



Aquaculture

INSTRUMENTATION

mjk 
a xylem brand

CONTENT

04 MAGFLUX® Q

Want your flowmeter to be easy to use and corrosion free?
Switch to MagFlux® Q and have a new, more user-friendly experience

08 EXPERT™ 3400

Does your level transmitter put you in control?
The MJK Expert™ 3400 will - quickly and trouble-free!

12 PHIX® COMPACT

How user-friendly is your pH transmitter?
pHix® Compact is both reliable and easy to maintain

16 EXO SONDE

Need to dive deep into your data?
EXO will get your quality data from up to 250 m below sea level
- even in saltwater

22 PRODSS

Want flexibility and freedom on the fly?
ProDSS is intelligent and will automatically detect which sensor you attach

28 PROSOLO

For fast accurate oxygen measurements - every time - go with ProSOLO.
Your fish will thank you...

32 M μ CONNECT® & MONITORLINK

Need to excel within pump and process control?
Try the advantages of the M μ Connect® & MonitorLink setup

MAGFLUX® Q

Want your flowmeter to be easy to use and corrosion free?

Switch to MagFlux® Q and have a new, more user-friendly experience

- Lightweight
- Short installation length
- Accuracy of 0.25%
- ABS plastic
- Possible remote mounting of converter

MagFlux® Q flowmeter is created in composite materials, designed with an optimized construction which secures optimal performance. It provides stable and highly accurate flow measurements in conductive liquids, especially at low flow velocity.

It is constructed without outer metal parts, which makes it a perfect solution for areas with risk of corrosion. It has no moving parts to create hydraulic influence on the flow and uses a well-proven technology, and communicates using a standard protocol.

The MagFlux® flow sensors are available in the sizes DN 50, DN80, DN 100 and DN150 with standard construction lengths and EN flanges. It can be installed either with the converter compact mounted on the flow sensor, wall mounted or mounted in a remote panel.

Features

- Sensor in ABS plastic, no outer parts in metal
- Very high precision at low flow speed
- Hastelloy C electrodes
- High dynamic measuring range with an accuracy of up to 0,25%
- Works perfectly with classic MagFlux® sensors and converters
- Low weight
- Ideal for sea water applications, e.g. aquaculture



SPECIFICATIONS

MAGFLUX® Q SENSOR	
Mounting Flanges	Compatible with EN1092-1
Built-in Length	Standard length according to ISO 13359
Accuracy¹	Better than ± 0,25 % @ 0,25-8 m/s
Ratio	0,5-100
Measuring Frequency	2,5 Hz
MATERIALS	
Housing	ABS
Flanges	ABS
Measuring Pipe	ABS
Lining	ABS
Electrodes²	Hastelloy
TEMPERATURE RANGE	
Medium Temperature	-20...80° C / -4...176° F
Ambient Temperature:	
• Compact Converter	-10...60° C / 15...140° F
• Remote Converter	-20...80° C / -4...176° F
Enclosure	IP 67, NEMA 4, standard IP 68, NEMA 6P (10m Wc, using the Gel potting kit 579035) - Remote Converter

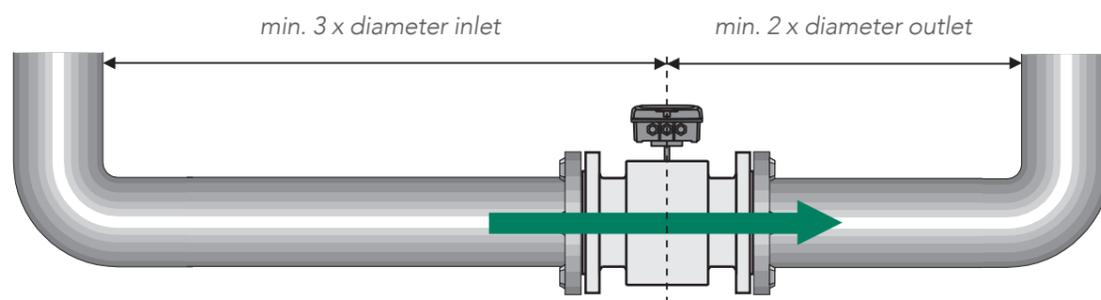
¹ Of measured value.

² Electrodes only available in Hastelloy incl. built-in ground electrode.

MOUNTING DATA - ACCURACY

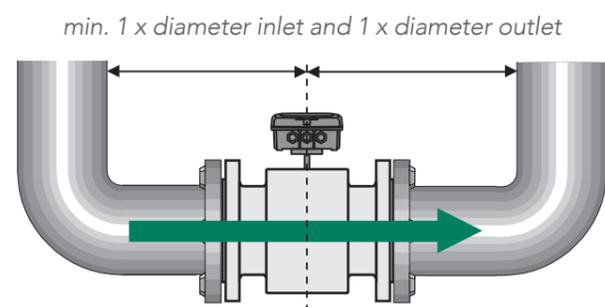
Accurate flow measurement requires a minimum of three pipe diameters of straight pipe upstream and two pipe diameters of straight pipe downstream from the center of the flow sensor.

Minimum pipe diameter distances for +/- **0,25 %** accuracy



Special design allows using short build-in construction still providing very accurate flow measurement even at one pipe diameter of straight pipe upstream and one pipe diameter of straight pipe downstream from the center of the flow sensor.

Minimum pipe diameter distances for up to **0,5 %** accuracy



EXPERT™ 3400

Does your level transmitter put you in control?

The MJK Expert™ 3400 will - quickly and trouble-free!

- Ceramic membrane
- Robust construction
- Flexible measuring range
- Accuracy of 0.1%
- PPS plastic
- 3 years of guarantee

The Expert™ 3400 hydrostatic level transmitter is accurate and has long-term stability. It is very robust and designed for applications in rough environments with aggressive chemicals, seawater and fluids.

The Expert™ 3400 with ceramic capacitive measuring system and built-in breather tube for direct air pressure compensation is designed for use in waterworks, sewage treatment plants and industrial applications.

A major design feature is the programming facility. Using a standard USB interface and a laptop computer, the servicing transmitter can be programmed on the fly to the required measuring range.

Features

- Ceramic diaphragm, PPS body,
- 2-wire 4 - 20 mA loop powered, 10-30VDC
- RS485/Modbus
- Surge resistance
- Accuracy better than $\pm 0.1\%$ and stability 0.1 % per year
- Field re-programmable for custom ranges and zero offset calibration
- Steel reinforced PUR cable with high tensile strength (1000kg)
- Measuring ranges from 0 - 0,3 m to 0 - 300 m.



SPECIFICATIONS

EXPERT™ 3400 LEVEL TRANSMITTER SPECIFICATIONS

Nominal Measuring Range	0-0,3 m	0-1 m	0-3 m	0-5 m	0-10 m	0-30 m	0-50 m	0-100 m	0-300 m
Measuring Principle	Ceramic capacitive, relative pressure								Ceramic cap., sealed gate
Min. Programmable Range	0-0,3 m	0-0,3 m	0-1 m	0-3 m	0-3 m	0-10 m	0-30 m	0-50 m	0-90 m
Max. Programmable Range	0-1 m	0-1 m	0-3 m	0-10 m	0-10 m	0-30 m	0-50 m	0-100 m	0-300 m
Max. Overpressure	4 bar	4 bar	6 bar	10 bar	10 bar	18 bar	40 bar	40 bar	40 bar
Temperature Range	-10° C to 70° C								
Temp. Deviation, Zero Point	Better than $\pm 0.02\%$ / ° C								
Temperature Deviation, FS	Better than $\pm 0.01\%$ / ° C								
Linearity / Stability	Better than $\pm 0.2\%$ FS / $\pm 0.2\%$ FS								
Measurement Accuracy	Better than $\pm 0.1\%$ FS @ +10 to 30° C Better than $\pm 0.2\%$ FS @ full temperature range								
Long Time Stability	Better than $\pm 0.1\%$ FS per year								
Materials	Housing: PPS 40% glass-reinforced Diaphragm: Ceramic 99.9% AL2O3 Cell packing: Viton®								
Supply Voltage	3400	10 - 30 V DC (12 - 30 V DC for cable lengths above 110 m)							
	3400D	10 - 28 V DC							
Output Signal	3400	2-wire 4 - 20 mA (passive transmitter) / Modbus RS485							
	3400D	Digital signal: RS485 Modbus level- and temperature transmitter signal							
Cable	2 x 0,5 mm ² (pressure) + 5 x 0,15 mm ² (data), shielded, PUR insulation, 1000 kg pull strength								

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Specification continued

EXPERT™ 3400 LEVEL TRANSMITTER SPECIFICATIONS									
Nominal Measuring Range	0-0,3 m	0-1 m	0-3 m	0-5 m	0-10 m	0-30 m	0-50 m	0-100 m	0-300 m
Cable Length¹	12 m	12 m	12 m	12 m	12 m	35 m	55 m	110 m	320 m
Enclosure	IP68, withstands a static pressure equal to max. overpressure.								
Safety Approvals	UL® Class I, II and II, Division 1 Hazardous (Classified) Locations, UL 913 ATEX: II 2G EEx ia IIC T4...T6. NB: Only applies to 3400								
Test Approvals	CE directive: 89/336/EEC, 2004/108/EC, 1999/EC EN 61326-1, 61326-2-3, EN 55011, 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-5, 61000-4-6, 61000-4-8 EN 61000-6-4 2007-02-19, EN 61000-6-2 2005-09-08,								

¹ Can be delivered with other cable lengths on request.

Relative pressure transmitters can be delivered with up to 60 m cable length.



EXPERT™ 3400
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mjk
a xylem brand

PHIX® COMPACT

How user-friendly is your pH transmitter?

pHix® Compact is both reliable and easy to maintain

- Easy mounting
- Simple calibration routine
- Robust construction
- Corrosion free design
- Trouble-free electrode change

The advanced and unique design of pHix® Compact ensures that your work is done fast, easy and with much accuracy.

Measure pH, temperature and redox. It's easy to mount pHix® Compact in pipelines or open tanks.

The double-junction electrode is developed especially for pHix® Compact and will provide significantly lower impedance, increased electrolyte volume, increased junction area and a longer lifetime compared to most traditional electrodes.

Simple communication for setup, calibration, electrode diagnosis and troubleshooting, goes without saying. The electrode works well in aqua culture, drinking water and water with low ion concentration.

Features

- Compact design; electrode, fitting and transmitter in one
- Built-in temperature transmitter
- 4-20 mA output
- Unique and simple buffer adjustment
- Constructed in fiberglass reinforced PPS and stainless steel
- Automatic buffer sequence
- Very resistant to clogging
- Suitable for acid/alkalic fluids.



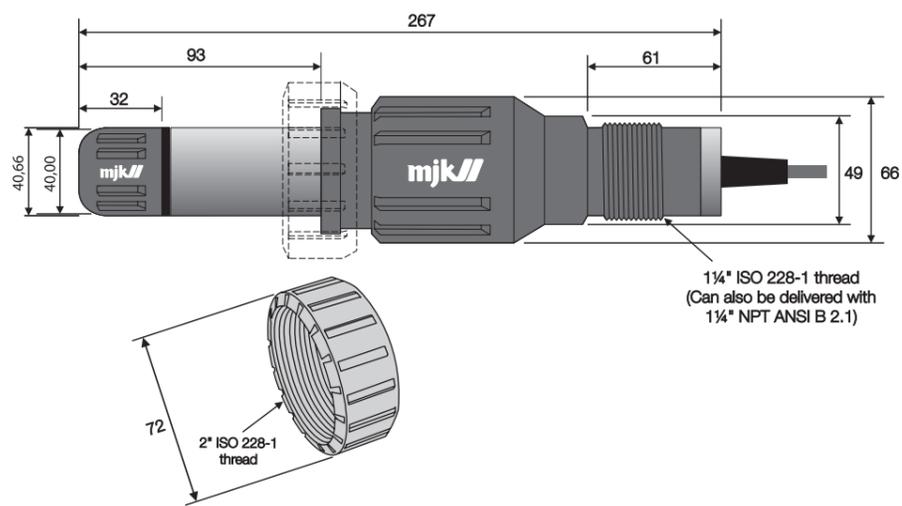
SPECIFICATIONS

PHIX® COMPACT SPECIFICATIONS

Input, pH and mV	0 - 14 pH / -1000...+ 1000 mV
Input Impedance, pH	> 2 x 10 ¹² Ω
Input Impedance and mV	> 2 x 10 ¹² Ω
Temperature Range	- 20 ... +60 °C / -4...+176° F
Accuracy pH	± 0,01 pH / 1 mV
Accuracy Temperature	± 0,5 % FS
Linearity pH	± 0,01 pH / 1 mV
Linearity Temperature	± 0,2 %
Repeatability	± 1,0 %
Response Time pH	±Approx. 10 seconds
Response Time Temperature	95% in less than 60 seconds (when sensor is fully submerged)
Temperature Compensation	Built-in sensor, -20 ... +80° C / -4...+176° F
Materials	Ryton® (PPS) and/or stainless steel (EN 1.4404 / AISL316)
Supply Voltage	12-30 V DC. 2-wire supply
Output Signal	4-20 mA for pH / mV / temperature - Scaled:0-14 pH/ -1000...+1000mV / 0 - 50° C (32-122° F)
Cable	2 X 2 x 0,5 mm ² , shielded, PUR insulation
Cable Length	6 meter (19.7 ft)
Weight	1,8 kg / 3,97lb
Enclosure	IP 68
CE Approvals	EN61000-6-4 2007-02-19, EN61000-6-2 2005-09-08

SPECIFICATIONS

ELECTRODES SPECIFICATIONS			
	160310 pH electrode	160311 pH electrode	160312 Redox/ORP electrode
Membrane	Glass	Glass	Platinum
Reference System	Ag/AgCL, 3.5M KCl	Ag/AgCL, 3.5M KCl	Pt/KCL, 3.5M KCl
Reference System Material	PTFE	PTFE	PTFE
Impedance	50 MΩ	50 MΩ	n/a
Measuring Range	0-14 pH	0-14 pH	-1000 / +1000 mV
Temperature Range	0-80° C / 32-122° F	0-80° C / 32-122° F	0-80° C / 32-122° F
0-point pH	4,60 pH, +/- 0.2 pH	7,00 pH, +/- 0.2 pH	n/a
Response Time	t95 - 5 sec.	t95 - 5 sec.	t95 - 5 sec.
Pressure	0-100 psig / 0-6,8 bar	0-100 psig / 0-6,8 bar	0-100 psig / 0-6,8 bar



EXO SONDE

Need to dive deep into your data?

EXO will get your quality data from up to 250 m below sea level - even in saltwater

- High data quality
- Rugged titanium sensors
- Used in depths up to 250 m
- Digital smart sensors
- Anti-fouling wiper ensures quality data
- SmartQCtm enables correct calibration routines & error checking
- SDI12, RS232 and RS485 output

When only the best will do, EXO is the premium water quality-monitoring platform in the world. It is a multiparameter 6-port water quality sonde with anti-fouling wiper.

The EXO advanced water quality monitoring platform includes the versatile multiparameter EXO2 sonde for oceanographic, estuarine, or surface water applications.

Its key benefits are, among other things, high-accuracy sensors with on-board memory, wireless communications and seamless integration into marine, estuarine, freshwater and ground water monitoring systems.

It has smart sondes and sensors and extremely versatile instruments, allowing the user to automatically configure a sonde with different sensor for different applications in minutes.

Leading in accuracy, it has been tested in a variety of rigorous field conditions as well as lab conditions to ensure accuracy and response times.

No matter which EXO sensors users select, they can be sure to monitor without interruption, as feature set of the sensors make them rugged and durable.

Features

- Wet-mateable connectors resist corrosion
- Isolated components prevent short circuits
- Welded housings and double o-rings prevent leaks
- High-impact plastic and titanium resists breaking
- Built-in antifouling systems protect data integrity
- Low power consumption extends underwater deployments
- Highest Data Quality Onboard monitoring systems verify sensor operation
- Anti-fouling with central wiper



- Desktop software compatible
- Flow cell
- UI in German, English, French, Japanese, Chinese, Spanish
- Logging capabilities
- Memory: >1,000,000 logged readings, 512 MB total memory
- Multiparameter
- Operating temperature: -5 to +50° C
- Power: 4 alkaline batteries
- Sampling
- Storage temperature: -20 to +80° C
- Unit of measure is parameter dependent

SPECIFICATIONS

EXO2 SPECIFICATIONS

EXO Parameter Measured	Sensor ¹	Range	Accuracy	Response	Resolution
Ammonium (freshwater only)	Ammonium Sensor Ammonia with pH sensor SKU: 599710	0 to 200 mg/L (0 to 30° C)	±10% of reading or 2 mg/L-N, w.i.g.	T63<30 sec	0.01 mg/L
Barometric Pressure	Integral Barometer	375 to 825 mmHg	±1.5 mmHg from 0 to 50° C	-	0.1 mmHg
Blue-green Algae, Phycocyanin	Total Algae Sensor SKU: 599102-01	0 to 100 µg/L; 0 to 100 RFU;	Linearity: R2 >0.999 for serial dilution of Rhodamine WT solution from 0 to 100 µg/mL BGA-PC equivalents	T63<2 sec	0.01 µg/L; 0.01 RFU
Blue-green Algae, Phycoerythrin	Total Algae Sensor SKU: 599103-01	0 to 280 µg/L; 0 to 100 RFU;	Linearity: R2 >0.999 for serial dilution of Rhodamine WT solution from 0 to 280 µg/mL BGA-PE equivalents	T63<2 sec	0.01 µg/L; 0.01 RFU

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Specification continued

EXO2 SPECIFICATIONS					
Chloride (freshwater only)	Chloride Sensor SKU: 599711	0 to 18000 mg/L-Cl (0 to 30° C)	±15% of reading or 5 mg/L-Cl, w.i.g.	T63<30 sec	0.01 mg/L
Chlorophyll	Total Algae Sensor SKU: 599102-01, 599103-01	0 to 400 µg/L Chl; 0 to 100 RFU	Linearity: R2 >0.999 for serial dilution of Rhodamine WT solution from 0 to 400 µg/L Chl a equivalents	T63<2 sec	0.01 µg/L Chl; 0.01 RFU
Conductivity	Conductivity / Temperature Sensor SKU: 599870	0 to 200 mS/cm	0 to 100: ±0.5% of reading or 0.001 mS/cm, w.i.g.; 100 to 200: ±1% of reading	T63<2 sec	0.0001 to 0.01 mS/cm (range dependent)
Depth - 10 m	Integral, Non-vented Depth Sensor	0 to 10 m (0 to 33 ft)	±0.04% FS (±0.004 m or ±0.013 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
Depth - 100 m	Integral, Non-vented Depth Sensor	0 to 100 m (0 to 328 ft)	±0.04% FS (±0.04 m or ±0.13 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
Depth - 250 m	Integral, Non-vented Depth Sensor	0 to 250 m (0 to 820 ft)	±0.04% FS (±0.10 m or ±0.33 ft)	T63<2 sec	0.001 m (0.001 ft) (auto-ranging)
Dissolved Oxygen, % air saturation	Optical Dissolved Oxygen Sensor SKU: 599100-01	0 to 500% air saturation	0 to 200%: ±1% of reading or 1% saturation, w.i.g.; 200 to 500%: ±5% of reading	T63<5 sec	0.1% air saturation
Dissolved Oxygen, mg/L	Optical Dissolved Oxygen Sensor SKU: 599100-01	0 to 50 mg/L	0 to 20 mg/L: ±0.1 mg/L or 1% of reading, w.i.g.; 20 to 50 mg/L: ±5% of reading	T63<5 sec	0.01 mg/L
fDOM (CDOM)	fDOM Sensor SKU: 599104-01	0 to 300 ppb Quinine Sulfate equivalents (QSU)	Linearity: R2 > 0.999 for serial dilution of 300 ppb QS solution Detection Limit: 0.07 ppb QSU	T63<2 sec	0.01 ppb QSU

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Specification continued

EXO2 SPECIFICATIONS					
Level, Vented - 10 m	Integral Vented Level Sensor	0 to 10 m (0 to 33 ft)	±0.03% FS (±0.003 m or ±0.010 ft)	T63<2 sec	0.001 m (0.001 ft)
Nitrate (freshwater only)	Nitrate Sensor SKU: 599709	0 to 200 mg/L-N (0 to 30° C)	±10% of reading or 2 mg/L-N, w.i.g.	T63<30 sec	0.01 mg/L
pH	pH Sensor SKU:599701 guarded, 599702 unguarded pH/ORP Sensor SKU:599705 guarded, 599706 unguarded	0 to 14 units	±0.1 pH units within ±10° C of calibration temp; ±0.2 pH units for entire temp range	T63<3 sec	0.01 units
ORP	pH/ORP Sensor SKU:599705 guarded, 599706 unguarded	-999 to 999 mV	±20 mV in Redox standard solution	T63<5 sec	0.1 mV
Temperature	Conductivity / Temperature Sensor SKU: 599870	-5 to 35° C 35 to 50° C	±0.01° C ±0.05° C	T63<1 sec	0.001° C
Turbidity	Turbidity Sensor SKU: 599101-01	0 to 4000 FNU	0 to 999 FNU: 0.3 FNU or ±2% of reading, w.i.g.; 1000 to 4000 FNU: ±5% of reading	T63<2 sec	0 to 999 FNU = 0.01 FNU; 1000 to 4000 FNU = 0.1 FNU
Salinity	Calculated from Conductivity and Temperature	0 to 70 ppt	±1.0% of reading or 0.1 ppt, w.i.g.	T63<2 sec	0.01 ppt
Specific Conductance	Calculated from Conductivity and Temperature	0 to 200 mS/cm	±0.5% of reading or .001 mS/cm, w.i.g.	-	0.001, 0.01, 0.1 mS/cm (auto-scaling)
Total Dissolved Solids (TDS)	Calculated from Conductivity and Temperature	0 to 100,000 mg/L Cal constant range 0.30 to 1.00 (0.64 default)	Not specified	-	Variable

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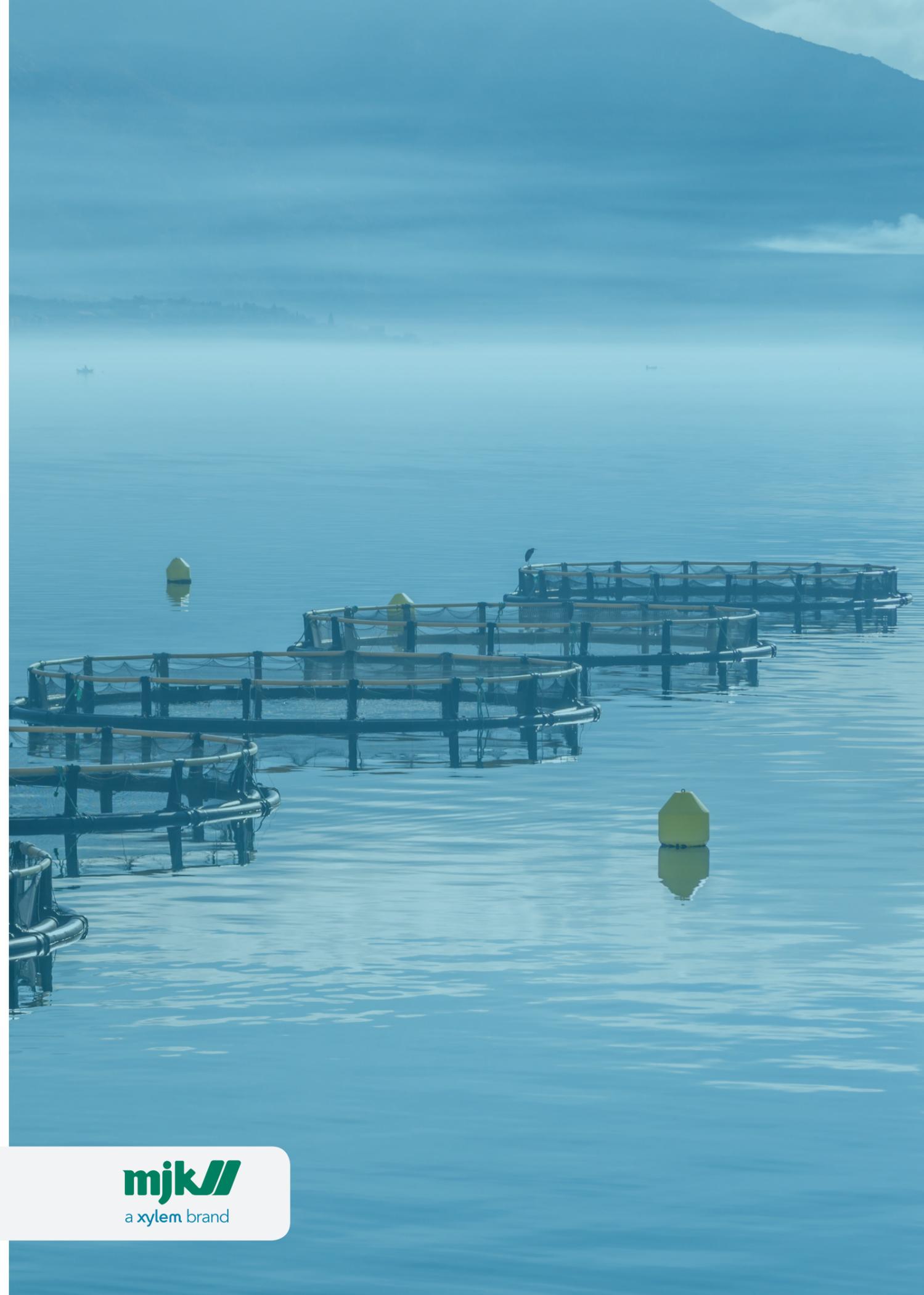
Specification continued

EXO2 SPECIFICATIONS					
Total Suspended Solids (TSS)	Calculated from turbidity and user reference samples	0 to 1500 mg/L	Not specified	T63<2 sec	Variable

¹ Specifications indicate typical performance and are subject to change. All sensors have a depth rating to 250 m (820 ft), except shallow and medium depth sensors, ammonium, chloride, and nitrate. Accuracy specification is attained immediately following calibration under controlled and stable environmental conditions. Performance in the natural environment may vary from quoted specification.

w.i.g. = whichever is greater.

See EXO2 datatsheet for further details.



EXO SONDE
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 a xylem brand

PRODSS

Want flexibility and freedom on the fly?

ProDSS is intelligent and will automatically detect which sensor you attach

- Real-time graphs
- Multilingual
- 100,000 data sets
- Smart, digital sensors - plug and play, automatically recognized
- Rugged titanium, laser welded sensors
- Universal 4 port design, any port will accept any ProDSS sensor

The YSI ProDSS (digital sampling system) handheld multiparameter meter provides extreme flexibility with two main cable options.

Choose between the fully loaded 4-port cable assembly outfitted with any four DSS sensors (with depth or no depth) or the ODO/CT probe and cable - where you get accurate DO measurements every time with an optical dissolved oxygen sensor with an inline conductivity sensor, allowing for real-time salinity compensation.

The ProDSS handheld can withstand the harshest field conditions and handling, with maximum versatility and functionality

Features

- Easy-to-read color and backlit display can be used in any lighting condition
- Scratch-resistant screen is viewable with polarized glasses
- Long-life rechargeable lithium-ion battery ensures reliability in the field and minimizes waste
- Waterproof (IP-67) rubber over-molded casing
- Simple interface and a dedicated "Help" button
- Ergonomic design for optimal handling and portability
- Optional GPS for geo-referencing data
- 3-year warranty



Smart sensors

The 4-port ProDSS cable uses digital **Smart Sensors** for fast, easy setup and storage, and highest quality data:

- Smart Sensors: any sensor in any port
- Traceable calibrations stored in sensor – recalibration not required if moved to another port or another instrument
- Sensors are auto-recognized upon installation
- Replaceable sensor modules and ODO cap reduces maintenance and cost of operation
- Highly-ruggedized, welded titanium sensor body
- 2-year warranty water

Water quality parameters

- Dissolved oxygen (optical)
- Turbidity
- pH
- ORP/Redox
- Conductivity
- Specific conductance
- Salinity
- Total Dissolved Solids (TDS)
- Resistivity
- Seawater density
- Total Suspended Solids (TSS)
- Depth
- GPS coordinates
- Ammonium
- Ammonia
- Chloride
- Nitrate
- Temperature
- Barometric pressure
- Total algae
- Chlorophyll

SPECIFICATIONS

PRODSS GENERAL SPECIFICATIONS	
Auto Stable	User-defined auto-stable function holds stable readings on display when criteria is met
Buffer Recognition	Auto buffer recognition and temperature compensation for US and NIST buffers
Calibration Points	1, 2, or 3 point for pH, turbidity, ammonium, nitrate, and chloride; 1 or 2 point for DO; 1 point for ORP, barometer, conductivity, specific conductance, salinity, and depth
Certifications	CE; RoHS; IP-67; WEEE; FCC; UN Part III, Section 38.3, Test methods for lithium-ion batteries (Class 9)
Connectivity	Built-in micro USB; Cable for PC connection and cable for connection to USB memory stick are included
Data Management	KorDSS desktop software included; 100 user-defined Data ID tags and 100 sites with GPS coordinates
Data Memory	>100000 data sets (data, date, time, user-defined info); 100 files
Display	Color, LCD graphic display; 3.9 x 6.5 cm
GLP Compliance	Yes; 400 detailed GLP records can be stored and are available to view, download and print
GPS	Optional internal GPS; coordinates are stored with measurement data and site lists
Languages	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional), Korean, Thai
Logging Modes	Single point or Continuous
Operating Temperature	0 to 50° C
Battery	Rechargeable lithium-ion battery pack provides ~20 hours with the handheld, 4 port cable and 4 smart sensors; battery recharge time is ~9 hours with the AC power adapter
Storage Temperature	0 to 45° C with battery installed; 0 to 60° C without battery installed
Recalibration Prompt	Provides reminder to recalibrate a ProDSS sensor after user-defined number of days
User ID	Optional user ID for data security
USB Portt	Built-in micro USB On-The-Go port for PC connection, recharging/powering the ProDSS and connecting directly to a USB stick

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Specification continued

PRODSS GENERAL SPECIFICATIONS	
Warranty	3-year; 2-year bulkhead, cable assembly, sensors; and ODO Extended Warranty cap; 1-year pH and pH/ORP sensor modules, ODO sensor caps, and Li-ion battery pack; 6-months ammonium, nitrate, and chloride sensor modules
Waterproof	IP-67; floats
Weight with Batteries (hand-held)	567 grams (1.25 lbs)

PRODSS SENSOR SPECIFICATIONS			
Sensor/Parameter	Range	Resolution	Accuracy
Temperature	-5 to 70° C (temperature compensation range for DO mg/L measurement: -5 to 50° C)	0.1° C or 0.1° F (user selectable)	±0.2° C
pH	0 to 14 pH units	0.01 pH units	±0.2 pH units
ORP	-1999 to 1999 mV	0.1 mV	±20 mV
Dissolved Oxygen	0 to 500%, 0 to 50 mg/L	0.01 mg/L and 0.1%, or 0.1 mg/L and 1% (user selectable)	0 to 200%: ±1% of reading or 1% saturation, whichever is greater 200 to 500%: ±8% of reading 0 to 20 mg/L: ±0.1 mg/L or 1% of reading, whichever is greater 20 to 50 mg/L: ±8% of reading
Barometer	375 to 825 mmHg	0.1 mmHg	±1.5 mmHg from 0 to 50° C
Conductivity	0 to 200 mS/cm	0.001, 0.01 or 0.1 µS/cm (range dependent)	0 - 100 mS/cm: ±0.5% of reading or .001 mS/cm, whichever is greater 100 - 200 mS/cm: ±1.0% of reading
Specific Conductance¹	0 to 200 mS/cm	0.001, 0.01, 0.1 mS/cm	0 - 100 mS/cm: ±0.5% of reading or .001 mS/cm, whichever is greater 100 - 200 mS/cm: ±1.0% of reading. User selectable reference temperature (15 to 25° C; default 25° C) and compensation coefficient (0 to 4%/° C; default 1.91%)

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Specification continued

PRODSS SENSOR SPECIFICATIONS			
Sensor/Parameter	Range	Resolution	Accuracy
Salinity ¹	0 to 70 ppt	0.01 ppt	±1.0% of reading or ±0.1 ppt, whichever is greater
Total Dissolved Solids (TDS) ¹	0 to 100 g/L	0.001, 0.01, 0.1 g/L	Calculated from specific conductance and a user-selectable TDS multiplier (0.30 to 1.00; default 0.65)
Resistivity ¹	0 to 2 Mohms	0.001, 0.01, 0.1 ohms	±0.1% Full Scale
Seawater Density ¹	0.0 to 50.0 sigma, sigma T	0.1 sigma or sigma T	-
Turbidity	0 to 4000 FNU	0.1 FNU	0 to 999 FNU: 0.3 FNU or ±2% of reading, whichever is greater 1000 to 4000 FNU: ±5% of reading
TAL-Chlorophyll TAL-Phycocyanin TAL-Phycoerythrin	0 to 100 RFU or 0 to 400 µg/L chl 0 to 100 RFU or 0 to 400 µg/L PC 0 to 100 RFU or 0 to 400 µg/L PE	0.01 RFU or 0.01 µg/L	Linearity: r2 ≥ 0.999 for Rhodamine WT across full range
Ammonium ²	0 to 200 mg/L NH4-N	0.01 mg/L	±10% of reading or 2 mg/L, whichever is greater
Ammonia ¹	0 to 200 mg/L NH3-N	0.01 mg/L	-
Chloride ²	0 to 18000 mg/L Cl	0.01 mg/L	±15% of reading or 5 mg/L, whichever is greater
Nitrate ²	0 to 200 mg/L NO3-N	0.01 mg/L	±10% of reading or 2 mg/L, whichever is greater
Depth	0 to 328 feet (0 to 100 m)	0.001 m or 0.01 ft	±0.004 m for 1, 4, and 10 m cables ±0.04 m for cables 20 m and longer

¹Derived/calculated parameter

²ISEs for freshwater only; 20-meter maximum depth



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mjk
a xylem brand

PROSOLO

For fast accurate oxygen measurements - every time - go with ProSOLO.

Your fish will thank you...

- Optical DO measurement - DO/CT and DO/T
- Digital sensors
- Rechargeable batteries
- Rugged
- KOR software included
- ODO cap replacement reminder

Connect any ProDIGITAL integrated probe/cable assembly to the ProSolo for enhanced versatility and to form a complete sampling system. Probe assemblies are user-replaceable with cable lengths ranging from 1 to 100-meters.

Advantages over electrochemical sensors include among other things, higher accuracy with no stir dependence, less drift over time; holds calibration longer and less maintenance; no membranes or electrolyte.

The ProSolo handheld meets the demands of true fieldwork with a rugged, waterproof case (IP-67 rated) and a military-spec (MS) cable connector. Rigorously drop tested from all angles, the handheld features a 3-year warranty, while a 2-year warranty is included with the probe assembly and ODO Cap.

ProSolo includes KorDSS Software, a powerful data management program for easy 2-way communication between the meter and a PC. A unique data backup feature allows for the export of data to a USB flash drive (included) in csv format without having to connect to a computer.

Features

- Ergonomic handheld for a comfortable grip
- Easy-to-read color display and backlit keypad
- Large onboard memory with storage capacity for over 100,000 data sets
- Site ID and Data ID tag capabilities for data organization
- Data export directly to USB flash drive (included)
- Single cable design for probe assembly lengths ranging from 1 to 100-meters
- Long-life rechargeable lithium-ion battery that is user-replaceable
- Simple and quick calibration procedures



SPECIFICATIONS

PROSOLO SPECIFICATIONS

Dimensions	8.3 cm width x 21.6 cm length x 5.6 cm depth; 567 g (with battery)
Power	Rechargeable lithium-ion battery pack provides ~48 hours with the handheld only; Battery recharge time is ~ 9 hours with the AC power adapter; The instrument can also be powered via AC or external power through the USB port
Operating Temperature	0 to 50° C
Storage Temperature	0 to 45° C with battery installed; 0 to 60° C without battery installed
Display	Color, LCD graphic display; 3.9 cm width x 6.5 cm height
Memory	>100,000 data sets
Barometer Units: mmHg, inHg, mbar, psi, kPa, atm	Range: 375 to 825 mmHg; Accuracy: ±1.5 mmHg from 0 to 50° C; Resolution: 0.1 mmHg
Sites and Data ID	100 user-defined sites and 100 user-defined data ID tags; Site pictures can be sent to the handheld via KorDSS Software
Calibration Records	400 detailed calibration records can be stored and are available to view, download, and print (printing only available via KorDSS Software)
Languages	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional), Korean, Thai
Certifications	CEC, CE; RoHS; IP-67; WEEE; FCC; UN Part III, Section 38.3, Test methods for lithium-ion batteries (Class 9)
Warranty	3 years on handheld

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Specification continued

PROSOLO SPECIFICATIONS

ODO/T Specifications

Size	2.46 cm diameter, cable options for 1, 4, 10, 20, 30, 50, and 100 m lengths
Dissolved Oxygen (Optical luminescence) Units: % saturation, % saturation local, mg/L, ppm	Range: 0 to 500%, 0 to 50 mg/L; Accuracy: 0 to 200%: $\pm 1\%$ of reading or 1% saturation, whichever is greater; 200 to 500%: $\pm 8\%$ of reading; 0 to 20 mg/L: ± 0.1 mg/L or 1% of reading, whichever is greater; 20 to 50 mg/L: $\pm 8\%$ of reading; Resolution: 0.01 mg/L and 0.1%, or 0.1 mg/L and 1% (auto-adjusts based on range)
Temperature (Thermistor) Units: °C, °F, K	Range: -5 to 70° C (temperature compensation range for DO mg/L measurement: -5 to 50° C); Accuracy: $\pm 0.2^\circ$ C; Resolution: 0.1° C or 0.1° F (auto-adjusts based on range)
Warranty	2 years on cable, probe, and ODO sensor cap



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Mμ CONNECT® & MONITORLINK

Need to excel within pump and process control?

Try the advantages of the Mμ Connect® & MonitorLink setup

- Reliability
- 3G & 4G communication
- Energy optimized control
- External monitoring and control
- HMI display

Mμ Connect® is an advanced combined control and monitoring unit for water tanks and similar within aquaculture.

The Mμ Connect® RTU (slave unit) is configured via the Connect Link™ software, which is connected via USB, the build-in Wi-Fi module, or the 3G or 4G modem.

The Wi-Fi allows for minor on-site adjustments and reading of data via the MJK Connect app on a smartphone. An MJK HMI display can be connected via a serial input, allowing reading of operations data and history.

Mμ Connect® is modular and can, via a DIN bus, be expanded with additional I/O modules allowing a wide variety of in- and outputs.

Mμ Connect® can also connect to e.g. flow, level or other meters using Modbus communication via a serial bus, and communicates with most SCADA systems on the market via standard communication protocols.

Features

- Intelligent pump monitoring
- Energy optimized pump control
- Built-in pump capacity calculation
- State machine for individual programming
- Flexible number of in/outputs via I/O modules
- Inter lock, either with pump stops or off-set of start/stop levels
- Logic functions (control word) for individual control, combination of alarms and more.



SPECIFICATIONS

Mμ CONNECT® SPECIFICATIONS			
Power Supply¹	11-30 V DC / 24 V AC ± 20%		
Power Consumption	8-40 VA, depends on setup		
Battery Backup¹	Built-in battery charger includes supervising an external lead storage battery (2-30 Ah)		
Clock	Realtime clock incl. built-in lithium battery (expected life circle 10 years@20° C)		
Memory	32MB flash memory, 10 X 36.000 logs depending on chosen protocol		
Build-in Communication	3G modem bands (MHz): B5 (850)/B8 (900)/B4 (1700)/ B2 (1900)/B1 (2100)	or	4G modem bands (MHz): B20 (800)/B8 (900)/B3 (1800)/B1 (2100)/B7 (2600)
	and 1 pcs. built-in Wi-Fi, 802.11b/g (2,4 GHz), max. 25Mbps (64/128 bit WEP, WPA, WPA2(AES))		
Interface	1 pcs. RS485 DIN bus for I/O modules 1 pcs. RS485 galvanic separated for Instrument Net 1 pcs. RS485 galvanic separated for Connect net 1 pcs. USB 1,1 type mini B, female 1 pcs. MMCX, female, for antenna		
Communications Protocol	Internal: Modbus® RTU-mode ± 1,0 %		
	External: Modbus® RTU-mode, COMLI® or Aqua Com		
Enclosure	IP 20		
Cabinet Material	PC (polycarbonate)		
Temperature Range	- 20 ... 60° C		
Weight	0,55 kg		
CE Approvals	EN 61000-6-4 2007-02-19, EN 61000-6-2 2005-09-08 cf. 89/336/EEC, 2004/108/EC, 1999/EC		
IN- AND OUTPUT RTU UNIT 3AI/6DI/2DO WITH EXPANSION MODULES MAX. 32 DI, 32 DO, 16 AI AND 16 AO			
Digital Input³	6 pcs. 10 - 30 V DC		
Digital Output³	2 pcs. electronic relays (max. 28 V AC / 28 V DC / 300 mA)		

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Specification continued

M μ CONNECT® SPECIFICATIONS	
Analog Input³	3 pcs. galvanic separated, 16 bit resolution, 4-20 mA, accuracy better than $\pm 0,25$ % of FS2
Analog Output³	Only M μ Connect® I/O module, 4-20 mA, galvanic separated
Power Supply for I/O	1 pcs. 15 V DC, 150 mA

¹Min 15-30 VDC to charge backup battery; battery is charged with either AC or DC supply.

²At operating conditions of 0-50°C.

³When using M μ Connect® expansion modules, the maximum number of in- and outputs will be: 32 DI, 32 DO, 16 AI and 16 AO (32 Digital Inputs, 32 Digital Outputs, 16 Analog Inputs and 16 Analog Outputs). When expansions modules are mounted, a bus system with a DIN rail is used.

I/O EXPANSION MODULES

M μ Connect® can be configured from a simple control unit to a fully expanded, multi-variable process control unit with a wide range of I/O modules. The maximum number of I/O modules is eight. Together with the CPU device, this offers a total of 16AI/16AO/32DI/32DO.

M μ Connect® is easily expanded via a DIN-bus rail system.



OPERATION

M μ Connect® can be operated from different devices:

- Smartphone - connected via external Wi-Fi module. The iPhone and Android apps are free and downloadable from the App Store or Android Market. Scan the QR code and download the MJK Connect app.
- Connect Link™ - for full setup, configuration and communication between nConnect® and a PC via a USB cable, 3G or 4G modem or Wi-Fi.
- HMI Display - provides graphical access to pump controls, data reading and real-time operation overview via touchscreen.

MONITOR LINK

Monitor Link provides a professional and specialized overview of the water level in industrial applications.

Monitor Link is perfect for industrial water monitoring; your company will receive a comprehensive

monitoring and reporting tool, without risking the loss of data as all data are saved daily on a remote server hosted by MJK/Xylem, keeping your IT cost on a minimum.

Monitor Link is a client/server based SCADA software, eliminating the needs for locally placed servers. MJK will handle all server maintenance, daily operations and the safety that a professionally hosted server solution demands.

Your data is stored on the MJK/Xylem server. From a laptop computer you can access the pivotal data, but also read any alarm or incident list, operation reports, working schedules and loads of more information. You can do your work very easy while MJK/Xylem handles the safety and service.

A wide selection of add-on modules provides Monitor Link the flexible and intuitive user interface that is needed in a modern SCADA system. The access is individually controlled; you can allow users to have limited control, full control or maybe some user just need to follow data, without having any control.

The client part operates on a standard PC, by installing the software, or on a tablet. MJK tech-team can assist when setting up your entire workflow and our support will help if you have any questions.

- Standard and individual setup > Monitor Link provides a wide selection of standard graphical files, but can also be adapted for your individual requirements.
- Data back-up on secured MJK/Xylem Server > We provide the safety your data needs
- Intuitive graphical user interface > Standard and individual process images
- Fixed monthly fee > Get rid of the expensive server budget
- Flexible online SCADA system > Inclusive working schedules, alarms and report handling
- Use your own graphic or even photo files!



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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

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