



# IQ SENSOR NET - the range

SECURE. MODULAR. FLEXIBLE.



a xylem brand

# IQ SENSOR NET – the System for Wastewater Treatment Plants and Industrial Applications

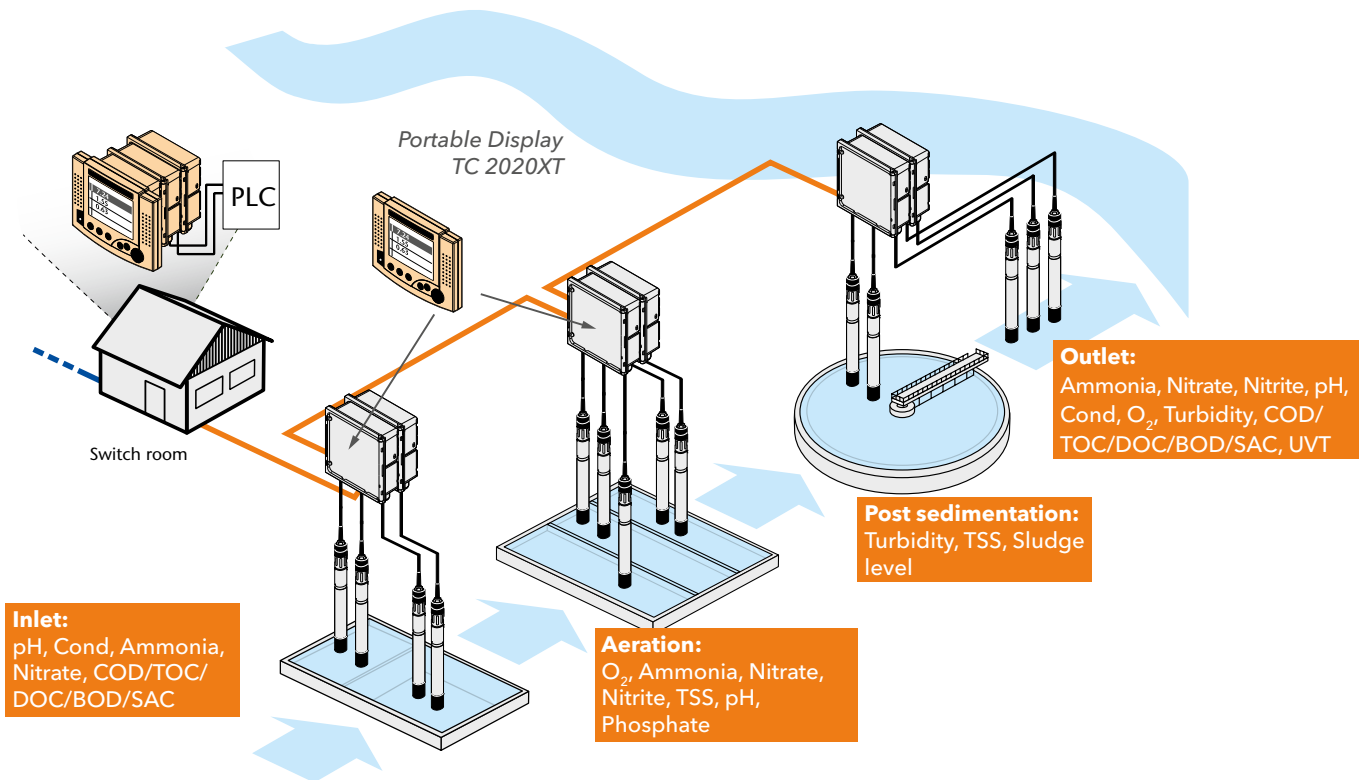
The digital and modular IQ SENSOR NET from WTW provides many unique advantages. Since 2001 our customers have enjoyed making the most of the IQ SENSOR NET modular design. It enables to easily expand the network with new members. This provides real flexibility and peace of mind that you are completely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

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

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

## 1) IQ Sensor Network: System 2020 XT

- For up to 20 digital IQ sensors in any order
- Ethernet/LAN interface and integrated webserver for easy network connection
- Fast and easy saving of logbook data, measured values and configurations for additional safety on a USB stick
- Easy and safe software updates via USB interface can be done by everyone
- Portable and clear display even in direct sun light



### Oxygen measurement with FDO 700 IQ

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

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

- ❑ Easy and fast matrix adjustment
- ❑ Up to 2.000 mg/l NH<sub>4</sub>
- ❑ Extremely robust electrodes
- ❑ Compensation with K and Cl

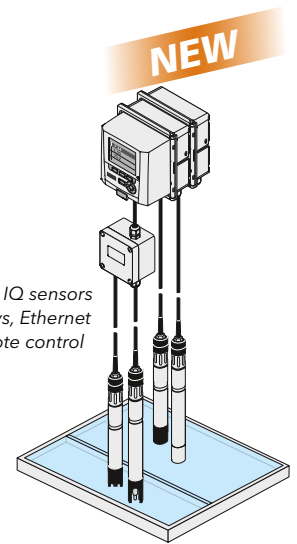
### Reagent-free COD measurement with NiCaVis 701/705 IQ NI

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

## 2) Outstanding among the Compact: System 282/284

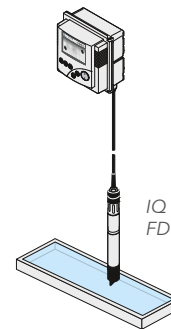
- Multi-channel controller for up to 4 IQ sensors provides easy and low-cost expansion
- Up to 20 parameters can be visualized at the same time
- Includes free-of-charge webserver for full remote control
- Perfectly suited to replace or add single measuring point
- Simple Data transfer and download with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

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



## 3) The Single Parameter Measuring Point: System 181

- Low-cost entrance into the digital measuring technique
- Suitable fixed cable sensors for the parameters pH/ORP, Cond, O<sub>2</sub> and Turb
- Stable, robust and reliable measuring technique



**IQ System 181** with  
FDO 700 IQ F

## All Parameters at a Glance

| Parameter                                    | Sensors            |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
|--|--------------------|----------------|------------------|------------------|------------------|-----------------|-----------------|------------------|----------------|--------------------------|------------------------|-------------------|-------------------|--------------------------|----------------|-----------------------|------------|----------|
|  | TriOxmatic® 700 IQ | FDO 700/701 IQ | Sensolyt® 700 IQ | TetraCon® 700 IQ | VisoTurb® 700 IQ | ViSolid® 700 IQ | AmmoLyt® 700 IQ | NitraLyt® 700 IQ | VARION® 700 IQ | NitraVis 701/705 IQ (TS) | NitraVis 701/705 IQ NI | UV 701/705 IQ NOx | UV 701/705 IQ SAC | CarboVis 701/705 IQ (TS) | NiCaVis 705 IQ | NiCaVis 701/705 IQ NI | IFL 700 IQ | P 700 IQ |
| Can be used with System 2020 XT and 282/284  | ■                  | ■              | ■                | ■                | ■                | ■               | ■               | ■                | ■              | ■                        | ■                      | ■                 | ■                 | ■                        | ■              | ■                     | ■          | ■        |
| Can be used with System 181*                 | ■                  | ■              | ■                | ■                | ■                |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| Parameter                                    |                    |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Temperature</b>                           | ■                  | ■              | ■                | ■                |                  |                 | ■               | ■                | ■              |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Oxygen</b> (electrochemical)              | ■                  |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Oxygen</b> (optical)                      |                    | ■              |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>pH/ORP</b>                                |                    |                | ■                |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Conductivity</b>                          |                    |                |                  | ■                |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Salinity</b>                              |                    |                |                  | ■                |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>TDS</b>                                   |                    |                |                  | ■                |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Turbidity</b> (optical)                   |                    |                |                  |                  | ■                |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>TS</b> (optical)                          |                    |                |                  |                  | ■                | ■               |                 |                  |                | ■                        |                        |                   |                   | ■                        |                |                       |            |          |
| <b>Ammonia</b> (ionselective)                |                    |                |                  |                  |                  |                 | ■               |                  | ■              |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Nitrate</b> (ionselective)                |                    |                |                  |                  |                  |                 |                 | ■                | ■              |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Nitrate</b> (optical/spectral)            |                    |                |                  |                  |                  |                 |                 |                  |                | ■                        | ■                      | ■                 |                   |                          | ■              | ■                     |            |          |
| <b>Nitrite</b> (optical/spectral)            |                    |                |                  |                  |                  |                 |                 |                  |                |                          | ■                      | ■                 |                   |                          |                | ■                     |            |          |
| <b>Potassium</b> (ionselective)              |                    |                |                  |                  |                  |                 | ■               |                  | ■              |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>Chloride</b> (ionselective)               |                    |                |                  |                  |                  |                 |                 | ■                | ■              |                          |                        |                   |                   |                          |                |                       |            |          |
| <b>COD/BOD/TOC/DOC</b><br>(optical/spectral) |                    |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   | ■                        | ■              | ■                     |            |          |
| <b>SAC and UVT</b> (optical/spectral)        |                    |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   | ■                 | ■                        | ■              | ■                     |            |          |
| <b>Sludge level</b>                          |                    |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       | ■          |          |
| <b>Orthophosphate</b> (wetchemical)          |                    |                |                  |                  |                  |                 |                 |                  |                |                          |                        |                   |                   |                          |                |                       |            | ■        |

\* Can only be used with respective fixed cable sensor

# Systems in Detail

| Modules   | MIQ/PS | MIQ/24V | MIQ/C6 | MIQ/R6 | MIQ/CR3 | MIQ/IC2 | MIQ/3-MOD | MIQ/3-PR | MIQ/JB | MIQ/JBR | MIQ/WL PS (SET) | MIQ/TC20XT | MIQ/MC3 | MIQ/MC3-MOD | MIQ/MC3-PR | Cleaning Air Box - 230 VAC | Cleaning Air Box - 115 VAC | MIQ/CHV PLUS |
|---|--------|---------|--------|--------|---------|---------|-----------|----------|--------|---------|-----------------|------------|---------|-------------|------------|----------------------------|----------------------------|--------------|
| Can be used with System 2020 XT                                       | ■      | ■       | ■      | ■      | ■       | ■       | ■         | ■        | ■      | ■       | ■               | ■          | ■       | ■           | ■          | ■                          | ■                          | ■            |
| Can be used with System 282/284                                       | ■      | ■       | ■      | ■      | ■       | ■       |           |          | ■      |         | ■               |            |         |             |            | ■                          | ■                          | ■            |
| Free IQSN connections   | 3      | 3       | 2      | 2      | 2       | 2       | 2         | 2        | 4      | 4       | 3               | ×          | 2       | 2           | 2          | ×                          | ×                          | 2            |
| <b>Module Functions</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| <b>Power Supply</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 100...240 V AC  | ■      |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 24 V AC/DC  |        | ■       |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| <b>Analog Outputs/Relays</b>  |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 6 x 0/4...20 mA   |        |         | ■      |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 6 x Relays  |        |         |        | ■      |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 3 x 0/4...20 mA<br>3 x Relays   |        |         |        |        | ■       |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| <b>Analog Inputs</b>  |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 2 x 0/4...20 mA   |        |         |        |        |         | ■       |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| <b>Interfaces</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| MODBUS  |        |         |        |        |         |         | ■         |          |        |         |                 |            |         | ■           |            |                            |                            |              |
| PROFIBUS  |        |         |        |        |         |         |           | ■        |        |         |                 |            |         |             |            | ■                          |                            |              |
| USB   |        |         |        |        |         |         | x ■       | x ■      |        |         |                 | ■          | ■       | ■           | ■          |                            |                            |              |
| Ethernet/LAN  |        |         |        |        |         |         |           |          |        |         |                 |            | ■       | ■           | ■          |                            |                            |              |
| <b>System Extension</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| 4 free IQSN connections   |        |         |        |        |         |         |           |          | ■      |         |                 |            |         |             |            |                            |                            |              |
| 4 free IQSN connections with signal amplification for large distances |        |         |        |        |         |         |           |          |        | ■       |                 |            |         |             |            |                            |                            |              |
| Radio connection  |        |         |        |        |         |         |           |          |        |         | ■               |            |         |             |            |                            |                            |              |
| <b>Controller</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| Controller/Terminal (with display)                                    |        |         |        |        |         |         |           |          |        |         |                 | ■          |         |             |            |                            |                            |              |
| Controller as standard IQ module without display                      |        |         |        |        |         |         |           |          |        |         |                 |            | ■       | ■           | ■          |                            |                            |              |
| <b>Compensation</b>   |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| Air pressure compensation for oxygen measurement                      |        |         |        |        |         |         | ■         | ■        |        |         |                 |            | ■       | ■           | ■          |                            |                            |              |
| <b>Compressed Air Cleaning</b>  |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            |              |
| Compressed air compressor 230 VAC                                     |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            | ■                          |                            |              |
| Compressed air compressor 115 VAC                                     |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            | ■                          |              |
| Valve for automatically controlled cleaning                           |        |         |        |        |         |         |           |          |        |         |                 |            |         |             |            |                            |                            | ■            |

\* USB interface only for software updates



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