



Make wastewater problems visible.

With NEMO, sensors and samplers work as one.

Measure and sample when it matters most. Up to 10 liquid or gas sensors in parallel. Plug-and-play. ATEX-certified for hazardous areas.



Telemetry data transfer to our cloud



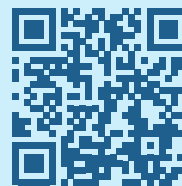
Targeted automatic sampling instead of blind analysis



Atex optional for zone1 or 2



ORI partners



Your Contact:

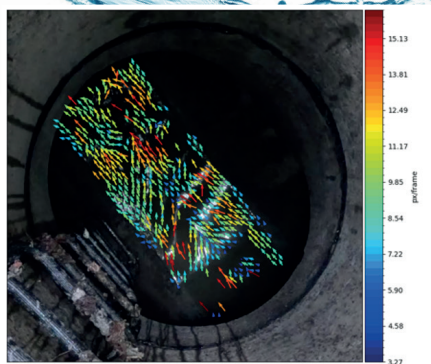
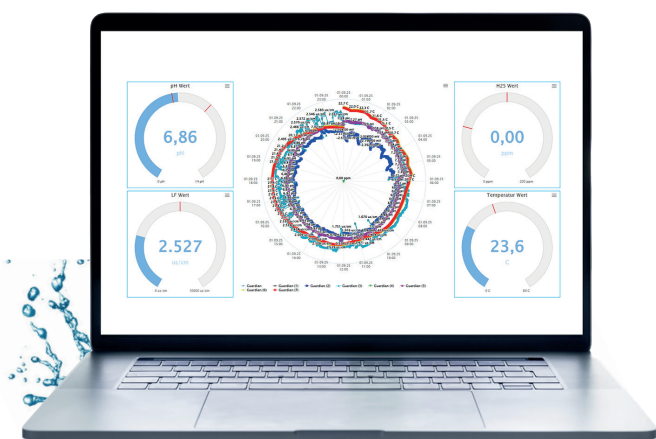
Online sensing and sampling with the NEMO system

With NEMO, you combine modern online sensor technology, intelligent trigger functions, sampling and advanced Dashboard technology in one system. Digital plug&play sensors provide not only measurement values, but also status and diagnostic data—delivering greater safety, transparency, and efficiency in water and wastewater monitoring.



SENSING AND SAMPLING

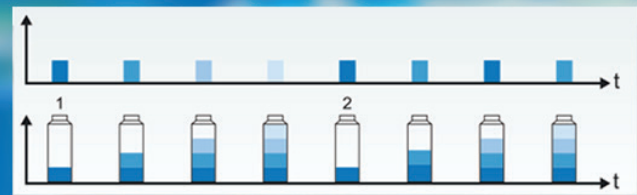
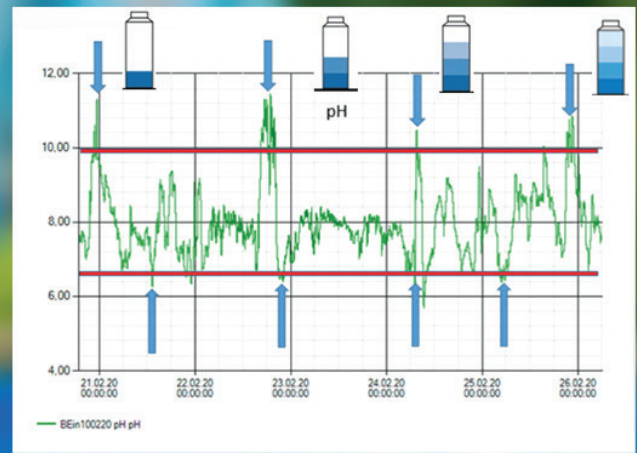
- > Plug-and-play connection for up to 10 digital sensors
- > Mettler Toledo ISM and weighing technology, Dräger Pac and Velocity V sensors can be connected directly
- > Online measurement, event-triggered sampling, and data logging in a single device
- > Unique system concept – simpler than traditional SDI-12 or analog solutions



When sensors and samplers learn to think together.

Water and wastewater processes are becoming increasingly complex: fluctuating influent conditions, new indirect dischargers, and growing requirements from authorities and operators. Traditional spot measurements or individual lab samples are often no longer sufficient to detect critical situations in time and make well-founded decisions.

This is exactly where Sensing & Intelligence with the NEMO system comes in. NEMO combines online sensor technology, event-triggered sampling, and data logging in one end-to-end concept. Modern digital sensors such as Mettler Toledo ISM or Dräger Pac are integrated via plug & play and often deliver far more than just a measurement value: they also transmit temperature, sensor status, serial number, lifetime (DLI), or alarm status.

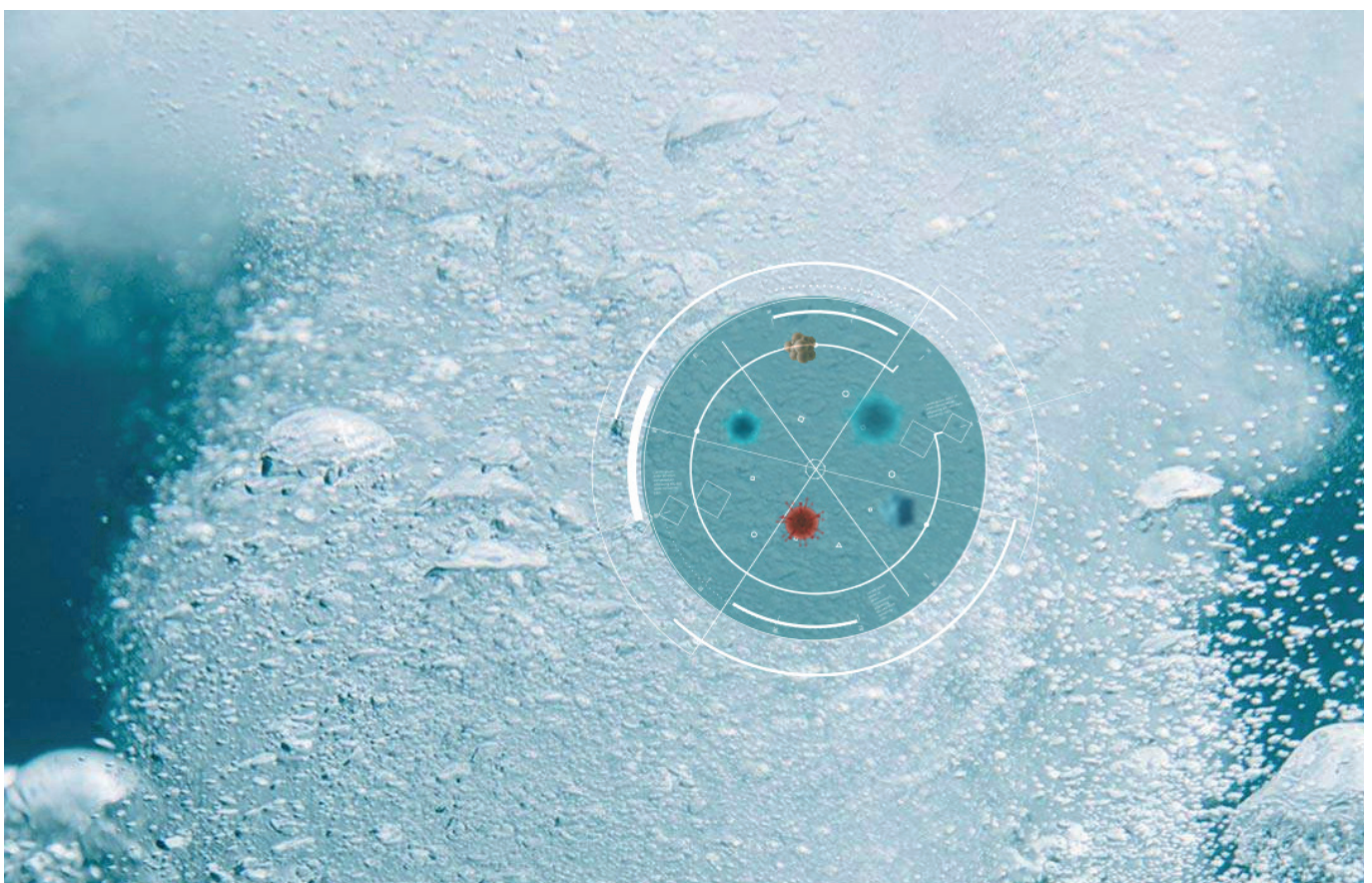
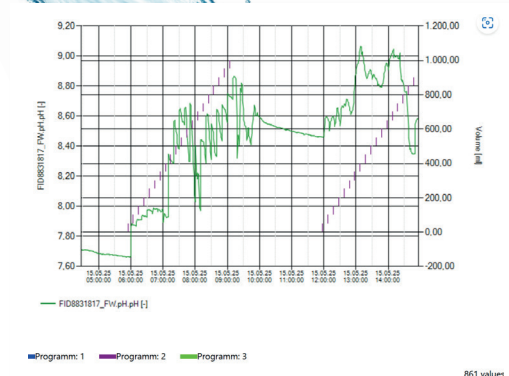
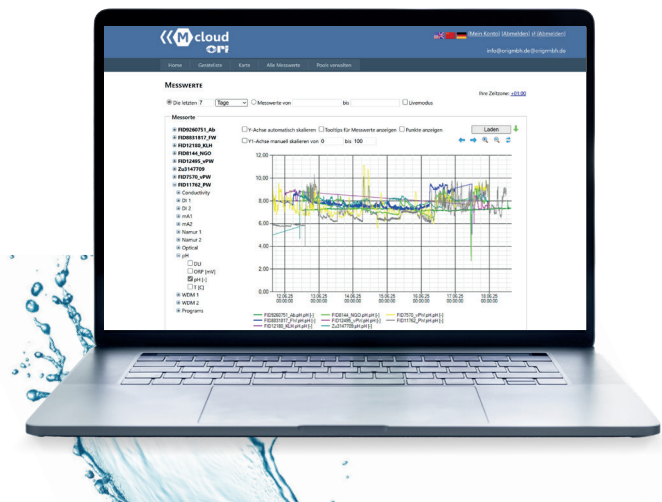


While many common systems on the market still rely mainly on simple analog inputs solutions that require time consuming parameterization, NEMO consistently focuses on easy integration and intelligent functions. Plug in the sensor, let it be recognized, define limit values — done. All sensors are manufactured by renowned suppliers and offer high quality. Building on this, event-triggered samples can be taken precisely at the truly relevant moments — for example during sudden pH shifts, conductivity peaks, or H_2S spikes.

The result: you don't just see that something is happening — you also understand why it's happening and can take targeted action.

Sensing with intelligence means:

- > Online measurement and sampling in one system
- > Digital plug-and-play sensors
- > More than a measurement value: sensor status, DLI, temperature, diagnostic data
- > Event triggered sampling exactly at the critical moment
- > A unique system solution with renowned brands such as Mettler Toledo ISM and Dräger Pac connected directly to NEMO



NEMO ZYX – Measurement Sensors

In liquids

pH

REDOX (ORP)

LF conductivity

O₂

Temp.

Level

Velocity

Flow

H₂S

Weight

Turbidity

In gas

CO₂

H₂S

O₂

SO₂

CO

Measurement Sensors

Plug and play Sensors are automatically detected by the NEMO control system
(incl. ISM, Bluetooth and RS 485 Sensors)



ISM sensors (ATEX certified)

from Mettler Toledo – reliable and digital with Intelligent Sensor Management (ISM®) technology, with K8 plug-in head + thread 13.5 + 120 mm sensor shaft length + sensor. Pre-calibrated



easySense sensors

from Mettler Toledo – reliable and digital, with K8 plug-in head + 13.5 thread + 120 mm sensor shaft length + sensor. Pre-calibrated



Bluetooth sensors

The robust, personal Dräger Pac® 6500 single-gas detector is designed for harsh conditions. It is fast and accurate and offers the option to set up to four alarm thresholds (depending on the sensor). It features Bluetooth and can be easily coupled with the NEMO display. With its integrated battery, it can operate and measure for months. Pre-calibrated



RS 485 preconfigured sensors

With one click on the NEMO device you activate the preconfigured sensors from Mettler Toledo, Mainstream or other brands

Plug and play sensor list

MT52005381

pH



InPro 4260i/SG/120 ISM pH/redox sensor

for inline measurement, with alkali-resistant glass membrane and platinum auxiliary electrode with integrated digital temperature sensor. Argenthal with silver ion barrier.

The hole diaphragm and the solid XEROLYT® extra polymer electrolyte ensure high long-term accuracy, virtually maintenance-free and reliable operation, and a long service life for the pH electrode, even with high particle content or when measuring sulphide-containing media.

Measuring range: 0–14 pH
 Operating temperature: 0–130 °C (32 °F – 266 °F)
 Operating pressure: 0 to 15 barg at 25 °C
 0 to 7 barg at 130 °C

Autoclavable/sterilisable: no
 ATEX/IECEX: Ex II 1/2G Ex ia IIC T6/T5/T4/T3 Ga/Gb



MT30301402

pH



InPro 4281i/SG/120 pH single-rod measuring chain

for inline measurement, with titanium shaft for chemically demanding applications. With integrated digital temperature sensor. Argenthal cartridge with silver-ion trap.

The hole diaphragm and the solid XEROLYT® extra polymer electrolyte ensure high long-term accuracy, virtually maintenance-free and reliable operation, and a long service life for the pH electrode, even with high particle content or when measuring sulphide-containing media.

Measuring range: 1–12 pH
 Operating temperature: 0–80 °C (32 °F – 176 °F)
 Operating pressure: 0 to 15 barg at 25 °C

Autoclavable/sterilisable: no
 ATEX/IECEX: Ex II 1/2G Ex ia IIC /T6/T5/T4/T3 Ga/Gb



MT52003771

pH

easySense pH 31

Reference system Argenthal (Ag/AgCl)
 Proven technology with gel and ceramic diaphragm and HA glass membrane.

Measuring range: 0–14 pH
 Operating temperature: 0–80 °C (32 °F – 176 °F)
 Operating pressure: 0 to 2 barg



MT522003768

pH

easySense pH 32 – Sensor for harsh processes

Reference system Argenthal (Ag/AgCl)
 Proven technology with gel (under pressure) and ceramic diaphragm and HA glass membrane.

Measuring range: 0–14 pH
 Operating temperature: 0–80 °C (32 °F – 176 °F)
 Operating pressure: 0 to 2 barg



Sensor list



MT52003772

ORP (REDOX)

easySense Redox 41 – Multi-purpose

Argenthal reference system (Ag/AgCl)
Proven technology with polymer and an open connection and platinum ring.

Measuring range: ± 1500 mV
Operating temperature: $0-80^{\circ}\text{C}$ ($32^{\circ}\text{F} - 176^{\circ}\text{F}$)
Operating pressure: 0 to 2 barg



MT52003791

LF (Conductivity)



InPro 7100i/12/120 – Conductivity sensor

Compact 4-electrode sensor – V4A electrodes (316L) with integrated temperature sensor, for inline measurement. Short response time and insensitive to aggressive solutions.

Measuring range: $0.02-500$ mS/cm
System accuracy: $\pm 5\%$ or better
Operating temperature: -20 to 150°C ($-4^{\circ}\text{F} - 302^{\circ}\text{F}$)
Ambient temperature: -20 to 50°C
Operating pressure: 0 to 20 bar at 135°C
 0 to 10 bar at 130°C
Sensor material: PEEK (FDA), 316L SS
Sterilisability: Yes (max. 150°C)
ATEX: **Ex II 1/2G Ex ia IIB T6/T5/T4/T3 Ga/Gb**



MT52003792

LF (Conductivity)



InPro 7100i/12/120 – Conductivity sensor

Compact 4-electrode sensor (Hastelloy C22 electrodes) with integrated temperature sensor for inline measurement. Short response time and insensitive to aggressive solutions.

Measuring range: $0.02-500$ mS/cm
System accuracy: $\pm 5\%$ or better
Operating temperature: $-20-150^{\circ}\text{C}$ ($-4^{\circ}\text{F} - 302^{\circ}\text{F}$)
Ambient temperature: $-20-50^{\circ}\text{C}$ ($-4^{\circ}\text{F} - 122^{\circ}\text{F}$)
Operating pressure: 0 to 20 bar at 135°C
 0 to 10 bar at 130°C
Sensor material: PEEK (FDA), Hastelloy C22
Sterilisability: Yes (max. 150°C)
ATEX: **Ex II 1/2G Ex ia IIB T6/T5/T4/T3 Ga/Gb**



MT52003810

LF (Conductivity)

easySens Cond77 – Conductivity sensor

Compact 4-electrode sensor – 1.4435 SS (316L)

Measuring range: $0.0002-4$ mS/cm
System accuracy: $\pm 5\%$ or better



Plug and play sensor list

MT52206431



InPro 6850iG/12/120 – Oxygen sensor (polarographic Clark electrode)

The digital sensor with integrated temperature sensor is used for inline measurement of the O₂ partial pressure in liquids and gases. It contains a platinum anode, which increases signal stability and extends maintenance intervals.

Measuring range:	300 ppm – 100% O ₂
System accuracy:	≤ ± [1% +0.03 vol-%]
Operating temperature:	–5 –70 °C (23 °F – 158 °F)
Ambient temperature:	–20 to 50 °C (–4 °F – 122 °F)
Operating pressure:	0.200 to 9.000 bar
Sensor material:	Stainless steel V4A 1.4435 (316L)
Autoclavable/sterilisable:	no
ATEX:	Ex ia IIC T6 / T5 / T4 / T3 Ga / Gb



MT52206406



easySense O₂ 21 – Multi-purpose

The sensor is designed for use in aqueous solutions

Measuring range:	0.03 ppm – 100% saturation
Operating temperature:	0–60 °C (32 °F – 140 °F)
Operating pressure:	0.5 to 2 barg
Humidity:	0...100%



MT30019005



InPro 5000i/12/120 – CO₂ sensor (Severinghaus principle)

for inline measurement. The sensor, based on the Severinghaus principle, enables the monitoring of dissolved CO₂ in the medium.

Measuring range:	10–1000 mbar pCO ₂ (10–1000 hPa) 0.145–14.5 psig pCO ₂
Accuracy:	± (10 % of the reading + 10 mbar)
Measuring temperature:	0 –60 °C (32 °F – 140 °F)
Mechanical temp. range:	0–135 °C (32 °F – 275 °F)
Operating pressure:	0.2–2 bar (absolute)
Mechanical pressure range:	max. 3 bar at 25 °C
Sensor material:	Stainless steel V4A 1.4435 (316L)
Autoclavable/sterilisable:	No
ATEX:	Ex ia IIC T6 / T5 / T4 / T3 Ga / Gb



Bluetooth sensors

dr8326341-H2S

H₂S
Gas

**Dräger Pac® 6500 H₂S gas detector**

Continuous measurement. With Bluetooth + Open-GATT protocol (please specify when ordering). DrägerSensor XXS H₂S LC

Triple alarm:	audible, visual and vibration
Protection glass:	IP68
Measuring range:	0–100 ppm
Resolution:	0.1 ppm
Alarms:	A1=5 ppm / A2=10 ppm – unlimited
Detection limit:	0.4 ppm
Precision:	≤ ± 5% of the measured value
Operating temperature:	–30 to 55 °C (–40 °F to 131 °F)
Air pressure:	700–1300 hPa
Relative humidity:	10–90%, non-condensing
ATEX / IECEx	II 1G Ex ia IIC T4 Ga



dr8326341-O2

O₂
Gas

**Dräger Pac® 6500 O₂ gas detector**

Continuous measurement. With Bluetooth + Open-GATT protocol (please specify when ordering). Dräger Sensor XXS O₂

Triple alarm:	audible, visual and vibration
Protection glass:	IP68
Measuring range:	0 – –25 vol.
Resolution:	0.1 ppm
Alarms:	A1=19 % / A2=23 %
Accuracy:	≤ ± 1% of measured value
Operating temperature:	–30 to 55 °C (–30 °F to 131 °F)
Air pressure:	700–1300 hPa
Relative humidity:	10–90%, non-condensing
ATEX / IECEx	II 1G Ex ia IIC T4 Ga



dr8326341-SO2

SO₂
Gas

**Dräger Pac® 6500 SO₂ gas detector**

Continuous measurement. With Bluetooth + Open-GATT protocol (please specify when ordering). DrägerSensor XXS SO₂

Triple alarm:	audible, visual and vibration
Protection glass:	IP68
Measuring range:	0–100 ppm
Resolution:	0.1 ppm
Alarms:	A1=0.5 ppm / A2=1.0 ppm – unlimited
Accuracy:	≤ ± 2% of the measured value
Operating temperature:	–30 to 55 °C (–30 °F to 131 °F)
Air pressure:	700–1300 hPa
Relative humidity:	10–90%, non-condensing
ATEX / IECEx	II 1G Ex ia IIC T4 Ga



dr8326341-CO

CO
Gas

**Dräger Pac® 6500 CO gas detector**

Continuous measurement. With Bluetooth + Open-GATT protocol (please specify when ordering). DrägerSensor XXS CO LC

Triple alarm:	audible, visual and vibration
Protection glass:	IP68
Measuring range:	0 – 2000 ppm
Resolution:	1 ppm
Detection limit:	1 ppm
Accuracy:	≤ ± 2% of the measured value
Operating temperature:	–40 to –50 °C (–40 °F to 131 °F)
Air pressure:	700–1300 hPa
Relative humidity:	10–90%, non-condensing
ATEX / IECEx	II 1G Ex ia IIC T4 Ga



RS 485 sensors

8800382 MP 8800381 MP[X]	Velocity measurement MP [X] – for harsh environments, for liquid phases.	
V Ex	Protection rating: IP68 Transducer type: Submerged/underwater sensor containing a complete ultrasonic transmitter, receiver, and signal processing chain. Method: Ultrasonic Doppler Minimum liquid level: 30 mm Velocity range: 5 m/s to -10 mm/s and 10 mm/s to 5 m/s Resolution: Better than 1 mm/s Dimensions: 105 mm long × 50 mm wide × 20 mm high 10 m sensor cable length (other lengths on request) Optional [X] versionATEX certified: Ex ia IIC T4 Ga	
on request	Mettler Toledo™ platform scale for determining the sampling volume based on weight for liquid phases	
wt Ex	Resolution: Max. load 100kg /± 1 gr ATEX / IECEx II 2G IIB T4	
on request	The submersible probe was designed for measuring fill levels and water levels in wastewater, sludge, or rivers. Ceramic sensor, slim design	
LEVEL		

mA sensors

suS00004V01

H₂S
Liquid/Gas



SulfiLogger™ X1-1020-5mgL – H₂S sensor for harsh environments

for gas and liquid phases. Continuous measure-ment. Length 240 mm, weight 0.85 kg, diameter 48.3 mm

Measuring range	Liquid phase 0–5 mg Gas 0–1000 ppm
Accuracy	± 5% or better
Operating temperature:	0 – 40 °C (32 °F – 104 °F)
Operating pressure:	max. 3 bar (44 psig)
Max. water depth:	10 m
Power consumption:	4–20 mA loop power or DC power supply (12–28 VDC) Batteries* (only with PowerCom Box)
Data output:	4–20 mA analogue signal RS–232 digital signal
Material:	V4A 1.4404 (AISI 316L).
ATEX:	Ex II 1G Ex ia IIC T4 Ga



on request

LEVEL



optional

Level and flow sensors

(radar, ultrasonic, inductive) from VEGA, 4–20mA. Non-contact level and fill level measure-ment.

Protection glass:	
Dimension :	105 mm long x 50 mm wide x 20 mm high
Optional ATEX certified	



on request

OPTISENS TUR 2000

KROHNE sensor for turbidity measurement in water and wastewater – **NON Ex** – mA connection



Sensor holders and sampling nozzles

Depending on the measurement and sampling location, very different requirements apply to sensor holders and sampling nozzles. The following parameters play a key role: installation dimensions of sewer pipes or open channels, water levels, flow velocity, or even natural site conditions for surface-water monitoring.

Key selection criteria:

- > Geometry and dimensions of the pipe or channel
- > Minimum and maximum water level
- > Flow conditions (calm, turbulent, high velocity)
- > Access and occupational safety (e.g., in a manhole)
- > Cleanability and maintenance access
- > Protection against deposits, floating debris, and damage

4811070

Protective armouring for 1 x ISM sensor

(pH, O₂, CO₂, LF) – Sensor thread PG13.5
– Material: V2A (AISI 304) / PVC / PA

Typical Challenges:

Small sewer pipes / tight installation spaces

Limited space, restricted access, risk of impact and damage.

Recommended solution (sensor holder / sampling port)

Slim sensor holder for one ISM sensor

Benefits for operation and measurement quality

Secure positioning in the flow zone, easy to hook in, protection against mechanical damage.



4811081

Double protective sensor housing

(pH, O₂, CO₂, LF) – Sensor thread PG13.5
Material: V2A (AISI 304) / PVC / PA

Typical Challenges:

Same as above

Recommended solution (sensor holder / sampling port)

For 2 x ISM/easySense sensors

Benefits for operation and measurement quality

Same as above



4811070

PVDF sensor holder version for 1 x ISM

(recommended for conductivity sensors) – Sensor thread PG13.5
Material: Polyvinylidene fluoride (PVTF) / PVC / PA

Typical Challenges:

For conductivity measurement in low-flow conditions, with a PVDF protective cage. Limited space, restricted access, risk of impact and damage.

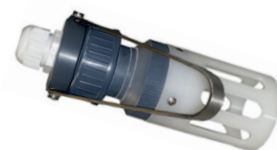
Recommended solution (sensor holder / sampling port)

for 1x ISM conductivitySensor.

Benefits for operation and measurement quality

Secure positioning in the flow zone, easy to hook in, protection against mechanical damage.

Reduced measurement deviation in stagnant water. Material: Polyvinylidenfluorid (PVTF) / PVC / PA).



Sensor list

481108

Pendulum protective armouring made of stainless steel V2A / AISI 304)

With PVC sampling nozzle made of stainless steel V2A + 2 ISM sensor holders. With threaded rods on the side for pendulum suspension in a sewage shaft.

Sensor thread PG13.5

Material: stainless steel V2A / AISI 304) / PVC / PA.

Typical Challenges:

For high water levels with high flow velocity (e.g., pressurized-pipe inlets, steep channels). Strong turbulence, risk of impact damage.

Recommended solution (sensor holder / sampling port)

Robust heavy-duty sensor holder with a pendulum suspension for two ISM sensors and a sampling port.

Benefits for operation and measurement quality

Reliable measurement even at high flow velocities, with a high level of mechanical protection for the sensors



8289086

Measuring sensor float

made of PVC. Floating measuring bracket. Ideal for changing water levels.

Sensor thread: PG13.5

Material: PVC / PA

Typical Challenges:

Wide channels with strongly fluctuating water levels / sew-ers, river sampling, surface waters.

Recommended solution (sensor holder / sampling port)

Floating measurement and sampling holder for two ISM sensors and a sampling port, with a defined immersion depth.

Benefits for operation and measurement quality

Better representativeness of the measurement, reliable sampling from the "main flow," and flexible placement across the full channel width.
Material: PVC / PA



8289083

Special float for suction piece

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



8289 087

Water channel shoe

With attachment eye, for channels from $\varnothing 125\text{mm}$ For 1 x suction hose and 2 x measuring electrodes
Sensor thread PG13.5
Material: Polyvinylidene fluoride (PVTF) / PVC / Polyamide (PA)

Typical Challenges:

For very low water levels with low flow velocity (e.g., dry-weather flow, small channels).

The sensor runs dry, measurements become unstable, in-sufficient sample yield, and the water level is too low for sampling and for continuous wetting of the sensors.

Recommended solution (sensor holder / sampling port)

Sensor holder & sampling port for two ISM sensors with a ponding / impoundment function.

Benefits for operation and measurement quality

Reliable wetting of the sensors and dependable sampling even at low water levels, thanks to the pond-ing/impoundment function. Material: Polyvinylidenfluorid (PVTF) / PVC / Polyamid (PA).



8099992

Bypass or side-stream solutions

with sensor holder + sam-pling nozzle

Flow path DN25 – U-shape with 2 x sensor holders + 1 x sam-pling nozzle.
The final shape can be adapted to the circum-stances.

Typical Challenges:

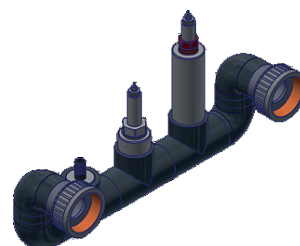
Direct installation in the channel is difficult or impractical; high load of coarse Bypass line with a defined flow rate, in-tegrated sensor holders, and a sampling suction inlet.

Recommended solution (sensor holder / sampling port)

Bypass line with a defined flow rate, integrated sensor holders, and a sampling suction inlet.

Benefits for operation and measurement quality

Excellent maintenance access, easy cleaning and calibra-tion, clean flow conditions and therefore high measure-ment stability.



4811088

SensorBox – 1 x ISM or 1x easSyns sensor

Suitable for sensors with K8 plug head + sensor thread 13.5 + 120 mm sensor shaft length.

Typical Challenges:

Difficult installation at low water levels.

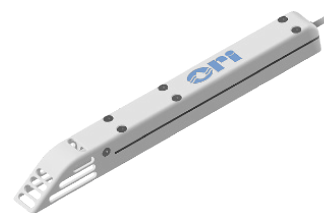
Recommended solution (sensor holder / sampling port)

For installation using the stainless-steel clamp ring

Benefits for operation and measurement quality

Suitable for 1x ISM or easySense

Not suitable for the easySens Cond77.



Sensor list

8289071

Pendulum mount with 2× ISM sensor box and sampling suction inlet

Typical Challenges:

Difficult installation at low water levels.

Recommended solution (sensor holder / sampling port)

Can be installed in the channel either as a pendulum-hung unit or in a semi-horizontal position aligned with the flow direction. Low-profile design for shallow water levels.

Benefits for operation and measurement quality

Suitable for 2× ISM or easySense sensors, as well as a sampling suction inlet. High moisture protection and strong mechanical protection for the plug connections. Optional flushing adapters available



8289072

Pendulum mount with 3× ISM sensor box and a sampling suction inlet

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



8289073

Pendulum mount with 4× ISM sensor box and a sampling suction inlet.

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



Sensor quiver in half shell for installation in the channel

8289074

Sensor quiver channel 150 mm

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



8289075

Sensor quiver channel 200 mm

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



8289076

Sensor quiver channel 300 mm

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



8800027

Stainless steel clamp ring

Typical Challenges:

Same as above:

Recommended solution (sensor holder / sampling port)

Same as above:

Benefits for operation and measurement quality

Same as above:



Sensor list

8289 048

Suspension rail

for a sampler or measuring technology in the manhole.
Mounting in the screen basket recesses.
655...950 mm variable for different shaft sizes



On request

Mounting hook

Sampler load carrier for attachment to the climbing
irons of the manhole



2532 007

ISM sensor seal

Sealing sleeve, external, for ISM sensor plug connection.



102251007

Measuring probe holder

(incl. strainer basket for the suction piece)

Typical Challenges:

Manholes with difficult access (deep manholes, narrow access openings).

Recommended solution (sensor holder / sampling port)

Sensor holder or sampling port with telescopic poles, 2.3 m to 3.2 m.

Benefits for operation and measurement quality

Easily positioned from above, no need to enter the manhole, improved occupational safety.
telescopic pole in various lengths must be ordered separately. See article: 102250728...





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