



# Tailor-made to your plant: IQ SENSOR NET

MODULAR SYSTEM 2020, EASILY EXPANDABLE IN THE FUTURE



a xylem brand

# A Flexible System – Reliable Results

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

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

## **Application areas and system concept**

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

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

# IQ SENSOR NET



## Further advantages

- 20 sensors connectable
- Automatic sensor recognition
- Centralized power supply for entire system
- IP66 and IP67 protection (depending on module)
- Full remote access without any extra costs with IQ WEB CONNECT
- Free-of-charge software updates
- Internal data logger
- USB interface for data storage and updates by default
- Additional Terminals - either with or without Controller (Backup) function
- Up to 3 km cable length permitted
- At least two IQ SENSOR NET connections per module for sensors or modules
- Feature enhancements by addition of specific modules
- Low installation costs by stack mounting without cable

# The Construction Kit to Suit your Needs

## The basic equipment

The Terminal with large display, user-friendly buttons working in all weather conditions and the power supply module



**MIQ/TC 2020 3G**  
connectable to any module



**MIQ/PS or MIQ/24V**  
For wide range or 24V (AC and DC) power supply

## The modules

Expand the functions of your system by adding specific modules. Some examples:



**MIQ/CR3**  
With 3 current outputs and 3 relays



**MIQ/C6**  
With 6 current outputs

**MIQ/R6**  
With 6 relays



**MIQ/IC2**  
With 2 current inputs to connect any third party sensor (e.g. level sensor)



**MIQ/JB**  
With 4 sensor connections

**MIQ/JBR**  
With 4 sensor connections and signal processing for long cable sections

## Sensors and parameters

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



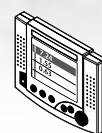
### MIQ/CHV Plus

For automatic pressured air cleaning of any sensor



### MIQ/WL PS

For radio transmission (e.g. at moving scraper bridges)



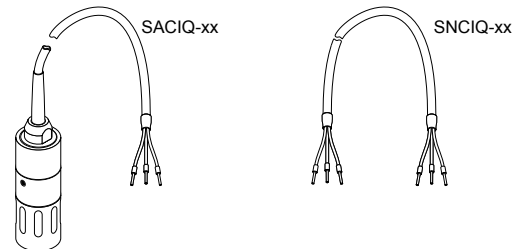
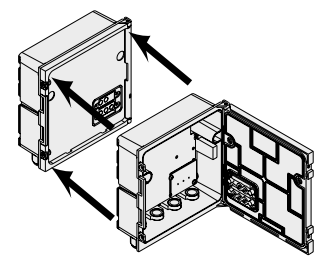
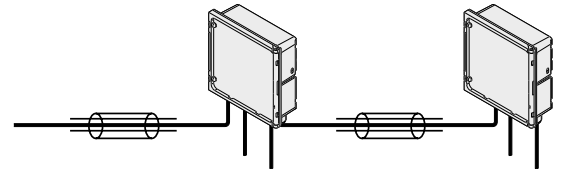
### Terminal IQ

The cost-effective supplement without Controller (BackUp) function

# Installation

Connect the modules via cable or by cable-free stack mounting, and connect sensors at any module.

- Module connection via SNCIQ cable
- Easy and cable-free stack-mounting thanks to universal module design
- Universal cable for sensors (SACIQ) and modules (SNCIQ)



## Example 1 System 2020 3G

Configuration example	Order No.
MIQ/TC 2020 3G-CR3	470 022
SACIQ-7,0	480 042
IQ Sensors	user selected

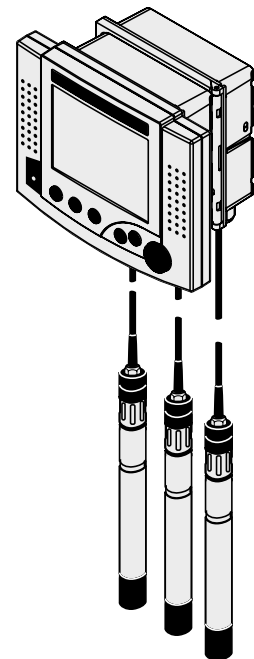
### MIQ/TC 2020 3G-CR3 Starter Set

consistig of:

- MIQ/TC 2020 3G (terminal/controller)
- MIQ/CR3 (3 x mA, 3 x relays)
- MIQ/PS (power supply)

additionally:

- 3 SACIQ (sensor connection cable)
- 3 IQ sensors

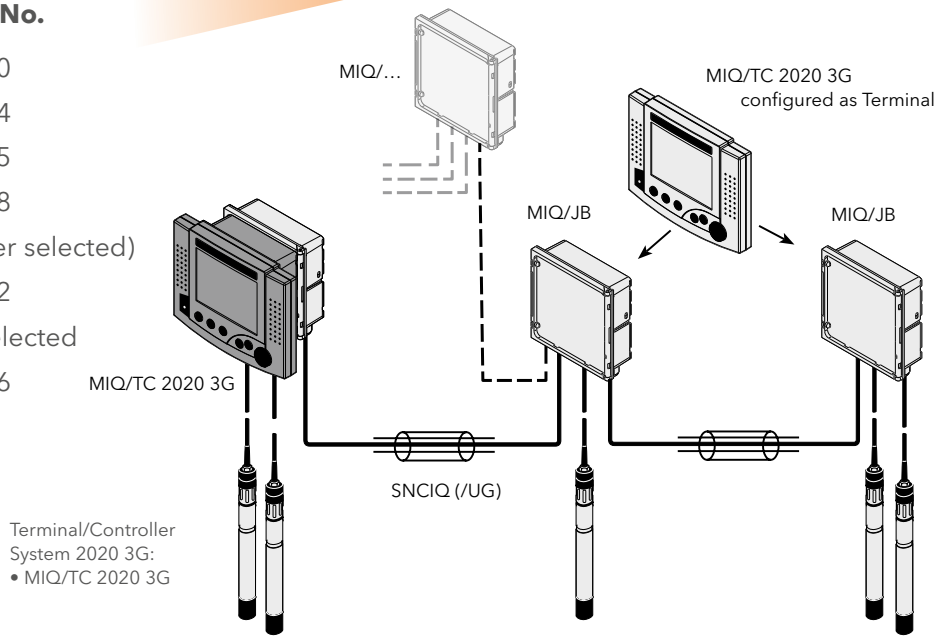


Multiparameter controller for up to 5 selectable sensors, with 3 current outputs and 3 relays

## Example 2 System 2020 3G

### Configuration example Order No.

MIQ/TC 2020 3G	470020
MIQ/PS	480004
MIQ/C6	480015
MIQ/JB	480008
Further modules connectable (user selected)	
SACIQ-7,0	480042
IQ sensors	user selected
SNCIQ	480046

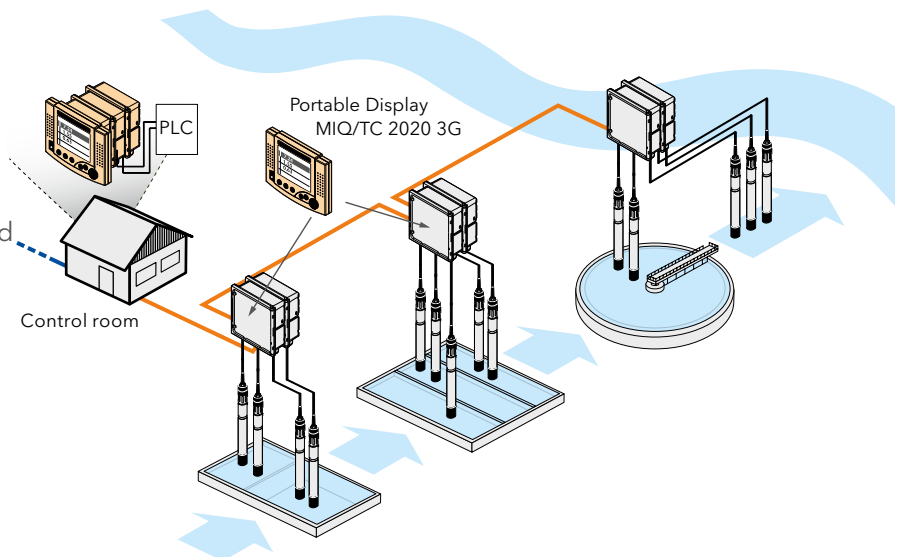


Branched network System 2020 3G for up to 20 freely selectable parameters. Example with 6 current outputs; measuring locations 2 and 3 are at a larger distance from the Terminal/Controller. Expandable with a portable Terminal MIQ/TC 2020 3G or Terminal IQ as an additional display for easy on-site calibration with or without redundant Controller function.

## Example 3 System 2020 3G

### Configuration example Order No.

MIQ/TC 2020 3G	470020
MIQ/PS	480004
MIQ/MC3	471020
MIQ/JB	480008
SACIQ-7,0	480042
IQ Sensors	user selected
SNCIQ	480046



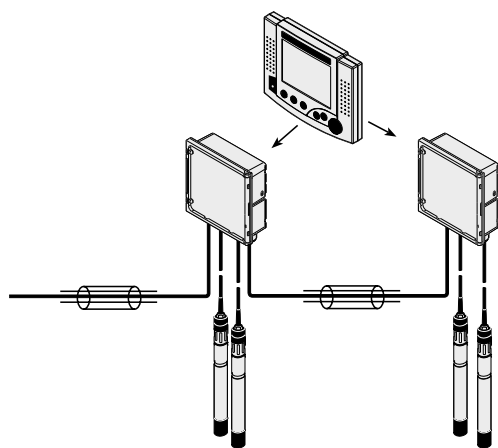
# Certainly Flexible

Portable Terminal, data transfer to PLC by fieldbus, Controller (Backup) function or operation from remote - stay future-proof and flexible with the IQ SENSOR NET.

- Portable Terminal with Controller (Backup) function
- Digital interfaces and Controller (Backup) function
- Cost-effective Terminal IQ without Controller (Backup) function
- Free-of-charge remote access with IQ WEB CONNECT

## Portable Terminal with Controller (Backup) function

Use a fixed terminal along with a portable one. Connect the portable terminal to any module and check the measured values right next to the sensors. In case of damage the portable terminal takes control of the system, thereby increasing the operational safety.



## Digital interfaces and Controller (Backup) function

To transfer the measured values to the PLC, analog outputs as well as digital fieldbuses are provided on the appropriate MIQ/MC3 controller module. Thus, the Terminal becomes portable and increases the operational safety, taking control of the system in case of damage.



## Cost-effective Terminal IQ without Controller (Backup) function

The new Terminal IQ without Controller (BackUp) function offers the most important functionalities as a cost-effective alternative. The prerequisite is an MIQ/TC 2020 3G or XT connected in the system.





## Full remote access with IQ WEB CONNECT

Control your IQ SENSOR NET conveniently from a distance. The IQ WEB CONNECT allows data storage and settings at any time free of charge, without subscription, secured by password.

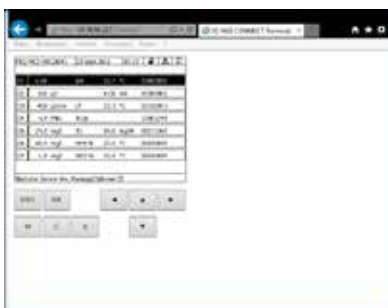
Just connect the IQ SENSOR NET to the internet or a local network via the integrated Ethernet interface.



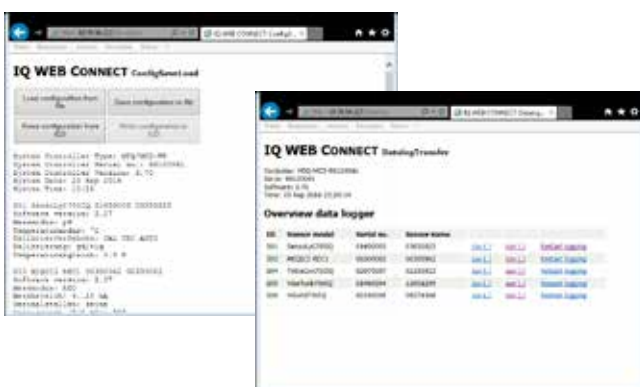
**Read** – Monitor all measured values at a glance



**Set** – Apply all changes from a distance with convenient input via keyboard



**Store** – Store your device configuration and measured data and plot your own graphs.



**IQ WEB CONNECT on the Internet**

Watch our video and see for yourself:

[www.wtw.com/webconnect](http://www.wtw.com/webconnect) (or scan the QR code).

# Sensors and Analyzers

All IQ sensors and analyzers are characterized by their robustness and durability. The universal cable and the automatic recognition allow for an easy installation and commissioning. Further convincing are unique technical features.

## Optical, calibration-free oxygen sensor

- Sloped membrane cap to avoid false high readings
- Long durability (3-5 years) and easy exchange of the sensor cap minimize maintenance
- No electrolyte, no flow required



## Stable NH<sub>4</sub> and NO<sub>3</sub> sensors

- Stable measurements, compensable, no drift
- Robust electrodes can be replaced individually and cleaned easily
- Fast and easy matrix adjustment



## Maintenance-free TSS and Turbidity sensors

- Integrated, automatic ultrasonic cleaning
- No wiper, no smearing
- No spare parts and no maintenance contracts required



## Reagent-free spectral COD, NO<sub>3</sub>, NO<sub>2</sub> sensors

- Optical, reagent-free measurement (turbidity compensated)
- Integrated, automatic ultrasonic cleaning, no wiper
- Specific algorithms for different applications



## Maintenance-free sludge level sensor

- Easy installation
- Minimum maintenance, no influence of air bubbles
- Reliable measurements, even with challenging applications



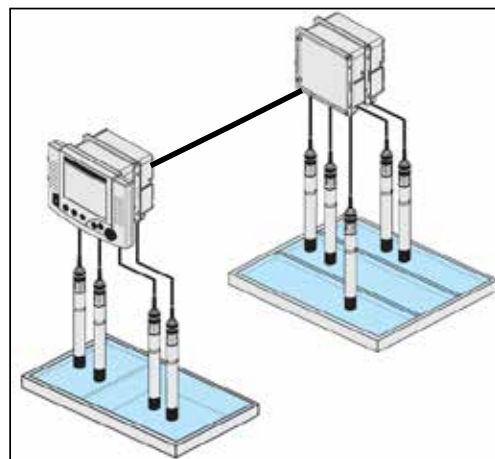
## The Simple choice for PO<sub>4</sub> and NH<sub>4</sub> Analyzers

- Minimized reagent consumption and waste
- Regular maintenance takes just 10 minutes every 3 months
- Reliable results from low to high measuring levels



## Technical data

Material	Polycarbonate with 20% glass fibre
Dimensions	Terminal: 8.3 x 6.7 x 1.6 in (W x H x D); (210 x 170 x 40 mm) Modules: 5.7 x 5.7 x 2.0 in (W x H x D); (144 x 144 x 52 mm)
Protection class	Modules: IP66 and IP67, respectively Sensors: IP68
Certificates	CE, cETL, ETL
Warranty	Modules and Terminals: 3 years Sensors: 2 years
Operational conditions	Operational temperature: -4 °F ... +131 °F; (-20 °C ... +55 °C) Storage temperature: -13 °F ... +149 °F; (-25 °C ... +65 °C)



## Ordering information

Model	Description	Order no.
MIQ/TC 2020 3G	Terminal/Controller for the IQ Sensor Net System 2020, portable Terminal with large color display, robust buttons and USB interface	470020
MIQ/TC 2020 3G-CR3	Ready-to-use starter set, consisting of Terminal (MIQ/TC 2020 3G), power supply module (MIQ/PS) and output module (MIQ/CR3)	470022
MIQ/TC 2020 3G-C6	Ready-to-use starter set, consisting of Terminal (MIQ/TC 2020 3G), power supply module (MIQ/PS) and output module (MIQ/C6)	470024
MIQ/TC 2020 3G-EF	Ready-to-use starter set, consisting of Terminal (MIQ/TC 2020 3G), power supply module (MIQ/PS) and Controller module (MIQ/MC3)	470026
Terminal IQ	Same as MIQ/TC 2020 3G, but without Controller (Backup) function	470021
SNCIQ ...	Connection cable, available in different lengths	480046 and 480068 ... 480072
SACIQ-...	Sensor cable, available in different lengths	480040 ... 480044
MIQ/PS	Wide range power supply module	480004
MIQ/24V	24V (AC and DC) power supply module	480006
MIQ/JB	Module with 4 sensor connections	480008
MIQ/JBR	Module with 4 sensor connections and signal amplifier for long cables	480010
MIQ/R6	Module with 6 relays	480013
MIQ/CR3	Module with 3 current outputs and 3 relays	480014
MIQ/C6	Module with 6 current outputs	480015
MIQ/IC2	Module with 2 inputs for connection of any third party sensor (e.g. level)	480016
MIQ/CHV PLUS	Module with automatic pressured air cleaning for any sensor	480018
MIQ/WL PS Set	Radio transmission module (e.g. for use at moving scraper brides)	480025

# 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](http://www.xylem.com)



## Regional Sales Offices

<b>UK:</b> Xylem Analytics UK Limited Tel +44 1462 673581 salesuk@xylem.com www.xylemanalytics.co.uk	<b>Asia:</b> Xylem Analytics Japan Tel +81 (0)44-222-0009 ysijapan.support@xylem.com www.xylem-analytics.jp	<b>Middle East &amp; Africa:</b> Xylem Analytics Middle East & Africa Tel +971 4 806 1000 Info.MEA@xylem.com www.xylemanalytics.com
<b>Australia:</b> Xylem Analytics Australia Tel +61 1300 995362 salesAus@xylem.com www.xylem-analytics.com.au	<b>China:</b> Xylem Analytics (Beijing) Co., Ltd Tel +86 10 5785 2266 Xylemanalytics.China@xylem.com www.xylemanalytics.cn	<b>France:</b> 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](https://www.facebook.com/wtw.wm)  [wtwgmbhinternational](https://www.youtube.com/wtwgmbhinternational)  [xylem.analytics.germany](https://www.instagram.com/xylem.analytics.germany)

 [xylemanalyticsgermany](https://www.linkedin.com/company/xylemanalyticsgermany)

 [xylemanalyticsgermany](https://www.x.com/xylemanalyticsgermany)



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

All names are registered tradenames or trademarks of Xylem Inc. or one of its subsidiaries.  
Technical changes reserved.  
© 2017 Xylem Analytics Germany Sales GmbH & Co. KG. 999194US