IQ SENSOR NET – the range
SECURE. MODULAR. FLEXIBLE.
**IQ SENSOR NET – the System for Wastewater Treatment Plants and more 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 3G
- For up to 20 digital IQ sensors in any order
- Measuring network for large plants, BackUp controller function for higher operational safety
- Ethernet/LAN interface and integrated webservice for easy network connection
- Fast and easy saving of logbook data, measured values and configurations for additional safety and easy and safe software updates via USB stick
- Up to 3 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 NH₄
- Extremely robust electrodes
- Compensation with K and Cl

The wetchemistry revolution is now: Alyza IQ PO₄
- Minimized reagent consumption and waste
- Extremely low maintenance
- Reliable results also in low measuring ranges
2) Outstanding among the Compact: System 282/284

- Multi-channel controller for up to 4 IQ sensors provides easy and lowcost expansion
- Up to 20 parameters can be visualized at the same time
- Includes free-of-charge webservice 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

3) The Single Parameter Measuring Point: System 181

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

All Parameters at a Glance

| Sensor | TriOxmatic® 700 IQ (F) | FDO®/700/701 IQ (F) | TetraCon® 700 IQ (F) | VisoTurb® 700 IQ | Ammolyt® 700 IQ | NitraLy® 700 IQ | VariOn® 700 IQ | NitraVis®* 701/705 IQ (TS) | Nitrav® 701/705 IQ (TS) | CarboVis® 701/705 IQ (TS) | NiCaVis® 701/705 IQ (NI) SF | UV 701/705 IQ SAC | UV 701/705 IQ NOx | FL 700 IQ | Alyza IQ PO4 |
|--------|-----------------------|---------------------|---------------------|-----------------|----------------|----------------|----------------|--------------------------|----------------------|--------------------------|-----------------------|---------------------|------------------|------------------|
| Usable with System 2020 3G and 282/284 | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Usable with System 181* | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Parameter | Temperature | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dissolved Oxygen (electrochemical) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dissolved Oxygen (optical) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| pH/ORP | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Conductivity | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Salinity | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Turbidity (optical) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| TSS (optical) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Ammonia (ion-selective) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Nitrate (ion-selective) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Nitrate (optical/spectral) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Nitrite (optical/spectral) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Potassium (ion-selective) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Chloride (ion-selective) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| COD/BOD/TOC/DOC (optical/spectral) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| SAC and UVT (optical/spectral) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Sludge Level | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Orthophosphate (optical/wetchemical) | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |

* Can only be used with respective fixed cable sensor.
† Nitrite and Nitrate are included in the measured value.
## Module

<table>
<thead>
<tr>
<th>Module</th>
<th>MIO/Q5</th>
<th>MIO/Q6</th>
<th>MIO/Q8</th>
<th>MIO/Q12</th>
<th>MIO/Q25</th>
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<tbody>
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### Module features

#### Power supply
- 100…240 V AC
- 24 V AC/DC

#### Analog outputs/relays
- 6 x 0/4…20 mA
- 6 x relays
- 3 x 0/4…20 mA, 3 x relays

#### Analog inputs
- 2 x 0/4…20 mA

#### Interfaces
- MODBUS
- PROFIBUS
- USB
- Ethernet/LAN (Profinet, Ethernet/IP, Modbus TCP)

#### Intra-system connectivity
- 4 available IQSN connectors
- 4 available IQSN connectors including signal amplification for large distances

#### Controller
- Controller/Terminal (with display)
- Controller in standard IQ module without display

#### Compensation
- Air-pressure compensation for D.O. measurement

#### Compressed air cleaning
- Air compressor 230 VAC
- Air compressor 115 VAC
- Valve for automatic cleaning

* USB interface only for software updates