner conductor (no damage); comprehensive EMC shield control; Cable topology within the IQ Sensor Net system as required, e.g. in the form of a line, tree, star; total cable length max. 250 m (273 yds) | | | |
| **Warranty** | 3 years for defects of quality | | | |

| Model | Description | Order No. |
|---|---|---|
| **DIQ/S 281-CR2** | Dual IQ/System 281, Universal monitor for the connection of 1 digital IQ sensor (pH/ORP, $O_2$, conductivity or turbidity), with 2 analog outputs (0/4-20 mA) and 2 relays, 100 … 240 VAC | 472103 |
| **DIQ/S 281-CR2/24V** | Like the DIQ/S 281, but for 24 V AC/DC voltage supply | 472104 |
| **DIQ/S 281-MOD** | Like the DIQ/S 281, but with MODBUS interface (RS 485) and 2 relays, 100 … 240 VAC (Please order separately D-SUB connection ADA/D-SUB 902888) | 472105 |
| **DIQ/S 281-HART** | Like the DIQ/S 281, but with HART interface and 2 relays, 100 … 240 VAC | 472106 |

a xylem brand

# IQ Sensor Net DIQ modules

Modules for the flexible expansion of digital IQ Sensor Net systems 181, 281 and 282/284 by additional measuring points or functions – compact design

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

DIQ/JB
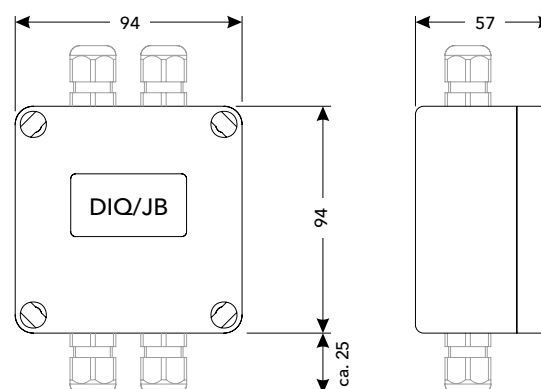
DIQ/CHV
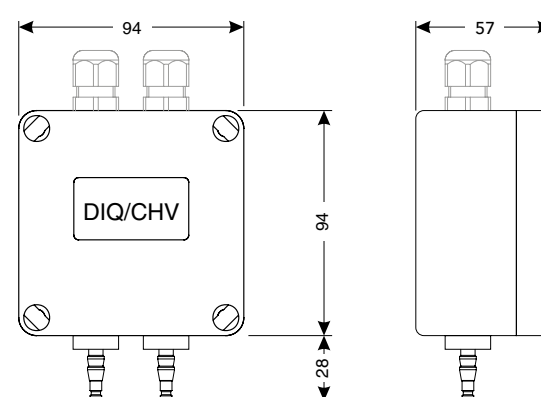
## Technical Data

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

| Model | Description | Order No. |
|---|---|---|
| DIQ/JB | Dual IQ/Junction Box to connect a second or remote IQ sensor in the system 181, 281 and 282/284 | 472005 |
| DIQ/CHV | Dual IQ/Cleaning Head Valve, for the automatic relay-controlled compressed air cleaning in the system 181, 281 and 282/284 | 472007 |

999216US

November 2020

# IQ Sensor Net Cable

One connection for all IQ sensors via the universal
**SACIQ sensor cable ,** including a version for corrosive media.
Specific two-wire **SNCIQ connection cable** with shield for safe power and information transfer within the IQ Sensor Net system (also for underground installation).

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

SACIQ

## Technical Data (excerpt)

| Model | SNCIQ(/UG) | SACIQ | SACIQ (SW) |
|---|---|---|---|
| **Type of connection** | Module to module, UG for underground installation | Module to sensor | Module to sensor, for corrosive media |
| **Allowed temperature** | -31 °F … 176 °F (-35 °C … +80 °C) | | |
| **Minimum bend radius** | 3.15 in. (80 mm) | | |
| **Outer diameter** | 0.31 ± 0.01 in. (8.0 ± 0.3 mm) | | |
| **Cores** | 2-wire with shield; 2 x 0.001 in.$^2$ (0.75 mm$^2$); Filler cord for easy connection of shield: 0.001 in.$^2$ (0.75 mm$^2$); pressure resistant to 10 bar | | |
| **Core colors** | Red, green | | |
| **Shield** | Braid of tinned copper wires, optical coverage min. 95 % | | |
| **Material** | Wire insulation: NDPE<br>Sheath: PUR (flame retardant) UV resistent<br>(UG: double sheath) | Wire insulation: NDPE<br>Sheath: PUR (flame retardant) UV resistent<br>Sensorhead: Stainless steel, POM | Wire insulation: NDPE<br>Sheath: PUR (flame retardant) UV resistent<br>Sensorhead: Titanium, POM |
| **Pressure resistance** | 10 bar (radial watertight) | | |
| **Integrated Overvoltage Protection** | According to EN 61326-1 enhanced overvoltage protection for the entire system, implemented in each component | | |
| **Connection Characteristics** | Comprehensive EMC shield control; cable topology within IQ Sensor Net system as required, e.g. in the form of a line, tree, star, multiple star; Total cable length: max. 1000 m/1094 yds (without signal amplifying), with signal amplifying module MIQ/JBR additional 1000 m/1094 yds (max 3000 m/3282 yds) | | |

| Model | Description | Order No. |
|---|---|---|
| **Sensor adapter cable SACIQ (Module–Sensor)** | | |
| **SACIQ-1,5** | Sensor adapter cable for all IQ sensors, with IP 68 waterproof connection to the IQ Sensor Net system. Cable length 1.5 m (4.9 ft) | 480040 |
| **SACIQ-7,0** | Like SACIQ-1,5, but with cable length 7 m (23 ft) | 480042 |
| **SACIQ-15,0** | Like SACIQ-1,5, but with cable length 15 m (49 ft) | 480044 |
| **SACIQ-SO** | Like SACIQ-1,5, but with customized cable length up to 100 m (330 ft) | 480041V |
| **SACIQ-20,0 SW** | Sensor adapter cable for all IQ sensors, in seawater design, with IP 68 waterproof connection to the IQ Sensor Net system. Cable length 20 m (65 ft), with screwable SACIQ-Plug | 480045 |
| **SACIQ-25,0 SW** | Like SACIQ-20 SW, but with cable length 25 m (82 ft) | 480066 |
| **SACIQ-50,0 SW** | Like SACIQ-20 SW, but with cable length 50 m (162 ft) | 480060 |
| **SACIQ-SO SW** | Like SACIQ-20 SW, but with customized cable length up to 100 m (330 ft) | 480064V |
| **SACIQ-Plug** | Screwable plug for all SACIQ sensor adapter cables for IQ sensors | 480065 |
| **Connection cable SNCIQ (Module–Module)** | | |
| **SNCIQ-100** | Specific two-wire IQ Sensor Net cable with shield for safe power/information transfer within the IQ Sensor Net system. Cable reel with 100 m (109 yds) | 480068 |
| **SNCIQ-200** | Specific two-wire IQ Sensor Net cable with shield for safe power/information transfer Like SNCIQ-100, but with cable length 200 m (119 yds) | 480069 |
| **SNCIQ-250** | Specific two-wire IQ Sensor Net cable with shield for safe power/information transfer Like SNCIQ-100, but with cable length 250 m (273 yds) | 480070 |
| **SNCIQ-500** | Specific two-wire IQ Sensor Net cable with shield for safe power/information transfer Like SNCIQ-100, but with cable length 500 m (547 yds). | 480072 |
| **SNCIQ - SO** | Like SNCIQ-100, but please indicate cable length in m when ordering (unit: m) | 480046V |
| **SNCIQ/UG-250** | Specific two-wire IQ Sensor Net cable with shield for safe power/information transfer within the IQ Sensor Net system, esp. for use in underground. Cable reel with 250 m (273 yds). | 480075 |
| **SNCIQ/UG- SO** | Like SNCIQ/UG-250, but please indicate cable length in m when ordering (unit: m) | 480047V |

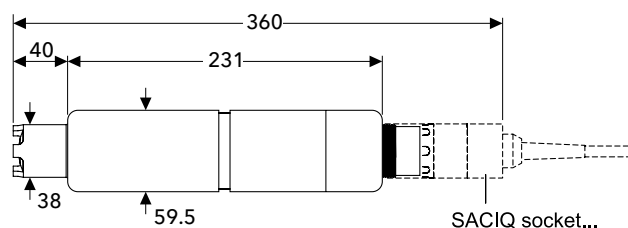# Digital electro-chemical IQ sensors for dissolved oxygen TriOxmatic®

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

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

TriOxmatic® 700 IQ
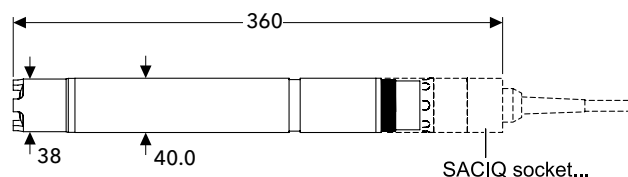
TriOxmatic® 700 IQ SW

## Technical Data

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

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

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

999224US

January 2020

# Digital optical IQ sensors for dissolved oxygen FDO®

Calibration-free, reliable, DIN compli-
ant - the optical FDO® oxygen sensors
for the IQ Sensor Net to regulate bio-
logical cleaning steps

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

FDO® 700 IQ, FDO® 701 IQ



400

39.7    40.0

Socket SACIQ...

FDO® 700 IQ SW, FDO® 701 IQ SW



400

34    276

39.7    59.5

Socket SACIQ...
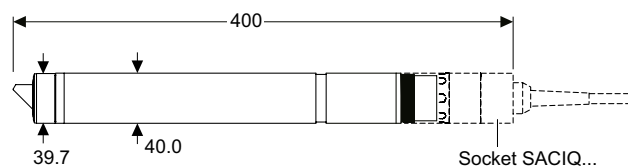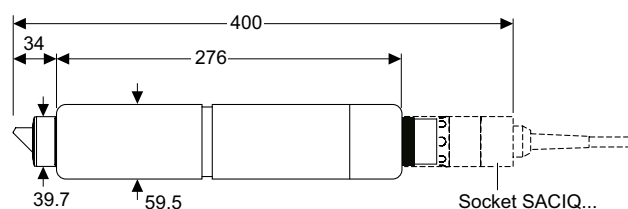
## Technical Data

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

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

| Model | Description | Order No. |
|---|---|---|
| **FDO® 700 IQ** | Optical $O_2$ sensor for connection to the IQ Sensor Net. (Please order cable separately) | 201650 |
| **FDO® 701 IQ** | like the FDO® 700 IQ, but with a faster response time | 201660 |
| **FDO® 700 IQ SW** | like the FDO® 700 IQ, but as sea water model with plastic arming (POM) | 201652 |
| **FDO® 701 IQ SW** | like the FDO® 700 IQ SW, but with a faster response time | 201653 |
| **SC-FDO 700** | Universal sensor cap for FDO® 700 IQ/700 IQ SW | 201654 |
| **SC-FDO 701** | Fast response time sensor cap for FDO® IQ 701/IQ 701 SW | 201655 |

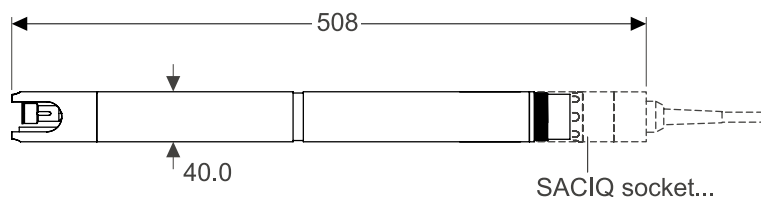999225US                    January 2020
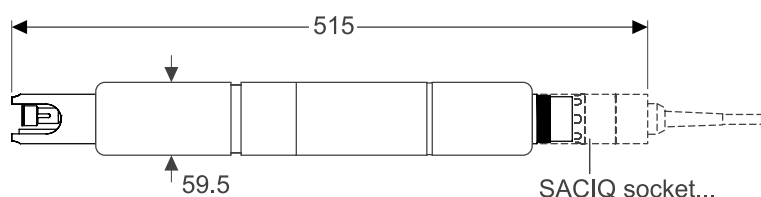
# Digital IQ pH/ORP armatures SensoLyt®

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

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

SensoLyt® 700 IQ



508

40.0

SACIQ socket...

SensoLyt® 700 IQ SW



515

59.5

SACIQ socket...

## Technical Data

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

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

| Model | Description | Order No. |
|---|---|---|
| **SensoLyt® 700 IQ** | Digital pH/ORP fitting for SensoLyt® electrode, with integrated preamplifier and temperature sensor (please order cable separately) | 109170 |
| **SensoLyt® 700 IQ SW** | Like the SensoLyt® 700 IQ, but as a sea water model | 109171 |
| **SensoLyt® 700 IQ/SET** | SensoLyt® 700 IQ including SensoLyt® SEA pH electrode and 7 m connecting cable | 109173 |
| **SensoLyt® 700 IQ/SET1** | SensoLyt® 700 IQ including SensoLyt® PtA ORP electrode and 7 m connecting cable | 109174 |

WTW
a **xylem** brand

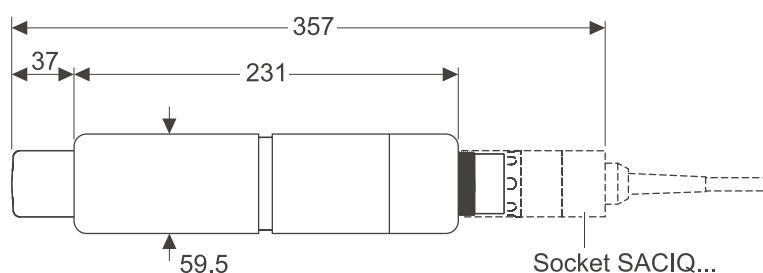# Digital IQ conductivity measuring cells TetraCon®

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

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

TetraCon® 700 IQ



Socket SACIQ...

TetraCon® 700 IQ SW



Socket SACIQ...
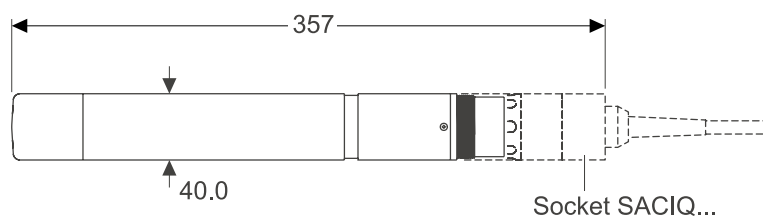
## Technical Data

| Model | TetraCon® 700 IQ | TetraCon® 700 IQ SW* |
|---|---|---|
| **Measuring method** | Conductometric (4-electrode cell) | |
| **Measuring range** | Cond: 10 µS/cm … 500 mS/cm<br>SAL: 0 … 70<br>TDS: 0 … 200 g/l | |
| **Accuracy** | ±2 % of measured value ±1 Digit (in standard solution, 25 °C, with non-linear temp. comp. (acc. DIN 38404)) | |
| **Cell Constants** | K = 0.917 cm$^{-1}$, ±1.5% (in free solution)<br>K = 0.933 cm$^{-1}$, TetraCon® 700 IQ with EBST 700-DU/N flow assembly | K = 0.917 cm$^{-1}$, ± 1.5% (in free solution) |
| **Resolution** | Depending on measuring range | |
| **Temp. measurement** | -5 ... +60 °C (23 ... 140 °F); NTC | |
| **Temp. compensation** | linear: 32 ... 140 °F (0 ... +60 °C)<br>nonlinear: +5 °C … 35 °C (acc. to DIN 38404)<br>nonlinear: +35 °C … +60 °C (acc. to WTW procedure) | |
| **Pressure Resistance** | 10 bar | |
| **Ambient Conditions** | -5 ... +60 °C (23 ... 140 °F) | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A;<br>Intended for indispensable operation | |
| **Certifications** | CE, cETL, ETL | |
| **Mechanical** | Sensor head: PVC<br>Sensor body: V4A stainless steel 1.4571<br>Protection rating IP 68 | |
| **Weight** (without cable) | Approx. 1.46 lb (660 g) | Approx. 2.58 lb (1,170 g) |
| **Warranty** | 2 years for defects in quality | |

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

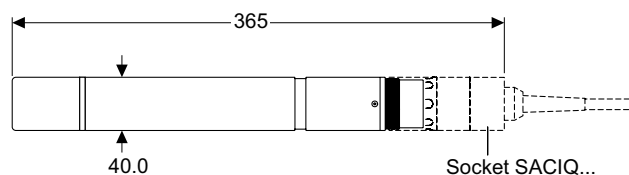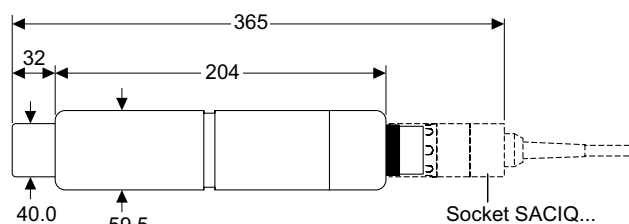| Model | Description | Order No. |
|---|---|---|
| **TetraCon® 700 IQ** | Digital 4 electrode conductivity measuring cell for highly contaminated wastewater (please order cable separately) | 302500 |
| **TetraCon® 700 IQ SW** | Like TertaCon® 700 IQ, but as a sea water model | 302501 |

# Digital turbidity sensors VisoTurb®

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

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

VisoTurb® 700 IQ



VisoTurb® 700 IQ SW



## Technical Data

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

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

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

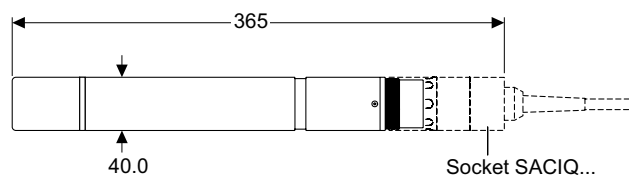a **xylem** brand

999228US

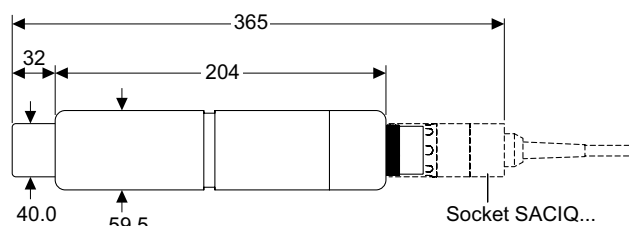December 2020

# Digital suspended solids sensors ViSolid®

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

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

ViSolid® 700 IQ

365

40.0

Socket SACIQ...

ViSolid® 700 IQ SW

365

32

204

40.0

59.5

Socket SACIQ...

## Technical Data

| Model | ViSolid® 700 IQ | ViSolid® 700 IQ SW* |
|---|---|---|
| **Measuring method** | Procedure for measuring scattered light | |
| **Measuring range** | | |
| g/l SiO$_2$ | 0 ... 300 g/l SiO$_2$ | |
| % SiO$_2$ | 0 … 30% SiO$^2$ | |
| g/l TSS | 0 ... 1000 g/l TSS | |
| % TSS | 0 … 100% TSS | |
| **Resolution** | | |
| g/l SiO$_2$ | Automatic according to measuring range 0.1 mg/l ... 1 g/l | |
| % SiO$_2$ | Automatic according to measuring range 0.001 % ... 0.01 % | |
| g/l TSS | Automatic according to measuring range 0.1 mg/l ... 1 g/l | |
| % TSS | Automatic according to measuring range 0.001 % ... 0.1 % | |
| **Accuracy** | *Depends on application and/or user calibration* | |
| Matrix type I | Process variation coefficient according to DIN 38402 part 51 <2 % | |
| Matrix type II | Process variation coefficient according to DIN 38402 part 51 <4 % | |
| **Calibration** | Typical sludge characteristics stored: matrix type 1, matrix type 2<br>Calibration by user: adjustment via correction factor, 1-point or multi-point calibration possible | |
| **Cleaning System** | Ultrasound cleaning system | |
| **SensCheck** | Contamination detection of optical window; failure of cleaning system | |
| **Pressure Resistance** | 10 bar (incl. sensor connection cable) | |
| **Ambient Conditions** | Operating temperature: 32 ... 140 °F (0 ... 60 °C);<br>ultrasonic cleaning system: 32 ... 140 °F (0 ... 60 °C) (overheating protection);<br>Storage temperature: 23 ... 149 °F (-5 ... +65 °C) | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A;<br>Intended for indispensable operation | |
| **Certifications** | CE | |
| **Mechanical** | Measuring window: Sapphire;<br>Sensor body: V4A stainless steel 1.4571;<br>Sensor head: V4A stainless steel 1.4571;<br>Protection rating: IP 68 | Measuring window: Sapphire;<br>Sensor-body: Titanium, POM<br>Sensor head: Titanium;<br>Protection rating: IP 68 |
| **Weight (without cable)** | Approx. 2.18 lb (900 g) | Approx. 3.13 lb (1420 g) |
| **Warranty** | 2 years for defects in quality | |

*\* SW: Sensor as sea water model (with plastic arming (POM))*
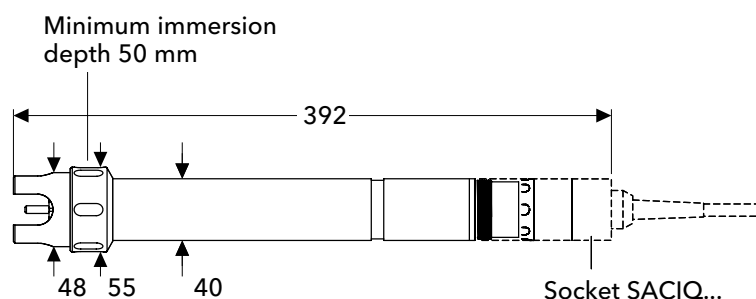
| Model | Description | Order No. |
|---|---|---|
| **ViSolid® 700 IQ** | Digital suspended solids sensor with integrated ultrasonic cleaning (please order cable separately) | 600012 |
| **ViSolid® 700 IQ SW** | Like ViSolid® 700 IQ, but as a sea water model | 600013 |

*a xylem brand*

999229US

December 2020

# Digital ISE combination sensor VARiON® for ammonium and nitrate

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

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

Minimum immersion depth 50 mm

392

48 55 40

Socket SACIQ...

## Technical Data

| Model | VARiON®*Plus* | |
|---|---|---|
| | **Ammonium Measurement** | **Nitrate Measurement** |
| **Measuring method** | Potentiometric | |
| **Maximum Configuration** | Common reference electrode, two measuring electrodes, one compensation electrode | |
| **Integrable Electrodes:** **Reference Electrode** | VARiON®*Plus* Ref | |
| **Measuring Electrode** **Compensation Electrode** | VARiON®*Plus* NH$_4$ VARiON®*Plus* K | VARiON®*Plus* NO$_3$ VARiON®*Plus* Cl |
| **Measuring range/ Resolution** | NH$_4$-N: 1 ... 2,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0,1 mg/l NH$_4^+$: 1 ... 2,580 mg/l / 1 mg/l; 0.1 ... 129.0 mg/l / 0,1 mg/l | NO$_3$-N: 1 … 1,000 mg/l / 1 mg/l; 0.1 ... 100 mg/l / 0,1 mg/l NO$_3$-: 5 … 4500 mg/l / 1 mg/l; 0.5 ... 450.0 mg/l / 0,1 mg/l |
| **Compensation Ranges** | K$^+$: 0.1 ... 1,000 mg/l / 0,1 mg/l | Cl-: 0.1 ... 1,000 mg/l / 0,1 mg/l |
| **Measuring Accuracy** in laboratory standard solutions | ± 5 % of measured value ± 0.2 mg/l in standard solutions | |
| **Calibration Procedures** | Matrix adjustment against any reference value, 2-point-calibration possible with multiple standard solution | |
| **Working Life** (typically) | Reference electrode: 18 months, measuring and compensation electrode: 18 months (in typical application - municipal sewage plants) | |
| **Temperature Measurement and Compensation** | Integrated NTC thermistor, Range 32 °F … 104 °F (0 °C … +40 °C), Accuracy ±0.5 K, Resolution 0.1 K, t$_{95}$ < 20 s | |
| **pH range** | pH 4 ... pH 8.5 | pH 4 ... pH 11 |
| **Pressure Resistance** | Maximum 0.2 bar (incl. SACIQ sensor connection cable, with installed electrodes) | |
| **Ambient Conditions** | Operating temperature: 32 °F … 104 °F (0 °C … +40 °C), storing temperature: 32 °F … 104 °F (0 °C … +40 °C) | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A; Intended for indispensable operation | |
| **Certifications** | CE | |
| **Mechanical** | Sensor body: V4A stainless steel 1.4571 Temperature sensor: V4A stainless steel 1.4571 Electrode connector: POM | Protective cup: POM Protection rating: IP 68 (0.2 bar, with installed electrodes) |
| **Weight** | Approx. 1.48 lb (670 g, without electrode, without sensor connection cable) | |
| **Warranty** | VARiON®*Plus* 700 IQ: 2 years; Electrodes: 1 year for defects of quality | |

| Model | Description | Order No. |
|---|---|---|
| **VARiON®Plus 700 IQ** | Digital sensor for the ion selective measurement of ammonium and nitrate, without electrodes (Please order the sensor cable SACIQ separately) | 107040 |
| **VARiON®Plus A comp SET NH$_4$** | VARiON®*Plus* 700 IQ, reference electrode VARiON® Ref, ammonium measuring electrode VARiON®*Plus* NH$_4$ and compensation electrode VARiON®*Plus* K (potassium) (Please order the sensor cable SACIQ separately) | 107060 |
| **VARiON®Plus N comp SET NO$_3$** | VARiON®*Plus* 700 IQ, VARiON® Ref, VARiON®*Plus* NO$_3$ and VARiON®*Plus* Cl (chloride) (Please order the sensor cable SACIQ separately) | 107062 |
| **VARiON®Plus AN/A comp SET NH$_4$ & NO$_3$** | VARiON®*Plus* 700 IQ, VARiON®Ref, VARiON®*Plus* NH$_4$ and VARiON®*Plus* NO$_3$, VARiON®*Plus* K (potassium) (Please order the sensor cable SACIQ separately) | 107066 |
| **VARiON®Plus AN/N comp SET NH$_4$ & NO$_3$** | VARiON®*Plus* 700 IQ, VARiON®Ref, VARiON®*Plus* NH$_4$ and VARiON®*Plus* NO$_3$, VARiON®*Plus* Cl (chloride) (Please order the sensor cable SACIQ separately) | 107068 |

# Digital ISE sensor AmmoLyt® for ammonium

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

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

Minimum immersion depth 50 mm

392

48  55  40

Socket SACIQ...

## Technical Data

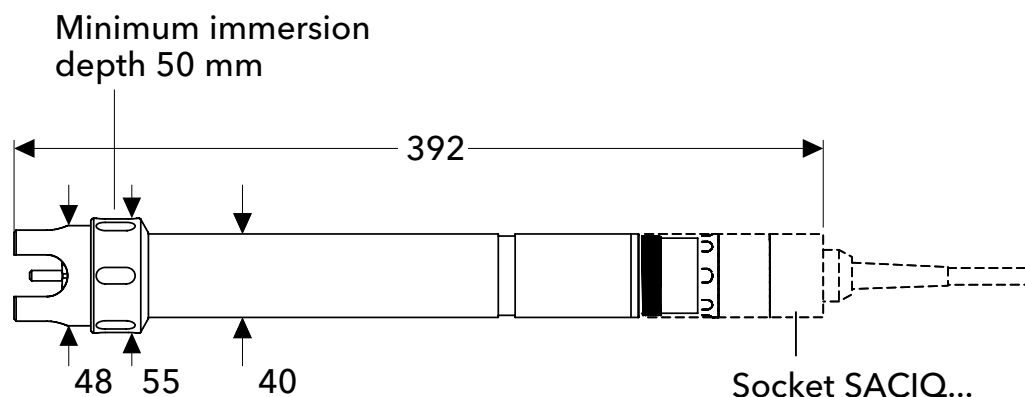| Model | AmmoLyt®*Plus* |
|---|---|
| **Measuring method** | Potentiometirc |
| **Appropriate Electrode** | Reference electrode VARiON® Ref, Measuring electrode VARiON®*Plus* $NO_3$, Compensation electrode VARiON®*Plus* Cl |
| **Measuring range/ Resolution Compensation Range** | $NH_4$-N:   1 ... 2,000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

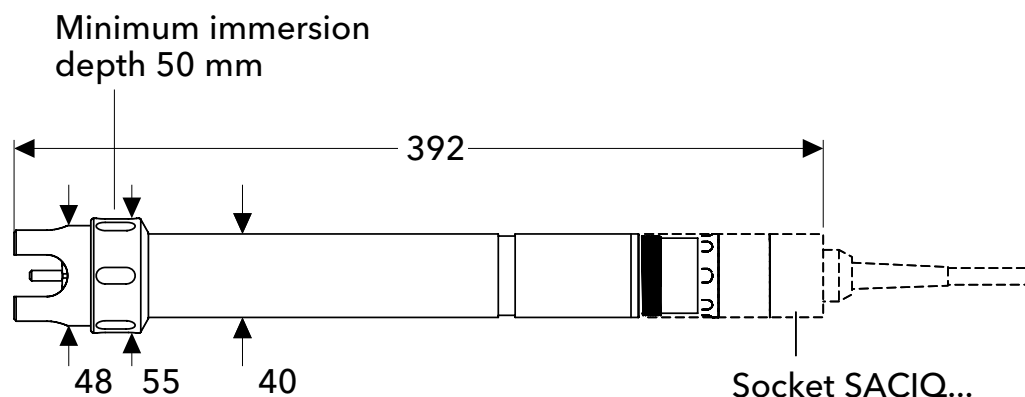| Model | Description | Order No. |
|---|---|---|
| **AmmoLyt® Plus 700 IQ** | Digital sensor for ion selective measurement of ammonium (Please order the sensor cable SACIQ separately) | 107070 |
| **AmmoLyt® Plus SET** | AmmoLyt®*Plus* 700 IQ, VARiON® Ref and VARiON®*Plus* $NH_4$ (Please order the sensor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

# Digital ISE sensor NitraLyt® for nitrate

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

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



Minimum immersion depth 50 mm

392

48  55  40

Socket SACIQ...

## Technical Data

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

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

# Digital optical UV VIS spectral probe NitraVis® for nitrate and suspended solids
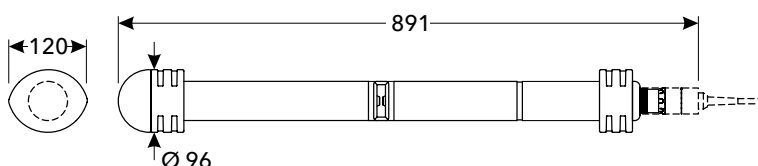
Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate and suspended solids (optional) – optimized for municipal wastewater treatment systems

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

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



865
774
381
Ø 60
Socket SACIQ...

With shock protection:

120
891
Ø 96
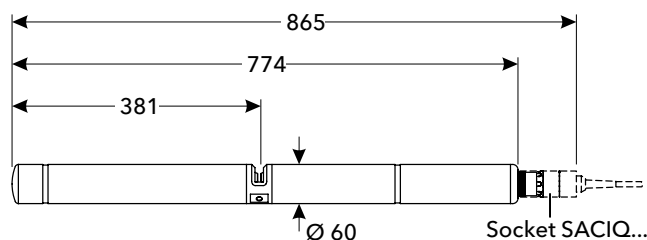
## Technical Data

| Model | NitraVis® 701 IQ | NitraVis® 705 IQ | NitraVis® 701 IQ TS | NitraVis® 705 IQ TS |
|---|---|---|---|---|
| **Measuring method** | Spectral Measurement in the UV-VIS Range (200 – 720 nm) | | | |
| **Measuring gap** (optical layer thickness) | 1 mm | 5 mm | 1 mm | 5 mm |
| **Application** (optimized for) | Municipal wastewater: | Municipal wastewater: | Municipal wastewater: | Municipal wastewater: |
| **Measuring range and Resolution** — NO₃ / NO₃-N / TSS | **Inlet:** 0.0 ... 300.0 mg/l 0.1 mg/l<br>0.00 ... 60.00 mg/l 0.01 mg/l | | **Inlet:** 0.0 ... 300.0 mg/l 0.1 mg/l<br>0.00 ... 60.00 mg/l 0.01 mg/l<br>0.00 ... 15.00 g/l 0.01 g/l | |
| | **Aeration:** 0.0 ... 300.0 mg/l 0.1 mg/l<br>0.00 ... 60.00 mg/l 0.01 mg/l | | **Aeration:** 0.0 ... 300.0 mg/l 0.1 mg/l<br>0.00 ... 60.00 mg/l 0.01 mg/l<br>0.00 ... 20.00 g/l 0.01 g/l | |
| | *Effluent:* 0.0 ... 750.0 mg/l 0.1 mg/l<br>0.0 ... 150.0 mg/l 0.1 mg/l | **Effluent:** 0.0 ... 250.0 mg/l 0.1 mg/l<br>0.00 ... 50.00 mg/l 0.01 mg/l | *Effluent:* 0.0 ... 750.0 mg/l 0.1 mg/l<br>0.0 ... 150.0 mg/l 0.1 mg/l<br>0 ... 4,500 mg/l 1 mg/l | **Effluent:** 0.0 ... 250.0 mg/l 0.1 mg/l<br>0.00 ... 50.00 mg/l 0.01 mg/l<br>0.0 ... 900.0 mg/l 0.1 mg/l |
| **Accuracy** (standard application muni. WWTP) | NO₃-N: ±3 % of measured value ±0.5 mg/l<br>TSS: ±5 % of measured value ±50 mg/l | | | |
| **Flow rate** | ≤3 m/s | | | |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) | | | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | | | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation | | | |
| **Certifications** | CE | | | |
| **Mechanical** | Housing: Titan Grade 2, PEEK<br>Window: Sapphire glass<br>Protection class: IP 68 | | | |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) | | | |
| **Warranty** | 2 years for defects in quality | | | |

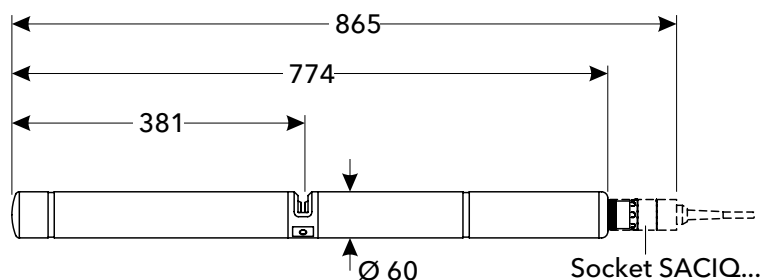| Model | Description | Order No. |
|---|---|---|
| **NitraVis® 701 IQ** | Spectral nitrate probe for the measurement in inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481044 |
| **NitraVis® 705 IQ** | Like NitraVis® 701 IQ, but for measuring in the outlet | 481046 |
| **NitraVis® 701 IQ TS** | Spectral nitrate and suspended solids probe for measuring in the inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481045 |
| **NitraVis® 705 IQ TS** | Like NitraVis® 701 IQ TS, but for measuring in the outlet | 481047 |

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January 2020

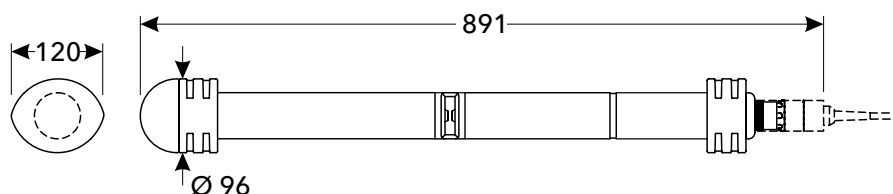# Digital optical sensors NiCaVis® for nitrate, carbon and suspended solids

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

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

NiCaVis® 705 IQ, NiCaVis® 705 IQ TS

865
774
381
Ø 60
Socket SACIQ...

With shock protection:

120
891
Ø 96

## Technical Data

| Model | NiCaVis® 705 IQ | NiCaVis® 705 IQ TS |
|---|---|---|
| **Measuring method** | Spectral Measurement in the UV-VIS Range (200 – 720 nm) | |
| **Measuring gap** (optical layer thickness) | 5 mm | |
| **Application** (optimized for) | Municipal wastewater: | Municipal wastewater: |

| Measuring range and Resolution | | **Effluent:** | | **Effluent:** | |
|---|---|---|---|---|---|
| | $NO_3$ | 0.0 ... 250.0 mg/l | 0.1 mg/l | 0.0 ... 250.0 mg/l | 0.1 mg/l |
| | $NO_3$-N | 0.00 ... 50.00 mg/l | 0.01 mg/l | 0.00 ... 50.00 mg/l | 0.01 mg/l |
| | COD | 0.0 ... 800.0 mg/l | 0.1 mg/l | 0.0 ... 800.0 mg/l | 0.1 mg/l |
| | TOC | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| | DOC | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| | BOD | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| | $SAC_{254\ total}$ | 0.0 ... 600.0 1/m | 0.1 1/m | 0.0 ... 600.0 1/m | 0.1 1/m |
| | $SAC_{254\ dissolv}$ | 0.0 ... 600.0 1/m | 0.1 1/m | 0.0 ... 600.0 1/m | 0.1 1/m |
| | $UVT_{254\ total}$* | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % |
| | $UVT_{254\ dissolv}$* | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % |
| | TSS | | | 0.0 ... 900.0 mg/l | 0.1 mg/l |

| | |
|---|---|
| **Accuracy** (standard application muni. WWTP) | $NO_3$-N: ± 3 % of measured value ± 0.5 mg/l<br>Carbon parameters: ± 5 % of measured value ± 2.5 mg/l<br>SAC: ± 0.5 % of measured value ± 0.4 SAK<br>UVT: < 10 % UVT ± 1 % UVT of measured value; > 10 % UVT ± 0.1 % UVT of measured value<br>TSS: ± 5 % of measured value ± 50 mg/l |
| **Flow rate** | ≤ 3 m/s |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation |
| **Certifications** | CE |
| **Mechanical** | Housing: Titan Grade 2, PEEK<br>Window: Sapphire glass<br>Protection class: IP 68 |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) |
| **Warranty** | 2 years for defects in quality |

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

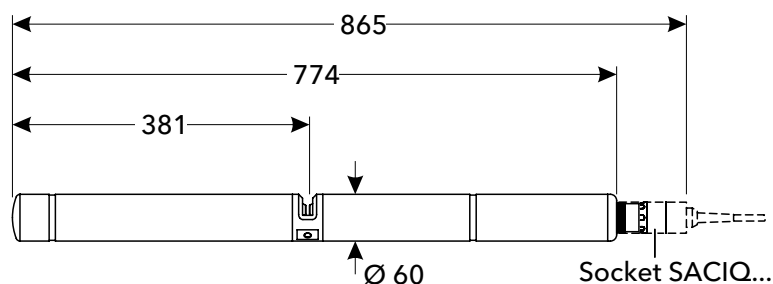| Model | Description | Order No. |
|---|---|---|
| **NiCaVis® 705 IQ** | Spectral UV-VIS probe for measuring nitrate, $COD_{tot}$, $COD_{diss.}$, TOC, BOD, DOC, $SAC_{tot}$, $SAC_{diss.}$ and $UVT_{254}$ in the drain/outlet with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481052 |
| **NiCaVis® 705 IQ TS** | Like NiCaVis® 705 IQ, but with TS | 481053 |

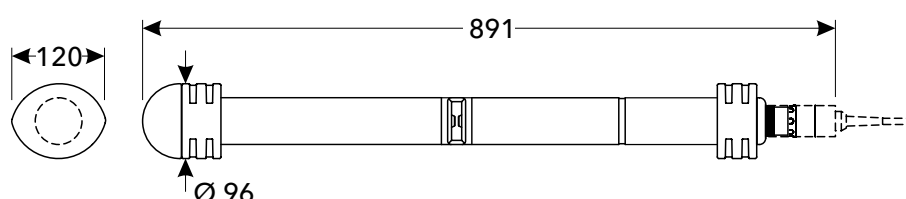# Digital optical UV spectral probe NitraVis® NI for nitrate and nitrite

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

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

NitraVis® 701 IQ NI, NitraVis® 705 IQ NI



Socket SACIQ...

**With shock protection:**



## Technical Data

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

| Model | Description | Order No. |
|---|---|---|
| **NitraVis® 701 IQ NI** | Spectral nitrate and nitrite probe for measuring in the inlet/aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481056 |
| **NitraVis® 705 IQ NI** | Like NitraVis®705 IQ NI, but for measuring in the drain/outlet | 481057 |

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

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

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

## Technical Data

| Model | NiCaVis® 701 IQ NI | NiCaVis® 705 IQ NI |
|---|---|---|
| **Measuring method** | Spectral Measurement in the UV Range (200–390 nm) | |
| **Measuring gap** (optical layer thickness) | 1 mm | 5 mm |
| **Application** (optimized for) | Municipal wastewater: | Municipal wastewater: |

| **Measuring range and Resolution** | | | | |
|---|---|---|---|---|
| | **Inlet:** | | | |
| $NO_3$ | 0.0 ... 300.0 mg/l | 0.1 mg/l | | |
| $NO_3$-N | 0.00 ... 60.00 mg/l | 0.01 mg/l | | |
| $NO_2$ | 0.0 ... 120.0 mg/l | 0.1 mg/l | | |
| $NO_2$-N | 0.00 ... 30.00 mg/l | 0.01 mg/l | | |
| $COD_{total}$ | 0 ... 20,000 mg/l | 1 mg/l | | |
| $COD_{dissolv}$ | 0 ... 12,500 mg/l | 1 mg/l | | |
| TOC | 0 ... 20,000 mg/l | 1 mg/l | | |
| DOC | 0 ... 12,500 mg/l | 1 mg/l | | |
| BOD | 0 ... 8,000 mg/l | 1 mg/l | | |
| $SAC_{254\ total}$ | 0 ... 5,000 1/m | 1 1/m | | |
| $UVT_{254\ total}$* | 0 ... 100.0 % | 0.1 % | | |
| | **Aeration:** | | | |
| $NO_3$ | 0.0 ... 300.0 mg/l | 0.1 mg/l | | |
| $NO_3$-N | 0.00 ... 60.00 mg/l | 0.01 mg/l | | |
| $NO_2$ | 0.0 ... 120.0 mg/l | 0.1 mg/l | | |
| $NO_2$-N | 0.00 ... 30.00 mg/l | 0.01 mg/l | | |
| $COD_{dissolv}$ | 0 ... 12,500 mg/l | 1 mg/l | | |
| DOC | 0 ... 12,500 mg/l | 1 mg/l | | |
| $SAC_{254\ total}$ | 0 ... 5,000 1/m | 1 1/m | | |
| $UVT_{254\ total}$* | 0 ... 100.0 % | 0.1 % | | |
| | *Effluent:* | | **Effluent:** | |
| $NO_3$ | *0.0 ... 750.0 mg/l* | *0.1 mg/l* | 0.0 ... 250.0 mg/l | 0.1 mg/l |
| $NO_3$-N | *0.0 ... 150.0 mg/l* | *0.1 mg/l* | 0.00 ... 50.00 mg/l | 0.01 mg/l |
| $NO_2$ | *0.0 ... 300.0 mg/l* | *0.1 mg/l* | 0.0 ... 100.0 mg/l | 0.1 mg/l |
| $NO_2$-N | *0.00 ... 75.00 mg/l* | *0.01 mg/l* | 0.00 ... 25.00 mg/l | 0.01 mg/l |
| $COD_{total}$ | *0 ... 4.000 mg/l* | *1 mg/l* | 0.0 ... 800.0 mg/l | 1 mg/l |
| $COD_{dissolv}$ | *0 ... 4.000 mg/l* | *1 mg/l* | 0.0 ... 800.0 mg/l | 1 mg/l |
| TOC | *0 ... 2.500 mg/l* | *1 mg/l* | 0.0 ... 500.0 mg/l | 1 mg/l |
| DOC | *0 ... 2.500 mg/l* | *1 mg/l* | 0.0 ... 500.0 mg/l | 1 mg/l |
| BOD | *0 ... 2.500 mg/l* | *1 mg/l* | 0.0 ... 500.0 mg/l | 1 mg/l |
| $SAC_{254\ total}$ | *0 ... 3.000 1/m* | *1 1/m* | 0.0 ... 600.0 1/m | 1 1/m |
| $UVT_{254\ total}$* | *0 ... 100.0 %* | *0.1 %* | 0.0 ... 100.0 % | 0.1 % |

| **Accuracy** (standard application muni. WWTP) | $NO_3$-N, $NO_2$-N: ±3 % of measured value ±0.5 mg/l<br>Carbon parameters: ±5 % of measured value ±2.5 mg/l<br>SAC: ±0.5 % of measured value ±0.4 SAK<br>UVT: <10 % UVT ±1 % UVT of measured value; >10 % UVT ±0.1 % UVT of measured value |
|---|---|

| | | |
|---|---|---|
| **Flow rate** | ≤ 3 m/s | NiCaVis® 701 IQ NI, NiCaVis® 705 IQ NI |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | |
| **Electromagnetic Compatibility** | EN 61326. Class B. FCC Class A<br>Intended for indispensable operation | |
| **Certifications** | CE | |
| **Mechanical** | Housing: Titan Grade 2. PEEK, Window: Sapphire glass<br>Protection class: IP 68 | |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) | |
| **Warranty** | 2 years for defects in quality | |

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

| Model | Description | Order No. |
|---|---|---|
| **NiCaVis® 701 IQ NI** | Spectral UV sensor for the measurement of nitrite. nitrate. $COD_{tot}$. $COD_{diss}$.. TOC. BOD. DOC. $SAC_{tot}$.. $SAC_{diss}$.. $UVT_{254}$ in the inlet and in the aeration with integrated ultrasonic cleaning. multifunctional slide and shock-absorption-rings. without connecting cable (order SACIQ separately) | 481054 |
| **NiCaVis® 705 IQ NI** | Like NiCaVis® 701 IQ NI. but for the measurement in the drain/outlet | 481055 |

# Optical nitrate sensor UV 70x IQ NOx

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

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

UV 701 IQ NOx, UV 705 IQ NOx



865

774

381

Ø 60

Socket SACIQ...

With shock protection:



120

891

Ø 96
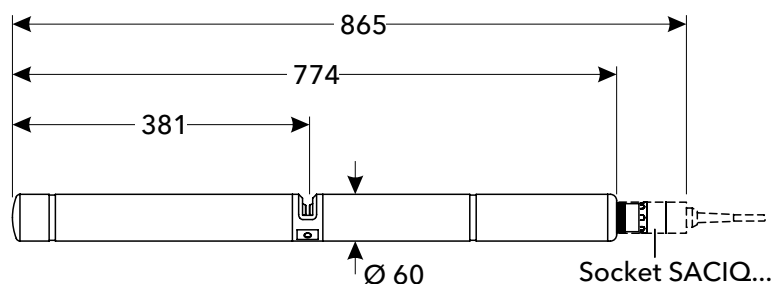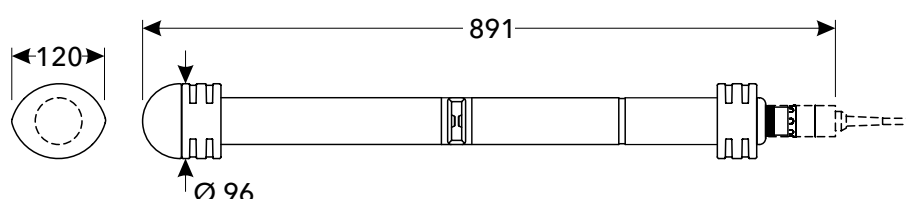
## Technical Data

| Model | UV 701 IQ NOx | | UV 705 IQ NOx | |
|---|---|---|---|---|
| **Measuring method** | UV Single Wavelengths Absorption Measurement | | | |
| **Measuring gap** (optical layer thickness) | 1 mm | | 5 mm | |
| **Application** (optimized for) | Municipal wastewater with a low proportion of industrial wastewater, waste water treatment plants, surface water | | | |
| **Measuring range and Resolution** NO$_X$ / NO$_X$-N | 0.0 ... 500.0 mg/l / 0.0 ... 100.0 mg/l | 0.1 mg/l / 0.1 mg/l | 0.0 ... 100.0 mg/l / 0.0 ... 20.0 mg/l | 0.1 mg/l / 0.1 mg/l |
| **Accuracy** (standard application muni. WWTP) | NO$_X$-N: ± 3 % of measured value ± 0.5 mg/l | | | |
| **Flow rate** | ≤ 3 m/s | | | |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) | | | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | | | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A Intended for indispensable operation | | | |
| **Certifications** | CE | | | |
| **Mechanical** | Housing: Titan Grade 2, PEEK Window: Sapphire glass Protection class: IP 68 | | | |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) | | | |
| **Warranty** | 2 years for defects in quality | | | |

| Model | Description | Order No. |
|---|---|---|
| **UV 701 IQ NOx** | Optical nitrate (NOx) sensor to measure higher concentration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481034 |
| **UV 705 IQ NOx** | Like UV 701 IQ NOx, but to measure low concentrations | 481035 |

**WTW**
a xylem brand

999237US

January 2020

# Digital optical UV-VIS spectral sensors CarboVis®

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

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

## Technical Data

| Model | CarboVis® 701 IQ | CarboVis® 705 IQ | CarboVis® 701 IQ TS | CarboVis® 705 IQ TS |
|---|---|---|---|---|
| **Measuring method** | Spectral Measurement in the UV-VIS Range (200–720 nm) | | | |
| **Measuring gap** (optical layer thickness) | 1 mm | 5 mm | 1 mm | 5 mm |
| **Application** (optimized for) | Municipal wastewater: | Municipal wastewater: | Municipal wastewater: | Municipal wastewater: |

**Measuring range and Resolution**

| | | CarboVis® 701 IQ | | CarboVis® 705 IQ | | CarboVis® 701 IQ TS | | CarboVis® 705 IQ TS |
|---|---|---|---|---|---|---|---|---|
| | | **Inlet:** | | | | **Inlet:** | | |
| $COD_{total}$ | | 0 … 20,000 mg/l | 1 mg/l | | | 0 … 20,000 mg/l | 1 mg/l | |
| $COD_{dissolv}$ | | 0 … 12,500 mg/l | 1 mg/l | | | 0 … 12,500 mg/l | 1 mg/l | |
| TOC | | 0 … 20,000 mg/l | 1 mg/l | | | 0 … 20,000 mg/l | 1 mg/l | |
| DOC | | 0 … 12,500 mg/l | 1 mg/l | | | 0 … 12,500 mg/l | 1 mg/l | |
| BOD | | 0 … 8,000 mg/l | 1 mg/l | | | 0 … 8,000 mg/l | 1 mg/l | |
| $SAC_{254\ total}$ | | 0.0 … 5,000 1/m | 1 1/m | | | 0.0 … 5,000 1/m | 1 1/m | |
| $SAC_{254\ dissolv}$ | | 0.0 … 3,000 1/m | 1 1/m | | | 0.0 … 3,000 1/m | 1 1/m | |
| $UVT_{254\ total}$* | | 0.0 … 100.0 % | 0.1 % | | | 0.0 … 100.0 % | 0.1 % | |
| $UVT_{254\ dissolv}$* | | 0.0 … 100.0 % | 0.1 % | | | 0.0 … 100.0 % | 0.1 % | |
| TSS | | | | | | 0.00 … 15.00 g/l | 0.01 g/l | |
| | | **Aeration:** | | | | **Aeration:** | | |
| $COD_{dissolv}$ | | 0 … 12,500 mg/l | 1 mg/l | | | 0 … 12,500 mg/l | 1 mg/l | |
| DOC | | 0 … 12,500 mg/l | 1 mg/l | | | 0 … 12,500 mg/l | 1 mg/l | |
| $SAC_{254\ total}$ | | 0.0 … 5,000 1/m | 1 1/m | | | 0.0 … 5,000 1/m | 1 1/m | |
| $SAC_{254\ dissolv}$ | | 0.0 … 3,000 1/m | 1 1/m | | | 0.0 … 3,000 1/m | 1 1/m | |
| $UVT_{254\ total}$* | | 0.0 … 100.0 % | 0.1 % | | | 0.0 … 100.0 % | 0.1 % | |
| $UVT_{254\ dissolv}$* | | 0.0 … 100.0 % | 0.1 % | | | 0.0 … 100.0 % | 0.1 % | |
| TSS | | | | | | 0.00 … 20.00 g/l | 0.01 g/l | |
| | | *Effluent:* | | **Effluent:** | | *Effluent:* | | **Effluent:** |
| $COD_{total}$ | | *0 … 4,000 mg/l* | *1 mg/l* | 0.0 … 800.0 mg/l | 0.1 mg/l | *0 … 4,000 mg/l* | *1 mg/l* | 0.0 … 800.0 mg/l | 0.1 mg/l |
| $COD_{dissolv}$ | | *0 … 4,000 mg/l* | *1 mg/l* | 0.0 … 800.0 mg/l | 0.1 mg/l | *0 … 4,000 mg/l* | *1 mg/l* | 0.0 … 800.0 mg/l | 0.1 mg/l |
| TOC | | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l |
| DOC | | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l |
| BOD | | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l | *0 … 2,500 mg/l* | *1 mg/l* | 0.0 … 500.0 mg/l | 0.1 mg/l |
| $SAC_{254\ total}$ | | *0.0 … 3,000 1/m* | *1 1/m* | 0.0 … 600.0 1/m | 0.1 1/m | *0.0 … 3,000 1/m* | *1 1/m* | 0.0 … 600.0 1/m | 0.1 1/m |
| $SAC_{254\ dissolv}$ | | *0.0 … 3,000 1/m* | *1 1/m* | 0.0 … 600.0 1/m | 0.1 1/m | *0.0 … 3,000 1/m* | *1 1/m* | 0.0 … 600.0 1/m | 0.1 1/m |
| $UVT_{254\ total}$* | | *0.0 … 100.0 %* | *0.1 %* | 0.0 … 100.0 % | 0.1 % | *0.0 … 100.0 %* | *0.1 %* | 0.0 … 100.0 % | 0.1 % |
| $UVT_{254\ dissolv}$* | | *0.0 … 100.0 %* | *0.1 %* | 0.0 … 100.0 % | 0.1 % | *0.0 … 100.0 %* | *0.1 %* | 0.0 … 100.0 % | 0.1 % |
| TSS | | | | | | *0 … 4,500 mg/l* | *1 mg/l* | 0.0 … 900.0 mg/l | 0.1 mg/l |

| **Accuracy** (standard application muni. WWTP) | Carbon parameters: ±5 % of measured value ±2.5 mg/l<br>SAC: ±0.5 % of measured value ±0.4 SAK<br>UVT: <10 % UVT ±1 % UVT of measured value; >10 % UVT ±0.1 % UVT of measured value<br>TSS: ±5 % of measured value ±50 mg/l |
|---|---|
| **Flow rate** | ≤ 3 m/s |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation |
| **Certifications** | CE |
| **Mechanical** | Housing: Titan Grade 2, PEEK; Window: Sapphire glass<br>Protection class: IP 68 |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) |
| **Warranty** | 2 years for defects in quality |

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

865
774
381
Ø 60
Socket SACIQ...

With shock protection:
120
891
Ø 96

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

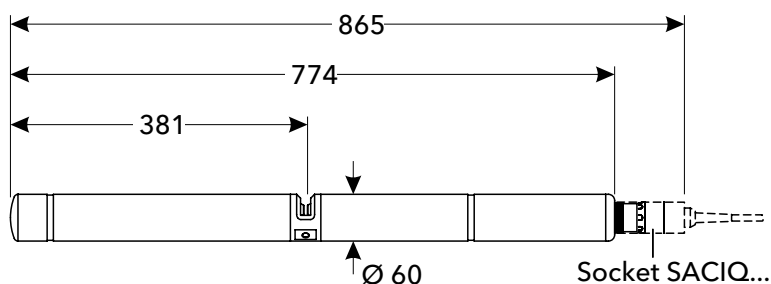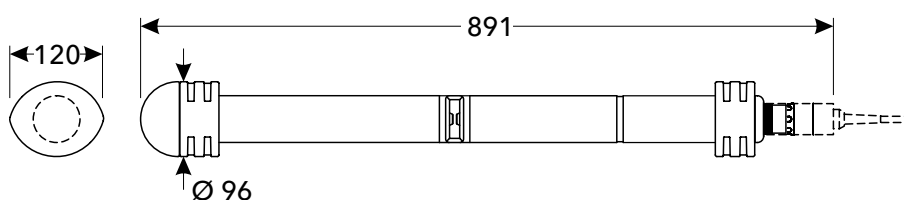| Model | Description | Order No. |
|---|---|---|
| **CarboVis® 701 IQ** | Spectral UV-VIS probe to measure $COD_{tot}$, $COD_{diss}$, TOC, BOD, DOC, $SAC_{tot}$, $SAC_{diss}$ and $UVT_{254}$ in the inlet and the aeration with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481048 |
| **CarboVis® 705 IQ** | Like CarboVis® 701 IQ, but for the measurement in the drain | 481050 |
| **CarboVis® 701 IQ TS** | Like CarboVis® 701 IQ, but to measure suspended solids included | 481049 |
| **CarboVis® 705 IQ TS** | Like CarboVis® 701 IQ TS, but for the measurement in the drain | 481051 |

# Optical SAC and UVT sensor
# UV 70x IQ SAC

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

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

UV 701 IQ SAC, UV 705 IQ SAC



**With shock protection:**



## Technical Data

| Model | UV 701 IQ SAC | | UV 705 IQ SAC | |
|---|---|---|---|---|
| **Measuring method** | UV-Absorptionsmessung 254 nm (Kompensation 550 nm) | | | |
| **Measuring gap** (optical layer thickness) | 1 mm | | 5 mm | |
| **Application** (optimized for) | Municipal wastewater with a low proportion of industrial wastewater, wastewater treatment plants, surface water | | | |
| **Measuring range and Resolution** | $COD_{total}$ | 0.0 ... 20,000 mg/l  1 mg/l | | 0.0 ... 800 mg/l  0.1 mg/l |
| | $COD_{dissolv}$ | 0.0 ... 12,500 mg/l  1 mg/l | | 0.0 ... 800 mg/l  0.1 mg/l |
| | TOC | 0.0 ... 20,000 mg/l  1 mg/l | | 0.0 ... 500.0 mg/l  0.1 mg/l |
| | DOC | 0.0 ... 12,500 mg/l  1 mg/l | | 0.0 ... 500.0 mg/l  0.1 mg/l |
| | BOD | 0.0 ... 8,000 mg/l  1 mg/l | | 0.0 ... 500.0 mg/l  0.1 mg/l |
| | $SAC_{254\ total}$ | 0.0 ... 3,000 1/m  1 1/m | | 0.0 ... 600.0 1/m  0.1 1/m |
| | $SAC_{254\ dissolv}$ | 0.0 ... 3,000 1/m  1 1/m | | 0.0 ... 600.0 1/m  0.1 1/m |
| | $UVT_{254\ total}$* | 0.0 ... 100.0 %  0.1 % | | 0.0 ... 100.0 %  0.1 % |
| | $UVT_{254\ dissolv}$* | 0.0 ... 100.0 %  0.1 % | | 0.0 ... 100.0 %  0.1 % |
| **Accuracy** (standard application muni. WWTP) | Carbon parameters: ±5 % of measured value ±2.5 mg/l<br>SAC: ±0.5 % of measured value ±0.4 SAK<br>UVT: <10 % UVT ±1 % UVT of measured value; >10 % UVT ±0.1 % UVT of measured value | | | |
| **Flow rate** | ≤ 3 m/s | | | |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) | | | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | | | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation | | | |
| **Certifications** | CE | | | |
| **Mechanical** | Housing: Titan Grade 2, PEEK<br>Window: Sapphire glass<br>Protection class: IP 68 | | | |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) | | | |
| **Warranty** | 2 years for defects in quality | | | |

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

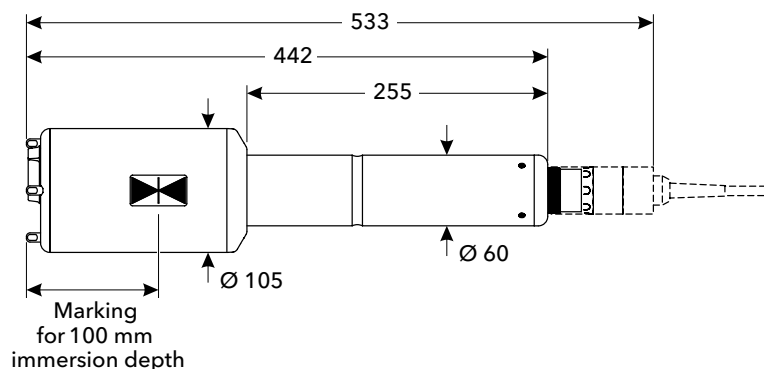| Model | Description | Order No. |
|---|---|---|
| **UV 701 IQ SAC** | Optical SAC and UVT sensor (254 nm) to measure higher concentrations with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings, without connecting cable (order SACIQ separately) | 481036 |
| **UV 705 IQ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

a **xylem** brand

# Digital IQ sensor IFL 700 IQ to determine the sludge level

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

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



## Technical Data

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

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

# Ammonium Analyzer Alyza IQ

To monitor the oulet of a wastewater treatment plant and for river monitoring with the IQ Sensor Net (Systems 2020 and 282/284)

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

Required space

Space to open the lid

approx. 200

Access to lid screws from both sides

Lid

Front view:

775

675

Lateral view:

540

445

approx. 500

Space for connections

Opening angle 180 °
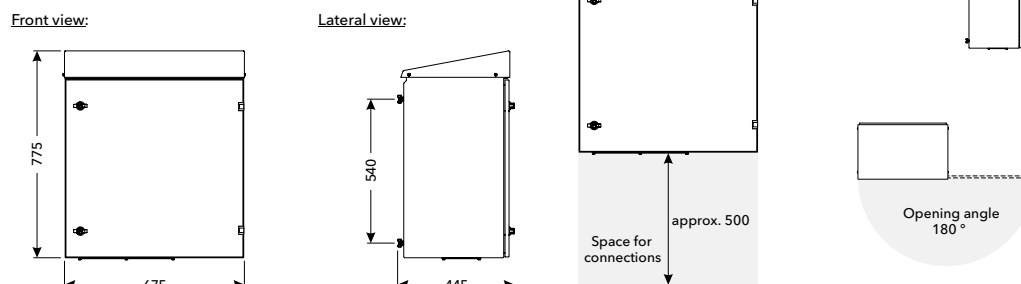
## Technical Data

| Model | Alyza IQ NH$_4$-111 | Alyza IQ NH$_4$-112 |
|---|---|---|
| **Measuring method** | Berthelot method (Indophenol method) | |
| **Measuring range** **MR 1:** | 0.02 … 5.00 mg/l NH$_4$-N | |
| Displayed: | 0.00 … 5.00 mg/l NH$_4$-N | |
| **Resolution** | 0.01 mg/l NH$_4$-N | |
| **Accuracy** | ±2 % ±0.02 mg/l | |
| **Measuring range** **MR 2:** | 0.10 … 20.00 mg/l NH$_4$-N | |
| Displayed: | 0.00 … 20.00 mg/l NH$_4$-N | |
| **Resolution** | 0.01 mg/l NH$_4$-N | |
| **Accuracy** | ±3 % ±0.10 mg/l | |
| **Sample streams/channels** | 1 channel | 2 channel |
| **pH range** | 5 … 9 | |
| **Sample temperature** | +39 ... +113 °F (+4 … +45 °C) | |
| **Filtration unit** | Filter/PC, FM-Case/PC (please order separately) | |
| **Cleaning** | Automatic cleaning with cleaning solution | |
| **Calibration** | Automatic 1- and 2-point calibration | |
| **Ambient conditions** | Operational temperature: -4 ... +104 °F (-20 … +40 °C); Storage temperature: -4 ... +122 °F (-20 … +50 °C) | |
| **Electrical connection** | 120 VAC / 240 VAC, 50/60 Hz | |
| **Mechanics** | Housing: powder-coated aluminum, UV resistant Overflow vessel: PMMA | |
| **Weight** | Approx. 81.6 lb (37 kg) (without liquids) | |
| **Warranty** | 2 years | |

*Subject to technical modifications.*

| Model | Description | Order No. |
|---|---|---|
| **Alyza IQ NH$_4$-111** | NH$_4$ analyzer, 1-channel, with 2 measuring ranges, Indophenol method, connectable to the IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825011 |
| **Alyza IQ NH$_4$-112** | NH$_4$ analyzer, 2-channel, with 2 measuring ranges, Indophenol method, connectable to the IQ Sensor Net Systems 2020 and 282/284, provides 10 W to the IQ Sensor Net; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825012 |
| **Reagent sets** | | |
| **R-Set NH4/1-1** | Reagents for Alyza IQ NH$_4$, when using MR 1 | 827540 |
| **R-Set NH4/1-2** | Reagents for Alyza IQ NH$_4$, when using MR 2 | 827541 |
| **SC-Set NH4/1-1_0/1** | Calibration standards and cleaning solution for Alyza IQ NH$_4$, when using MR 1; Calibration standards with 0 mg/l and 1 mg/l | 827545 |
| **SC-Set NH4/1-1_0/4** | Calibration standards and cleaning solution for Alyza IQ NH$_4$, when using MR 1; Calibration standards with 0 mg/l and 4 mg/l | 827546 |
| **SC-Set NH4/1-2_0/16** | Calibration standards and cleaning solution for Alyza IQ NH$_4$, when using MR 2; Calibration standards with 0 mg/l and 16 mg/l | 827547 |

# Orthophosphate Analyzer Alyza IQ

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

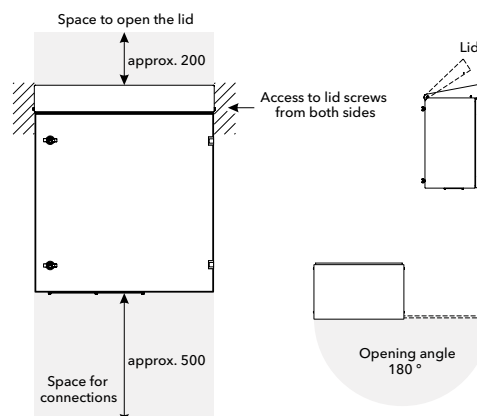*We would like to inform you about the application range on our website*

**Required space**



**Front view:**
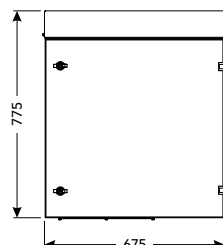
**Lateral view:**
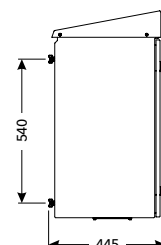
## Technical Data

| Model | Alyza IQ PO$_4$-111 | Alyza IQ PO$_4$-112 | Alyza IQ PO$_4$-121 | Alyza IQ PO$_4$-122 |
|---|---|---|---|---|
| **Measuring method** | Molybdate vanadate method (Yellow method) | | | |
| **Measuring range**<br>**Resolution**<br>**Accuracy** | **MR 1:**  0.02 … 15.00 mg/l PO$_4$-P<br>Displayed: 0.00 … 15.00 mg/l PO$_4$-P<br>0.01 mg/l PO$_4$-P<br>± 2 % ± 0.02 mg/l | | **MR 2:**  0.2 … 50.0 mg/l PO$_4$-P<br>Displayed: 0.0 … 50.0 mg/l PO$_4$-P<br>0.05 mg/l PO$_4$-P<br>± 2 % ± 0.2 mg/l | |
| **Sample streams/channels** | 1 channel | 2 channel | 1 channel | 2 channel |
| **pH range** | 5 … 9 | | | |
| **Sample temperature** | +39 ... +113 °F (+4 … +45 °C) | | | |
| **Filtration unit** | Filter/PC, FM-Case/PC (please order separately) | | | |
| **Cleaning** | Automatic cleaning with cleaning solution | | | |
| **Calibration** | Automatic 1- and 2-point calibration | | | |
| **Ambient conditions** | Operational temperature: -4 … +104 °F (-20 … +40 °C); Storage temperature: -4 ... +122 °F (-20 … +50 °C) | | | |
| **Electrical connection** | 120 VAC / 240 VAC, 50/60 Hz | | | |
| **Mechanics** | Housing: powder-coated aluminum, UV resistant<br>Overflow vessel: PMMA | | | |
| **Weight** | Approx. 81.6 lb (37 kg) (without liquids) | | | |
| **Warranty** | 2 years | | | |

*Subject to technical modifications.*

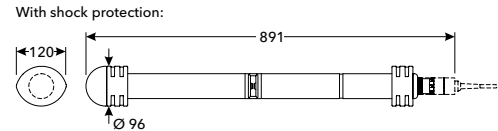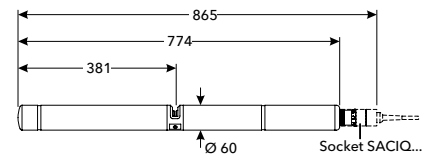| Model | Description | Order No. |
|---|---|---|
| **Alyza IQ PO$_4$-111** | PO$_4$ analyzer, 1-channel, with MR 1, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825511 |
| **Alyza IQ PO$_4$-112** | PO$_4$ analyzer, 2-channel, with MR 1, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825512 |
| **Alyza IQ PO$_4$-121** | PO$_4$ analyzer, 1-channel, with MR 2, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825521 |
| **Alyza IQ PO$_4$-122** | PO$_4$ analyzer, 2-channel, with MR 2, yellow method, connectable to IQ SENSOR NET Systems 2020 and 282/284, provides 10 W to the IQ SENSOR NET; including 2 m SNCIQ cable, reagent sets need to be ordered separately | 825522 |
| **Reagent sets** | | |
| **R-Set PO4/1-1** | Reagents for Alyza IQ PO$_4$-X1X with MR 1 | 827550 |
| **R-Set PO4/1-2** | Reagents for Alyza IQ PO$_4$-X2X with MR 2 | 827551 |
| **SC-Set PO4/1-1_0/1** | Calibration standards and cleaning solution for Alyza IQ PO$_4$-X1X with MR 1; Calibration standards with 0 mg/l and 1 mg/l | 827555 |
| **SC-Set PO4/1-1_0/10** | Calibration standards and cleaning solution for Alyza IQ PO$_4$-X1X with MR 1; Calibration standards with 0 mg/l and 10 mg/l | 827556 |
| **SC-Set PO4/1-2_10/40** | Calibration standards and cleaning solution for Alyza IQ PO$_4$-X2X with MR 2; Calibration standards with 10 mg/l and 40 mg/l | 827557 |

999221US

January 2020

# NiCaVis® optical sensors for surface water monitoring

Multiparameter-sensors with ultrasonic cleaning technology for the reagent-free measurement of color, nitrate, nitrite, carbon parameters and total suspended solids in rivers and lakes.

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

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



With shock protection:

## Technical Data

| Model | NiCaVis® 705 IQ SF | | NiCaVis® 705 IQ NI SF | | NiCaVis®705 IQ SF Co | |
|---|---|---|---|---|---|---|
| Measuring method | Spectral measurement in the UV-VIS range of 200-720 nm | | Spectral measurement in the UV range of 200–390 nm | | Spectral measurement in the UV-VIS range of 200-720 nm | |
| Measuring gap (optical layer thickness) | 5 mm | | | | | |
| Application (optimized for) | Surface water e.g. rivers and lakes | | | | | |
| **Measuring range and Resolution** | | | | | | |
| $NO_3$ | 0.0 ... 250.0 mg/l | 0.1 mg/l | 0.0 ... 250.0 mg/l | 0.1 mg/l | 0.0 ... 250.0 mg/l | 0.1 mg/l |
| $NO_3$-N | 0.00 ... 50.00 mg/l | 0.01 mg/l | 0.00 ... 50.00 mg/l | 0.01 mg/l | 0.00 ... 50.00 mg/l | 0.01 mg/l |
| $NO_2$ | | | 0.0 ... 100.0 mg/l | 0.1 mg/l | | |
| $NO_2$-N | | | 0.00 ... 25.00 mg/l | 0.01 mg/l | | |
| $COD_{diss.}$ | 0.0 ... 800.0 mg/l | 0.1 mg/l | 0.0 ... 800.0 mg/l | 0.1 mg/l | 0.0 ... 800.0 mg/l | 0.1 mg/l |
| TOC | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| DOC | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| BOD | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| $SAC_{254\ total}$ | 0.0 ... 600.0 1/m | 1 1/m | 0.0 ... 600.0 1/m | 1 1/m | 0.0 ... 600.0 1/m | 1 1/m |
| $SAC_{254\ diss.}$ | 0.0 ... 600.0 1/m | 1 1/m | | | 0.0 ... 600.0 1/m | 1 1/m |
| $UVT_{254\ total}$* | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % |
| $UVT_{254\ diss.}$* | 0.0 ... 100.0 % | 0.1 % | | | 0.0 ... 100.0 % | 0.1 % |
| TSS | 0.0 ... 900.0 mg/l | 0.1 mg/l | | | | |
| Hazen 340 nm | | | | | 0 ... 1,050 mg/l Pt/Co | 1 mg/l |
| Hazen 350 nm | | | | | 0 ... 1,150 mg/l Pt/Co | 1 mg/l |
| Hazen 390 nm | | | | | 0 ... 2,100 mg/l Pt/Co | 1 mg/l |
| Hazen 445 nm | | | | | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| Hazen 455 nm | | | | | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| Hazen 465 nm | | | | | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| ISO 410 nm | | | | | 0 ... 5,300 mg/l Pt/Co | 1 mg/l |
| **Accuracy** (standard application surface water) | $NO_3$-N, $NO_2$-N: ±3 % of measured value ±0.5 mg/l<br>Carbon parameters: ±5 % of measured value ±2.5 mg/l<br>SAC: ±0.5 % of measured value ±0.4 SAK<br>UVT: <10 % UVT ±1 % UVT of measured value; >10% UVT ±0.1 % UVT of measured value<br>TSS: ±5 % of measured value ±50 mg/l | | | | | |
| **Turbidity compensation** | For color parameters: selectable | | | | | |
| **Flow rate** | ≤3 m/s | | | | | |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) | | | | | |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor | | | | | |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation | | | | | |
| **Certifications** | CE | | | | | |
| **Mechanical** | Housing: Titan Grade 2, PEEK; Window: Sapphire glass; Protection class: IP 68 | | | | | |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) | | | | | |
| **Warranty** | 2 years for defects in quality | | | | | |

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

| Model | Description | Order No. |
|---|---|---|
| **NiCaVis® 705 IQ SF** | Spectral UV-VIS probe to measure Nitrate, $COD_{diss.}$, TOC, BOD, DOC, SAC, $UVT_{254}$ and TSS in surface waters with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings | 481058 |
| **NiCaVis® 705 IQ NI SF** | Spectral UV probe to measure Nitrate, Nitrite, $COD_{diss.}$, TOC, BOD, DOC, SAC and $UVT_{254}$ in surface waters with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings | 481059 |
| **NiCaVis® 705 IQ SF Co** | Spectral UV-VIS probe to measure Nitrate, Color, $COD_{diss.}$, TOC, BOD, DOC, SAC and $UVT_{254}$ in surface waters with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings | 481060 |

*All probes without connecting cable (order SACIQ separately)*
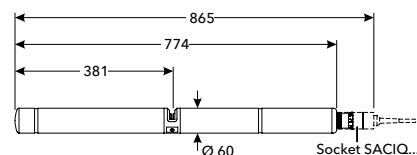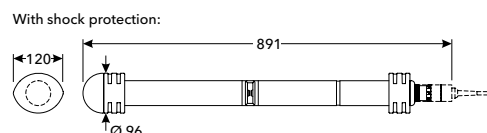
a xylem brand

# Digital optical sensors for color, carbon, TSS and nitrate

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

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

ColorVis 705 IQ,
CarboVis® 705 IQ TS Co,
NiCaVis® 705 IQ TS Co

865
774
381
Ø 60
Socket SACIQ...

With shock protection:
120
891
Ø 96

## Technical Data

| Model | ColorVis 705 IQ | CarboVis® 705 IQ TS Co | NiCaVis® 705 IQ TS Co |
|---|---|---|---|
| **Measuring method** | Absorbance Measurement at selected wavelength | Spectral measurement in the UV-VIS range of 200-720 nm | |
| **Measuring gap** (optical layer thickness) | 5 mm | | |
| **Application** (optimized for) | Municipal wastewater: | | |

| Measuring range and Resolution | ColorVis 705 IQ Effluent: | | CarboVis 705 IQ TS Co Effluent: | | NiCaVis 705 IQ TS Co Effluent: | |
|---|---|---|---|---|---|---|
| $NO_3$ | | | | | 0.0 ... 250.0 mg/l | 0.1 mg/l |
| $NO_3$-N | | | | | 0.00 ... 50.00 mg/l | 0.01 mg/l |
| COD $_{total}$ | | | 0.0 ... 800.0 mg/l | 0.1 mg/l | 0.0 ... 800.0 mg/l | 0.1 mg/l |
| COD$_{dissolv}$* | | | 0.0 ... 800.0 mg/l | 0.1 mg/l | 0.0 ... 800.0 mg/l | 0.1 mg/l |
| TOC | | | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| DOC | | | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| BOD | | | 0.0 ... 500.0 mg/l | 0.1 mg/l | 0.0 ... 500.0 mg/l | 0.1 mg/l |
| SAC$_{254\ total}$ | | | 0.0 ... 600.0 1/m | 0.1 1/m | 0.0 ... 600.0 1/m | 0.1 1/m |
| SAC$_{254\ dissolv}$ | | | 0.0 ... 600.0 1/m | 0.1 1/m | 0.0 ... 600.0 1/m | 0.1 1/m |
| UVT$_{254\ total}$* | | | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % |
| UVT$_{254\ dissolv}$* | | | 0.0 ... 100.0 % | 0.1 % | 0.0 ... 100.0 % | 0.1 % |
| TSS | | | 0.0 ... 900.0 mg/l | 0.1 mg/l | 0.0 ... 900.0 mg/l | 0.1 mg/l |
| Hazen 340 nm | 0 ... 1,050 mg/l Pt/Co | 1 mg/l | 0 ... 1,050 mg/l Pt/Co | 1 mg/l | 0 ... 1,050 mg/l Pt/Co | 1 mg/l |
| Hazen 350 nm | 0 ... 1,150 mg/l Pt/Co | 1 mg/l | 0 ... 1,150 mg/l Pt/Co | 1 mg/l | 0 ... 1,150 mg/l Pt/Co | 1 mg/l |
| Hazen 390 nm | 0 ... 2,100 mg/l Pt/Co | 1 mg/l | 0 ... 2,100 mg/l Pt/Co | 1 mg/l | 0 ... 2,100 mg/l Pt/Co | 1 mg/l |
| Hazen 445 nm | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| Hazen 455 nm | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| Hazen 465 nm | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l | 150 ... 10,000 mg/l Pt/Co | 1 mg/l |
| ISO 410 nm | 0 ... 5,300 mg/l Pt/Co | 1 mg/l | 0 ... 5,300 mg/l Pt/Co | 1 mg/l | 0 ... 5,300 mg/l Pt/Co | 1 mg/l |

| | |
|---|---|
| **Accuracy** (standard application muni. WWTP) | $NO_3$-N: ±3 % of measured value ±0.5 mg/l<br>Carbon parameters: ±5 % of measured value ±2.5 mg/l<br>SAC: ± 0.5 % of measured value ± 0.4 SAK<br>UVT: <10% UVT ±1 % UVT of measured value; >10% UVT ± 0.1 % UVT of measured value<br>TSS: ±5% of measured value ±50mg/l |
| **Turbidity compensation** | For color parameters: selectable |
| **Flow rate** | ≤3 m/s |
| **Pressure Resistance** | Maximum 1 bar (incl. sensor connection cable) |
| **Electrical connections** | 2-wire shield cable with quick fastener to sensor |
| **Electromagnetic Compatibility** | EN 61326, Class B, FCC Class A<br>Intended for indispensable operation |
| **Certifications** | CE |
| **Mechanical** | Housing: Titan Grade 2, PEEK; Window: Sapphire glass; Protection class: IP X8 |
| **Weight** (without cable) | Approx. 8.82 lb (4 kg) |
| **Warranty** | 2 years for defects in quality |

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

| Model | Description | Order No. |
|---|---|---|
| **ColorVis 705 IQ** | Spectral UV-VIS probe for measuring color (Hazen 340, 390, 445, 455, 465, ISO 410) with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings | 481067 |
| **CarboVis® 705 IQ TS Co** | Spectral UV-VIS probe for measuring color, COD$_{tot}$, COD$_{diss.}$, TOC, BOD, DOC, SAC$_{tot.}$, SAC$_{diss.}$, UVT$_{254}$ and TSS in the drain/outlet with integrated ultrasonic cleaning, multifunctional slide and shock-absorption-rings | 481065 |
| **NiCaVis® 705 IQ TS Co** | Like CarboVis® 705 IQ TS Co, but with nitrate | 481066 |

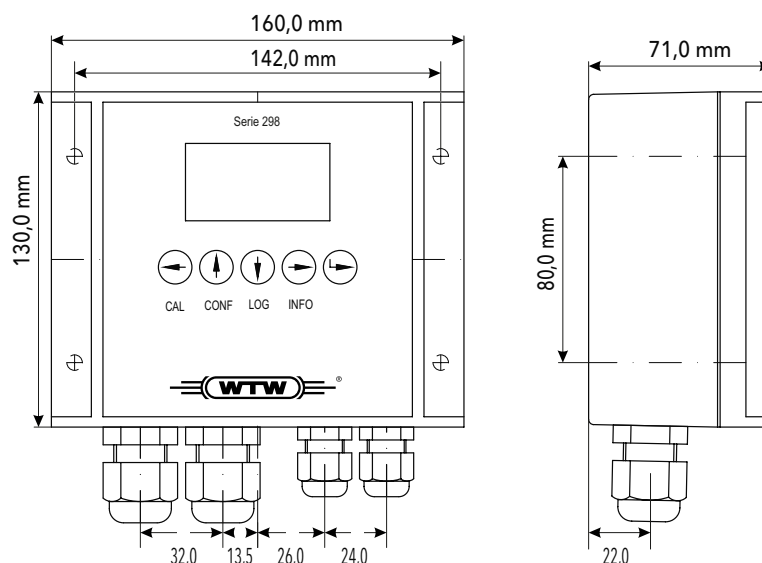*All probes without connecting cable (order SACIQ separately)*

# Analog controllers

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

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

160,0 mm
142,0 mm
130,0 mm
71,0 mm
80,0 mm

Serie 298

CAL   CONF   LOG   INFO

32,0   13,5   26,0   24,0      22,0

## Technical Data

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

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

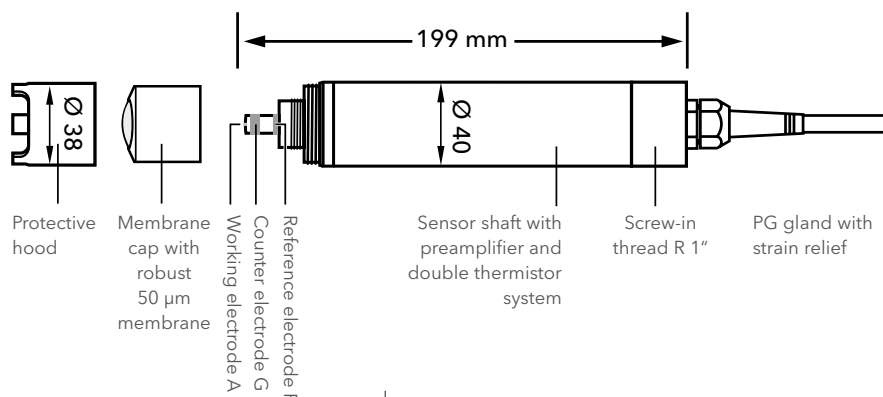| Model | Description | Order No. |
|---|---|---|
| pH 298 NTC | Analog controller to measure pH/ORP, 230 V (and 115 V) and NTC | 191230 |
| pH 298 Pt100 | Analog controller to measure pH/ORP, 230 V (and 115 V) and Pt100 | 191232 |
| pH 298 Pt1000 | Analog controller to measure pH/ORP, 230 V (and 115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

*24V versions available upon request*

# Analog electrochemical oxygen sensors TriOxmatic®

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

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

TriOxmatic® 690, TriOxmatic® 700, TriOxmatic® 701



199 mm

Ø 38 — Protective hood

Membrane cap with robust 50 μm membrane

Working electrode A

Counter electrode G

Reference electrode R

Ø 40 — Sensor shaft with preamplifier and double thermistor system

Screw-in thread R 1"

PG gland with strain relief

## Technical Data

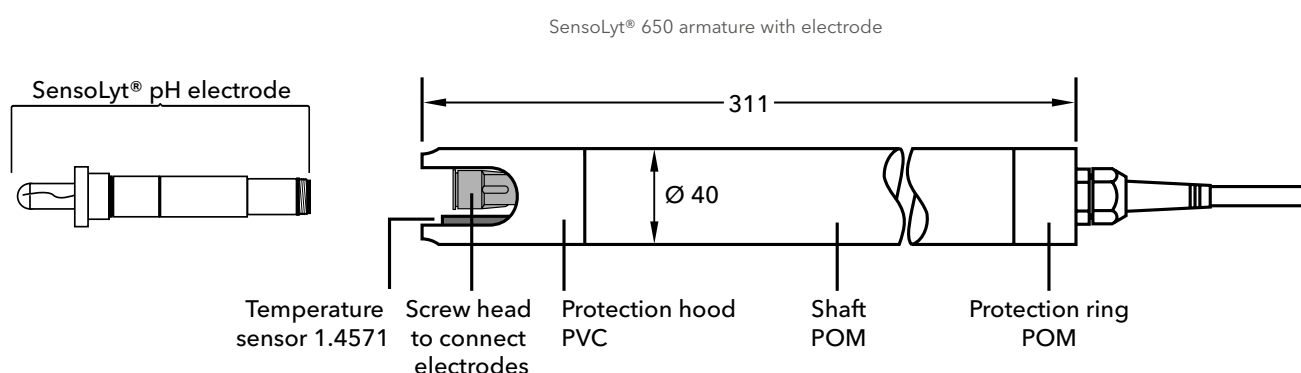| Model | | TriOxmatic® 690 | TriOxmatic® 701 |
|---|---|---|---|
| **Measuring principle** | | Amperometric | |
| **Measuring Range** (25 °C, depends on respective controller) | | | |
| | **O₂ Concentration** | 0.0 ... 60.0 mg/l | 0.00 ... 20.00 mg/l; 0.0 ... 60.0 mg/l |
| | **O2 Saturation** | 0 ...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

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

*a xylem brand*

# Analog pH/ORP armature SensoLyt®

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

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

SensoLyt® 650 armature with electrode

SensoLyt® pH electrode



Temperature sensor 1.4571
Screw head to connect electrodes
Protection hood PVC
Shaft POM
Protection ring POM

## Technical Data

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

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

a **xylem** brand

# Analog pH/ORP electrodes (SensoLyt® series)

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

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

SensoLyt® electrode
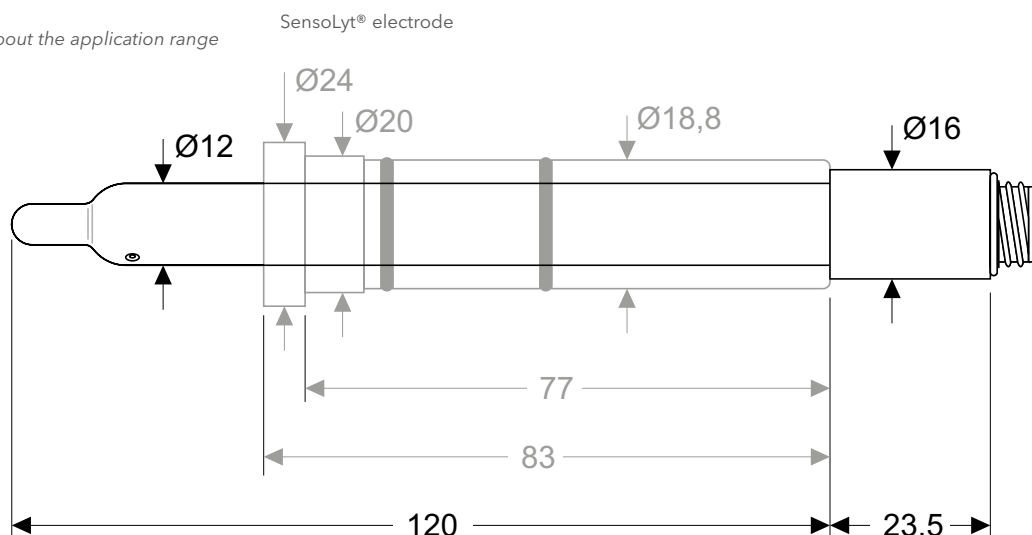


## Technical Data

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

| Model | Description | Order No. |
|---|---|---|
| **SensoLyt® SEA** | pH electrode for heavily loaded wastewater, to be connected to SensoLyt® armature | 109115 |
| **SensoLyt® TFA** | pH electrode for industrial or non typical municipal wastewater, to be connected to SensoLyt® armature | 109114 |
| **SensoLyt® ECA** | pH electrode for normally charged wastewater, to be connected to SensoLyt® armature | 109117 |
| **SensoLyt® SEA-HP** | pH electrode to be used under increased pressure and temperature conditions, to be connected to SensoLyt® armature | 109118 |
| **SensoLyt® DWA** | pH electrode for drinking water, to be connected to SensoLyt® armature | 109119 |
| **SensoLyt® PtA** | ORP electrode for heavily loaded wastewater, to be connected to SensoLyt® armature | 109125 |
| **SensoLyt® PtFA** | ORP electrode for industrial or non typical municipal wastewater, to be connected to SensoLyt® armature | 109126 |
| **SensoLyt® SE** | Like model SEA, but unamored, to be installed by example in flow cells | 109100 |
| **SensoLyt® EC** | Like model ECA, but unamored, to be installed by example in flow cells | 109102 |
| **SensoLyt® DW** | Like model DWA, but unamored, to be installed by example in flow cells | 109103 |
| **SensoLyt® Pt** | Like model PtA, but unamored, to be installed by example in flow cells | 105412 |

999262US September 2021

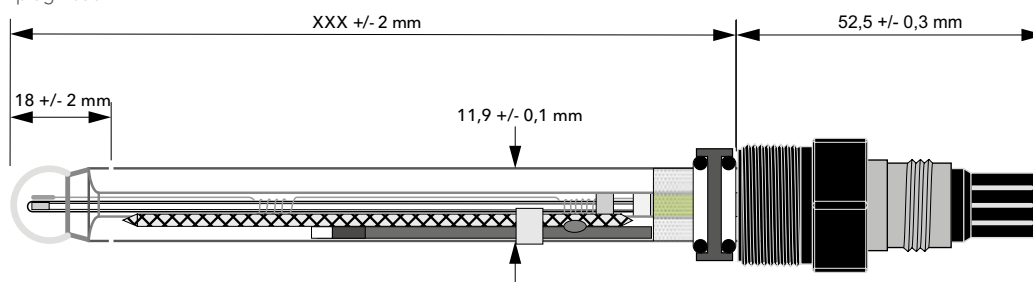# Analog pH/ORP electrodes (ProcessLine®series)

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

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

ProcessLine® electrode with S8 plug head
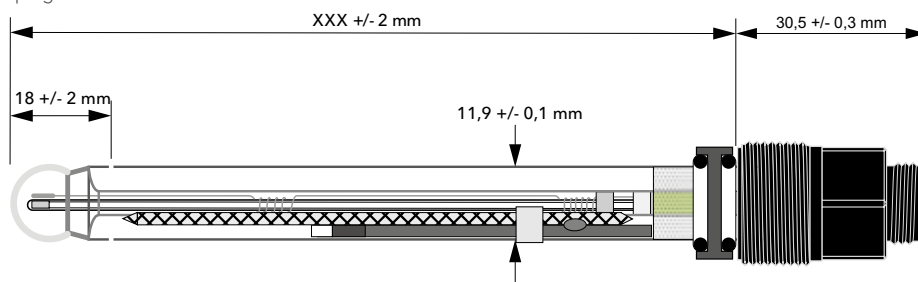


ProcessLine® electrode with VP plug head
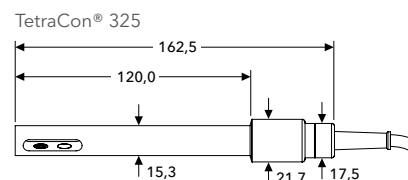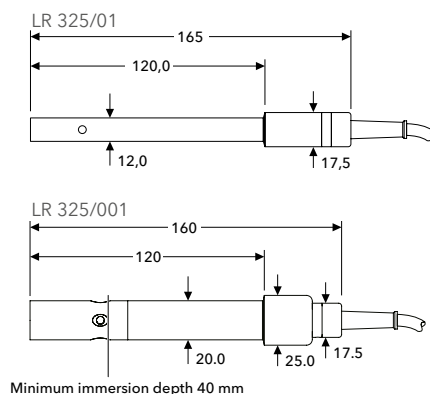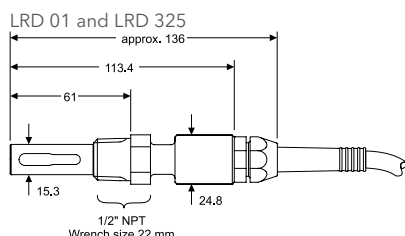


## Technical Data

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

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

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# Analog conductivity measuring cells

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

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



LRD 01 and LRD 325



1/2" NPT
Wrench size 22 mm

LR 325/01



TetraCon® 325



LR 325/001



Minimum immersion depth 40 mm

## Technical Data

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

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

a **xylem** brand

# Analog controllers for EX area

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

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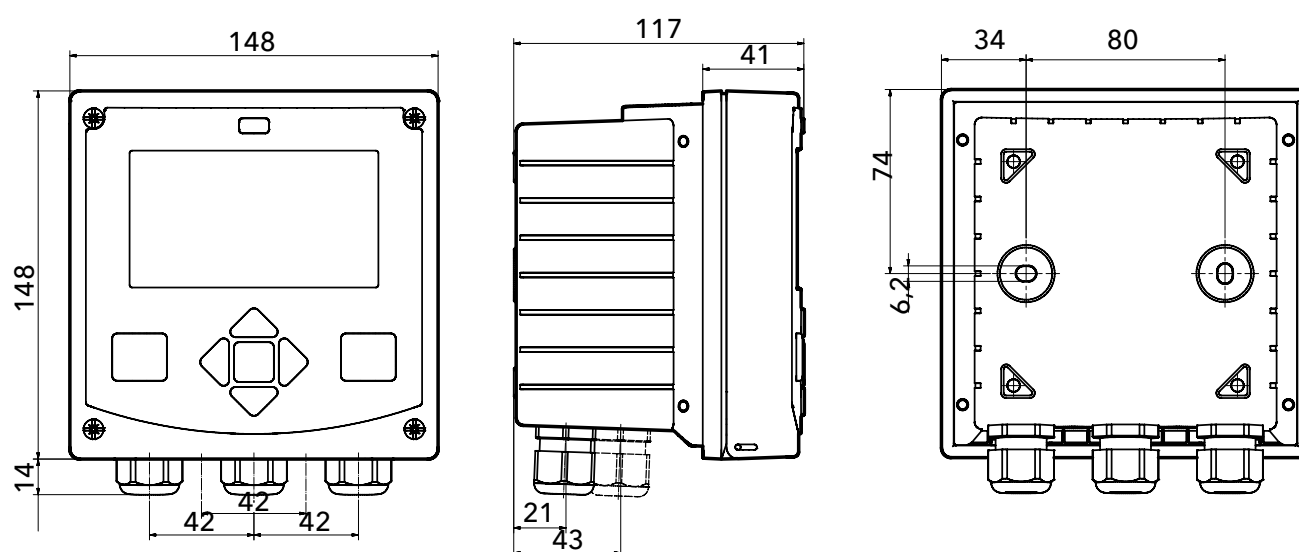


## Technical Data

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

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

# Isolated amplifier for EX area

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

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

118.2 mm · 22.5 mm · 73.5 mm

① ② ③ ④

⑤ ⑥ ⑦ ⑧

Snap-on mounting onto 35-mm
EN 60715 mounting rail
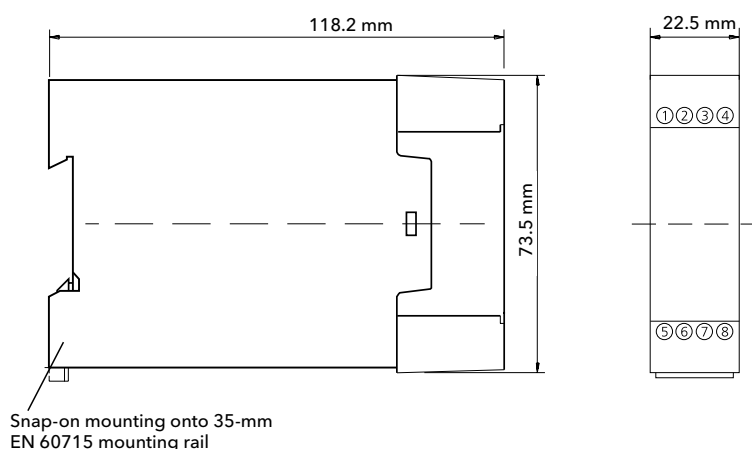
## Technical Data

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

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

a **xylem** brand

999268US · January 2020

# Analog conductivity measuring cells TetraCon® for EX area

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

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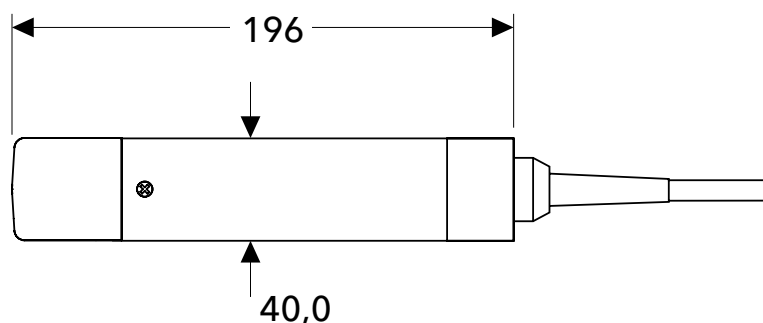


## Technical Data

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

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

a **xylem** brand

January 2020

# Analog pH/ORP armature SensoLyt® for EX area

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

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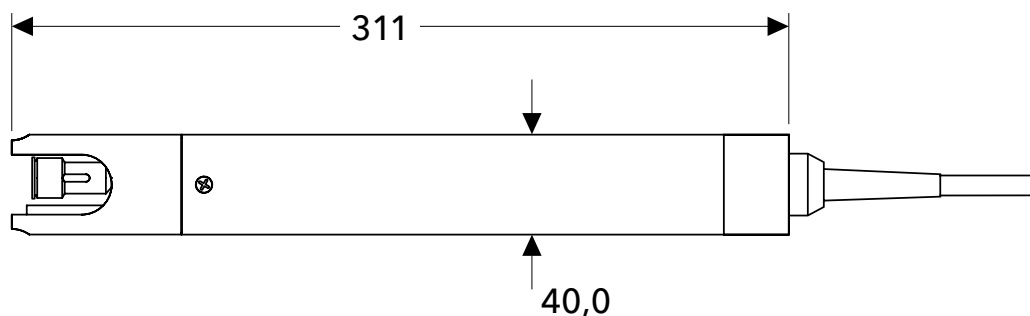


## Technical Data

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

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

a xylem brand

999270US                    June 2021

# Portable Samplers PB-M

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

*We would like to inform you about the application range on our website*
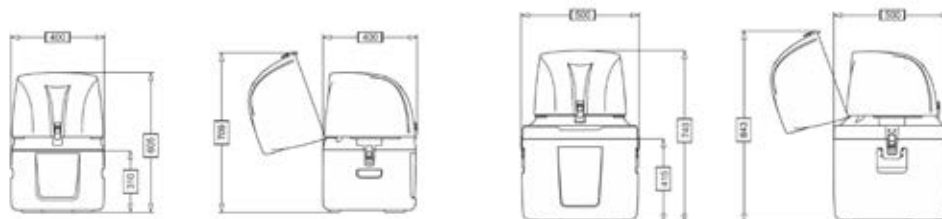
## Technical Data

| Model | PB-M-S | PB-M-L |
|---|---|---|
| Sampling method | Vacuum-System | |
| Sampling fractioning | Collection container (PE): 1 x 13 l | Bottles (PE): 24 x 1 l* |
| Dosing | 20 ... 350 ml | |
| Sampling modes | Time-, amount-, event-proportional or manual | |
| Volume accuracy | <2.5 % or ±3 ml | |
| Sampling temperature | +32 ... +104 °F (0 ... +40 °C) | |
| Ambient temperature | +32 ... +122 °F (0 ... +50 °C) | |
| Suction height | Max. 21 ft (6.5 m) at 1013 hPa | |
| Suction tube | PVC, 16 ft (5 m), 0.39 in (10 mm), fabric reinforced** | |
| Signal inputs | 2 x 0(4) ... 20 mA 8x digital (amount, event, freely programmable) | |
| Programming | 12 programs (freely programmable); with function to link programs | |
| Program start | Immediately, at a certain time, by an external signal | |
| Program stop | End of sampling program after one program run, continuous operation or x-runs | |
| Pause mode | Interruption of program run at any time | |
| Languages | Multi-language, selectable | |
| Signal outputs / status messages | 8 x digital, 1 x collective malfunction message | |
| Data logging | 3000 entries, nonvolatile data memory, storage of sampling and malfunction data (sampling extraction, bottle changes, messages, external signals) | |
| Interfaces | Mini-USB, RS422/485, Ethernet RJ45 | |
| Housing | ABS, double-walled insulation | |
| Wetted materials | PC, PVC, silicone, PS, PE | |
| Dimensions (D x H) | 15.8 x 23.8 in (400 x 605 mm) | 19.7 x 29.1 in (500 x 740 mm) |
| Weight | 17.6 lb (8 kg) | 26.5 lb (12 kg) |
| Power supply | 12 V | |
| Standards | CE, sampling according to ISO 5662-10 and EN 16479 | |
| Protection Rating | IP65 (power supply) | |
| Warranty | 2 years on defects in quality according to § 10 terms of conditions | |

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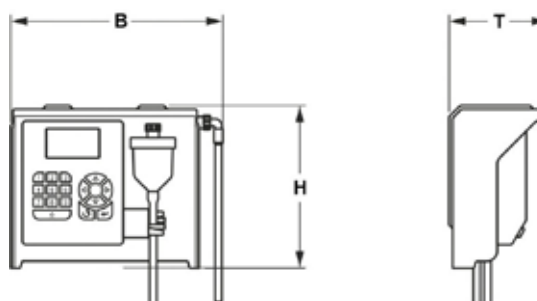*\*\* expandable per meter, max. length 98 ft (30 m)*

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

# Samplers for wall mounting

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

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

## Technical Data

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

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

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

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# Sample preparation system PurCon®

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

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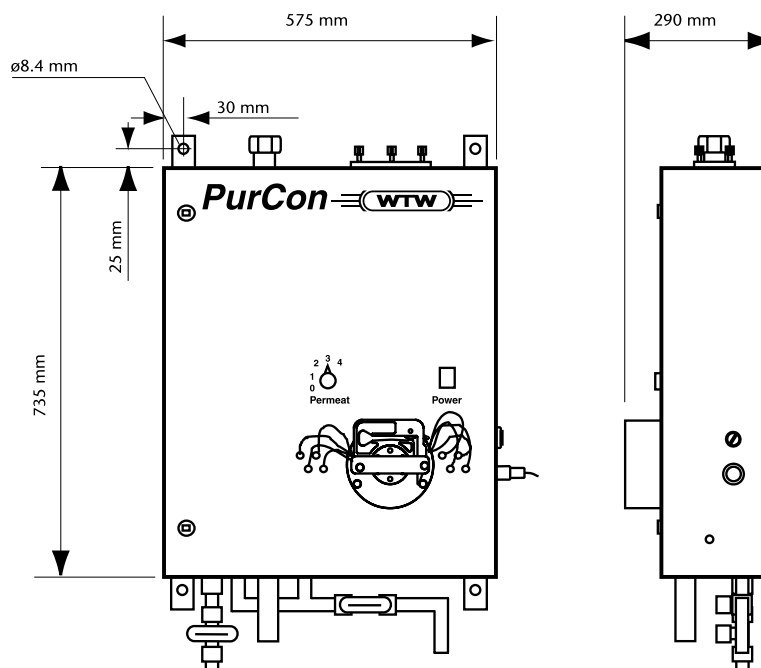


## Technical Data

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

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

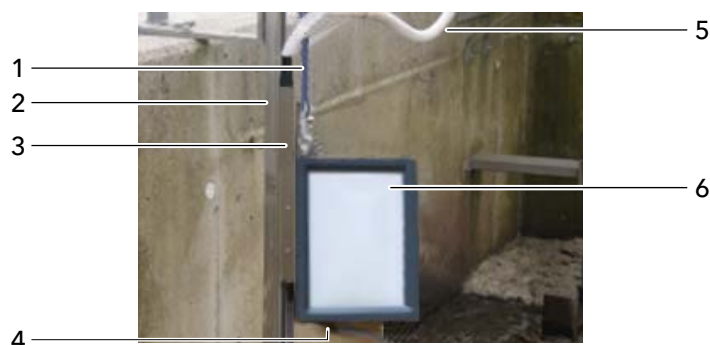999265US                                                                 January 2020

# Filtration Alyza IQ

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

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

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

## Technical Data

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

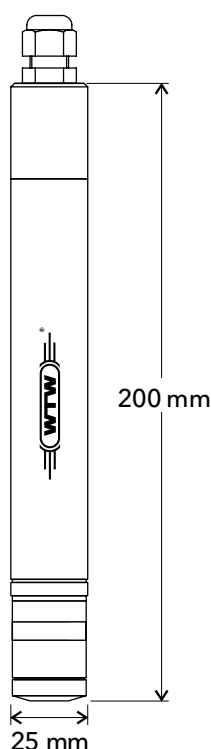| Model | Description | Order No. |
|---|---|---|
| **FM/PC** | Filter membrane module FM-Case/PC with premounted membrane. Suitable for Alyza IQ and P 700 IQ | 821939 |
| **Filter/PC** | Filter module for housing FM-Case/PC. Suitable for Alyza IQ and P 700 IQ | 821940 |
| **FM-Case/PC** | Housing for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

a **xylem** brand

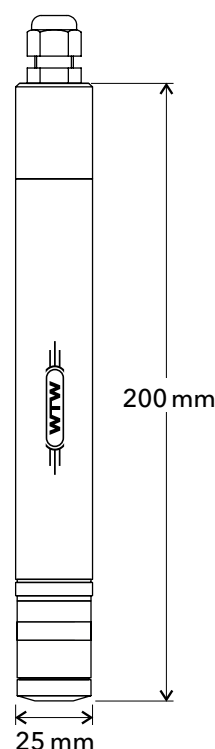# Analog chlorine sensors

## For free and total chlorine

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

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

FCML 412 N

TCML N

200 mm

200 mm

25 mm

25 mm

## Technical Data

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

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

# Drinking water panels



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

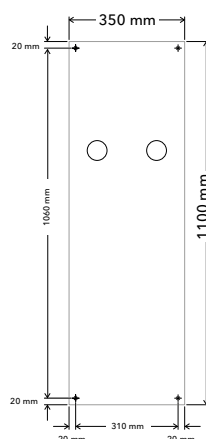*We would like to inform you about the application range on our website*

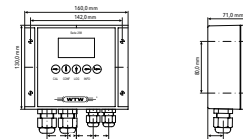Basic equipment of the drinking water panel 8X-yyyyy
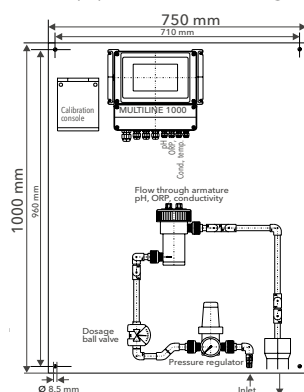


MULTILINE 1000
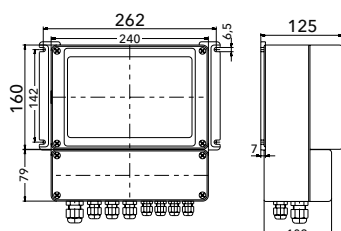


CL 298/P (Flow)



CL 298



## Technical Data

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

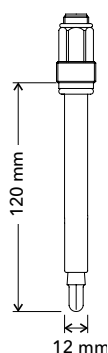*) Please note: Tolerated sensor operation temperature may vary significantly.

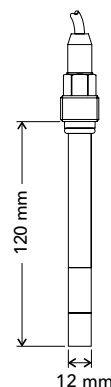| Model | Description | Order No. |
|---|---|---|
| MULTILINE 1000 230VAC | Multi-parameter monitor to connect up to any 16 sensors, power supply 230 VAC | 480200 |
| Drinking water panel | Ready-to-use panel to measure pH, ORP, Cond, Chlorine and Turbidity (Turb 2000); X: with or without flow; yyyyy: coding depnedent on parameter selection; details see price list or drinking water flyer | 8X-yyyyy |
| CL 298/P - 230 VAC | Ready to operate measuring panel to measure free or total chlorine, analog monitor 2 current outputs and MODBUS interface, with automatic temperature compensation (Pt1000), 230 VAC | 801260 |
| CL 298/P Flow - 230 VAC | Like the CL 298/P, but with FlowControl to monitor the flow volume | 801261 |

# Drinking water sensors

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

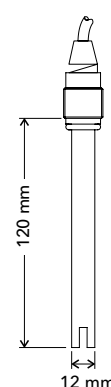*We would like to inform you about the application range on our website*

SenTix® ML 70 / ORP     Oxi ML 41     LR ML

120 mm    120 mm    120 mm

12 mm    12 mm    12 mm

## Technical Data

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

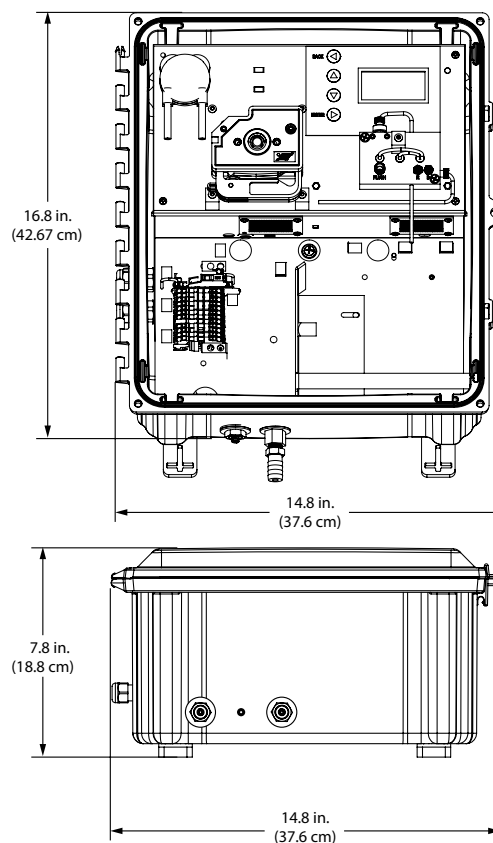| Model | Description | Order No. |
|---|---|---|
| SenTix®ML 70 | pH combination electrode with gel electrolyte, S7 plug head, glass-shaft; PG 13.5 screw thread | 104100 |
| SenTix®ML ORP | ORP combination electrode with gel electrolyte, S7 plug head, glass-shaft; PG 13.5 screw thread | 104150 |
| Oxi ML 41 | Electrochemical D.O. sensor with 1 m (3.3 ft) fixed cable for measuring and controlling oxygen in drinking water. Use with transmitter MULTILINE 1000 or Oxi 4000. Range: 0-20 mg/l or 0 - 200 %, temperature range: -5–45 °C, with temperature sensor Pt 1000; open cable ends. | 201931 |
| LR ML | Conductivity cell, with 1 m fixed cable, 2 graphite electrodes; – 5–80 °C; range 100 µS/cm - 20 mS/cm; temperature measurement with Pt 1000, PG 13.5 screw thread | 301150 |

# Chlorine 3017M DPD Chlorine analyzer



## Technical Data

| Model | Chlorine 3017M |
|---|---|
| Measurement principle / method | Colorimetric with N, N-Diethyl-p-phenylenediamine (DPD) |
| Measurement Range | 0 ... 5 mg/l free or total chlorine, reagent dependent |
| Resolution | 0.01 mg/l |
| Accuracy | ±0.03 mg/l or ±5%, whichever is greater |
| Limit of Detection | 0.03 mg/l |
| Measurement Interval | Programmable; 2.5 ... 60 minutes |
| Sample Temperature | 5 ... 45 °C (41 ... 113 °F) |
| Sample Flow Rate to Sample Inlet Device | 50 ... 1,000 ml/min when using Sample Inlet Device |
| Inlet pressure | 0.07 ... 1.40 bar (1 ... 20 psi) with Sample Inlet Device |
| Reagent Consumption | ~30 days per bottle at a 2.5 minute measurement interval |
| Calibration | Factory calibrated, 1-point if required |
| Display | 2.8 x 6 cm backlit LCD |
| Mounting | 4 mounting struts bolted to back of unit |
| Regulatory Compliance | US EPA regulations 40 CFR 141.74 and 40 CFR 136.3; Standard method 4500-CL-G; US EPA method 334.0; ISO method 7393-2 |
| Language | English, French, German, Italian, Spanish |
| Reagent Storage Life (before hydration) | Buffer and indicator: 5 years DPD powder: 1 year |
| Reagent Storage Life (after hydration) | ~30-40 days |
| Power | 115–230 VAC, 50–60 Hz, 70 VA |
| Relays | Two relays rated at 6A, 30 VDC |
| Analog Output | One 4-20 mA configurable output |
| Digital Output | RS-485 Modbus RTU |
| Light Source | Class 1 LED; wavelength centered at 525 nm |
| Light Path Length | >1 cm |
| Environmental conditions | Storage Temperature Range: 5 ... 70 °C (41 ... 158 °F) Operating Temperature Range: 5 ... 55 °C (41 ... 131 °F) Relative Humidity: 90% at 40 °C non-condensing |
| Certification | CE, cETLus |
| Mechanics | Enclosure: Polycarbonate Flow cell Assembly: CPVC Sample pump assembly: PA12 is Polyamide12 and POM is Polyacetal Reagent pump assembly: Cyanoacrylate body and Stainless steel rollers Fan assembly: Acrylonitrile Butadiene Styrene (ABS) Terminal block: Polyamide 66 (PA 66) Housing: Designed for IP 66/NEMA 4X |
| Weight | 8 kg (<18 lbs) |
| Warranty | 2 year warranty |

WTW's 3017M DPD chlorine analyzer continuously monitors free or total chlorine in drinking water or wastewater applications using the ISO and EPA approved DPD colorimetric method.

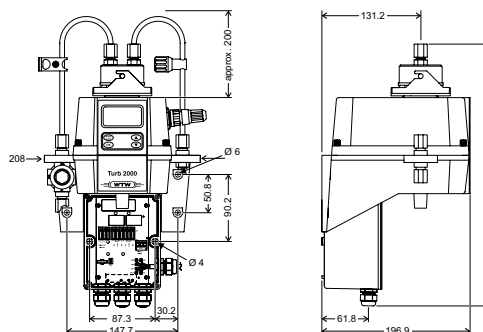*We would like to inform you about the application range on our website*



| Model | Description | Order No. |
|---|---|---|
| Chlorine 3017M | DPD Chlorine Analyzer | 860151 |
| CLDF-Kit 30 | Reagent kit for Free Chlorine | 860160 |
| CLDT-Kit 30 | Reagent kit for Total Chlorine | 860165 |
| RT-Kit | Replacement Tubing kit for the Chlorine 3017M | 860181 |
| FC-Kit | Glass Flow cell with O-Rings 3017M | 860186 |
| RC-Kit | Reagent caps, 2 each, 3017M | 860187 |
| SID-Kit | Sample Inlet Device Kit | 860188 |

# Turb PLUS 2000 Turbidity Analyzer

WTW's Turb PLUS 2000 continuously monitors turbidity in drinking water using DIN EN ISO 7027 or EPA 180.1 compliant method. Equipped with ultrasonic cleaning.

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

## Technical Data

| Model | Turb PLUS 2020 | Turb PLUS 2120 |
|---|---|---|
| Measurement principle | Scattered light measurement white light, nephelometric measurement | Scattered light measurement infrared light, nephelometric measurement |
| Measurement Range | Factory setting: 0 ... 100 NTU; optional measuring ranges 0 ... 10 and 0 ... 1000 NTU (loaded on USB) | |
| Resolution | Down to 0.0001 NTU | |
| Accuracy | ±2 % of reading or ±0.02 NTU below 40 NTU whichever is greater (0–100 and 0–1000 ranges) ±5 % of reading above 40 NTU (0–100 and 0–1000 NTU ranges) ±2 % of reading or ±0.02 NTU (0–10 NTU range) | |
| Limit of Detection | 0.02 NTU | |
| Response time | Adjustable (1 ... 60 readings) | |
| Sample Temperature | 1 °C ... 50 °C (34 °F ... 122 °F) | |
| Sample Flow Rate | 100 ml/min. ... 1.5 liter/min. (0.026 ... 0.40 Gal/min) | |
| Maximum Water Pressure | Integral pressure regulator rated 7 bar (101.5 PSI) | |
| Cleaning | Ultrasonic cleaning | |
| Calibration | Factory calibrated to 0 ... 100 NTU, recalibration required every three months and after change of measuring range | |
| Display | Multi-Line Liquid Crystal Backlit Display | |
| Mounting | Wall mounting with 6 screws | |
| Regulatory Compliance | Compliant to U.S. EPA 180.1 | Compliant to DIN EN ISO 7027 |
| Power | 100–240 V AC, 47–63 Hz, 80 VA | |
| Relays | Two Programmable, 120–240 V AC 2A Form C Relay | |
| Analog Output | One powered 4–20 mA, 1000 W drive | |
| Digital Output | Bi-directional RS-485, Modbus RTU | |
| Environmental conditions | Storage Temperature Range:    1 °C ... 50 °C (34 °F ... 122 °F) Operating Temperature Range: 1 °C ... 50 °C (34 °F ... 122 °F) Relative Humidity:            Up to 95 % (non-condensing) Not recommended for outdoor use. Altitude up to 2000 meters. | |
| Certification | CE, cETLus CE Approved, LC listed to UL 61010-1 3rd Edition: 2012 LC: Certified to CSA 22.2 No.61010-1-12: 2012 | |
| Mechanics | Wetted Materials: Nylon, Borosilicate Glass, Silicone, Polypropylene, Stainless Steel, Viton, Acety Housing: ABS (Double Insulated, Pollution Degree 2, Overvoltage Category II) | |
| Weight | 2.8 kg (6.2 lbs.) | |
| Warranty | 2 years on defects in quality according to § 10 terms of conditions | |

| Model | Description | Order No. |
|---|---|---|
| Turb PLUS 2020 | Online turbidity meter, with white light and integrated bubble trap; nephelometric measurement specified according to US EPA 180.1, with ultrasonic cleaning 110–240 VAC | 600026 |
| Turb PLUS 2120 | Online turbidity meter, with infrared light and integrated bubble trap; nephelometric measurement specified according to DIN EN ISO 7027, with ultrasonic cleaning 110–240 VAC | 600036 |
| Turb PLUS 2120 Set | Turb PLUS 2120 including external bubble trap | 600037 |
| BC-Turb/DW | External bubble trap | 600041 |
| Kal Kit Turb/DW | Calibration standard set with standards 0.02, 10 and 1000 NTU, cleaning tissues and designation rings | 600052 |
| Kal Kit Turb PLUS 2000 | Calibration standard set with standards 0.02, 10 and 100 NTU, cleaning tissues and designation rings | 600054 |
| Kal Kit Turb 2110/DW | Calibration standard set with standards 0.02, 1 and 10 NTU, cleaning tissues and designation rings | 600056 |

a xylem brand

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June 2021

# Xylem |'zīləm|

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

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

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

**Regional Sales Offices**

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

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

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

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

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

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

*Visit our website for more contact info*

*Connect with us:*   wtw.wm    wtwgmbhinternational    xylem.analytics.germany

xylemanalyticsgermany    xylemanalyticsgermany

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