



evoqua  
WATER TECHNOLOGIES



# WALLACE & TIERNAN<sup>®</sup> FLOW CELL MODULE DEPOLOX POOL E

INSTRUCTION MANUAL



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*Please note*

Original instruction manual!

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## 1. Introduction

### 1.1 Documentation

#### 1.1.1 Target groups

This instruction manual provides the information for installation, operating and maintenance personnel. It is required for operation and maintenance of the flow cell module DEPOLOX Pool E.

This instruction manual is intended for operators of the flow cell module DEPOLOX Pool E. It contains important information for safe, trouble-free and efficient operation of the flow cell module DEPOLOX Pool E. Observing these instructions will help prevent risks, reduce repair costs and downtimes, and increases the reliability and service life of the flow cell module DEPOLOX Pool E.

Sections installation and maintenance are intended only for trained service personnel. These sections contain important information on assembling, configuring, and commissioning the flow cell module DEPOLOX Pool E and on maintenance and repair work.

All those working with the flow cell module DEPOLOX Pool E must have read and understood the instruction manual and, in particular, the safety instructions.

Please consult the table of contents and the index to quickly find the information you require.

## 1.2 Disclaimer

We are not liable for any damages incurred during installation or use of these hardware and software components. This applies specifically to trouble-free interaction with the software and hardware components you choose.

We are not liable for buyer damages (in particular, lost profits, lost information and service interruptions), which arise when using the flow cell module DEPOLOX Pool E, nor for other damages. You are solely responsible for the installation!







The contents of the instruction manual has been checked to make sure that it matches the detailed hardware and software. Deviations can nevertheless not be ruled out and we therefore assume no liability for full conformity. The details in this instruction manual are checked regularly and any necessary corrections are included in subsequent issues.

### 1.3 Conventions



*Please note*

This instruction manual contains a number of notes with different priorities that are marked with symbols.

Pictogram	Note	Meaning
	<i>Danger!</i>	Immediate danger to life and limb! If the situation is not corrected, death or serious injury will result.
	<i>Warning!</i>	Danger to life and limb! If the situation is not corrected, death or serious injury can result.
	<i>Attention!</i>	If this note is not observed, moderate or minor injury or damage to equipment can result.
	<i>Warning!</i>	Electrocution hazard.
	<i>Please note</i>	These notes indicate a material risk or provide useful information to make working with the device easier.
	<i>Attention!</i>	Environmental hazard! Do not throw away or burn the batteries! Batteries must be disposed of at a collection point.





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## 2. Safety

### 2.1 Intended use

The flow cell module DEPOLOX Pool E is intended exclusively for the measurement and control of the treatment of water in swimming pools and baths.

The operational safety of the flow cell module DEPOLOX Pool E is only guaranteed if it is used in accordance with its intended application. It may only be used for the purpose defined in the order and under the installation, operating and ambient conditions specified in this instruction manual.

All inspection and maintenance work must be carried out in accordance at the specified intervals.

Compliance with the intended use also includes reading this instruction manual and observing all the instructions it contains.

The owner/operator of the installation has sole responsibility for consequences of any use that does not conform with the installation's intended use.

## 2.2 General safety instructions

Evoqua Water Technologies GmbH attaches great importance to ensuring that work on its device is always perfectly safe. This was already taken into account in the design of the installation by the integration of safety features.

### *Safety regulations*

The safety instructions in this documentation must be observed at all times. Additional industry-wide or in-house safety regulations also continue to apply.

### *Safety instructions on the unit*

All safety instructions attached to the unit itself must be observed. These instructions must always be clearly legible and complete.

### *State-of-the-art technology*

The unit has been constructed in accordance with state-of-the-art technology and the accepted safety regulations. However, if the unit is used by persons who have not been adequately instructed, risks to life and limb of such persons or third parties and damage to the unit itself or to other property cannot be ruled out. Work not described in this instruction manual must be performed only by authorized personnel.

### *Personnel*

The operator of the overall system must ensure that only authorized and qualified specialized personnel are permitted to work with and on the unit within their defined scope of authority. "Authorized specialists" refers to skilled personnel employed by the owner/operator or by Evoqua Water Technologies GmbH or, if applicable, the service partner. Only qualified electricians must perform work on electrical components.

### *Spare parts / components*

Trouble-free operation of the unit is only guaranteed if original spare parts and components are used in precisely the combination described in this instruction manual. Failure to observe this instruction may incur the risk of malfunction or damage to the unit.

### *Extensions and conversions*

Never attempt to perform any modifications, extensions or conversions on the unit that could have an adverse affect on safety without the written approval of the manufacturer.

### *Electrical power*

During normal operation, the controller must remain closed. Connect the power cables in accordance with the wiring diagram.

*IT security* Evoqua Water Technologies GmbH offers IT security mechanisms for its products to support secure system operation. We recommend checking on a regular basis to see what information is available regarding IT security developments for your products. Information on this can be found on the Internet.

For the safe operation of an installation, it is furthermore necessary to integrate the automation components into a holistic IT security concept which comprises the entire system and is in accordance with latest state of the art technology. In the process, implemented products deriving from other manufacturers should be taken into account.

Upon start-up of the electronic module, it should be ensured that the factory-configured passwords and user names are replaced with individual ones.

*Disposal* Ensure safe and environment-friendly disposal of agents and replacement parts.

### 2.3 Specific operating phases

*Normal operation* Never employ any working methods which could affect safety!

Only run the flow cell module when the housing is closed!

Inspect the flow cell module at least once daily for externally visible damage and faults! Inform the responsible person/authority immediately of any detected changes (including any changes in the operating performance)!

In the event of malfunctions, always switch the flow cell module off immediately! Have malfunctions remedied immediately!

*Installation and maintenance work* Always perform installation or maintenance work in accordance with this instruction manual or the technical documentation for installed system components!

Secure the flow cell module against activation during installation and maintenance work!

Always retighten released screw connections!

Never use corrosive cleaning agents (e.g. spirit)!  
Use only a damp cloth to clean the device.

Ensure safe disposal of agents and replaced parts in accordance with environmental regulations!

## 2.4 Notes on Special Dangers

### *Electrical power*

Only qualified electricians or trained personnel supervised by a qualified electrician are permitted to perform any work on electrical components in accordance with valid electro-technical regulations.

If stipulated, disconnect all parts of the flow cell module from the power supply before performing any inspection, maintenance or repair work. Then first test the disconnected components to ensure they do not carry any voltage.

The system may still be live even if the operating voltage is switched off.

In the event of a fault in the electrical power supply, switch the flow cell module off immediately!

Inspect/check the flow cell module of the system regularly. Remedy any faults immediately.

Connect disconnected cables in accordance with the wiring diagram.

## 2.5 Warranty conditions

The following must be observed for compliance with warranty conditions:

- Installation and commissioning by Evoqua Water Technologies GmbH personnel or trained and authorized specialized personnel, e.g. of contracted companies
- Intended use
- Observation of the operational parameters and settings.
- The unit may only be operated by trained personnel.
- An operating log book must be kept (only in the public sector).
- Only approved calibration chemicals may be used
- The unit must not be exposed to frost.
- Maintenance work must be executed
- Use of genuine spare parts

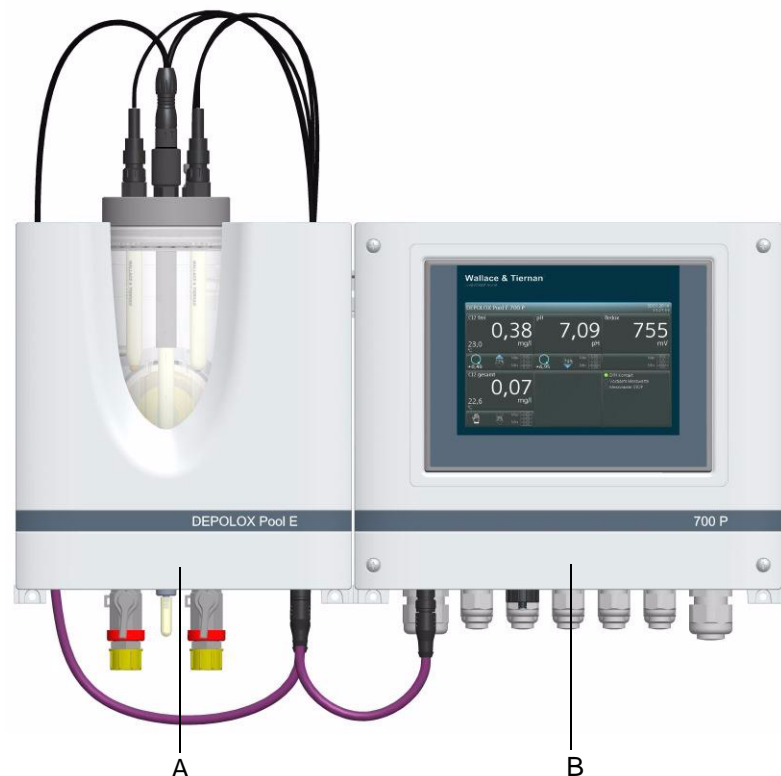
If any of the above conditions are not met, the warranty is void.

## 3. Description

### 3.1 General

The flow cell module DEPOLOX Pool E is part of the pool management system DEPOLOX Pool E 700 P.

The flow cell module DEPOLOX Pool E and sensors, together with the electronic module 700 P is used to measure and control the hygiene assistance parameters free chlorine, pH value and Redox voltage, as well as combined chlorine, total chlorine, conductivity and temperature.



A Flow cell module DEPOLOX Pool E with sensors  
B Electronic module 700 P

*Flow cell module  
DEPOLOX Pool E*

The flow cell module DEPOLOX Pool E is a special flow cell adapter for sample water from various pool applications.

The flow cell module DEPOLOX Pool E is available as a non-pressurized or pressurized version.

The non-pressurized and pressurized version of the flow cell module differ in the number of sensors that can be installed and in the design of the sample water outlet.

The non-pressurized version is characterized by a free sample water outlet.

With the pressurized version, the sample water can be returned to the system circuit.

All sensors that are required for the measurement tasks in swimming pools, are attached or screwed into the cover of the cell body of the flow cell module DEPOLOX Pool E.

The maintenance-free flow control valve is the main hydraulic part of the flow cell module DEPOLOX Pool E. The task of the flow control valve is to keep the sample water flow constant, irrespective of fluctuations in operating pressures.

The multi-sensor monitors the correct flow and records the temperature of the sample water. The metallic sensor housing guarantees good sample water earthing. The continuous hydromechanical cleaning of the electrode of the chlorine sensor prevents the effective natural contamination of the electrode surfaces and guarantees long-term chlorine measurements.

The transformation of the analog sensor signal for the digital transfer to the electronic module 700 P is realized via the electronic box DFMe. If optional sensors are used, this occurs via the module SiDiSens LF (conductivity).



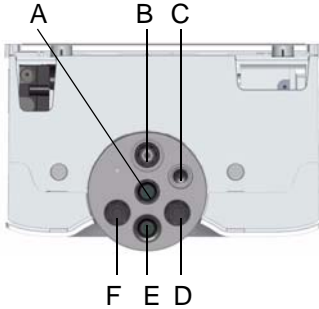
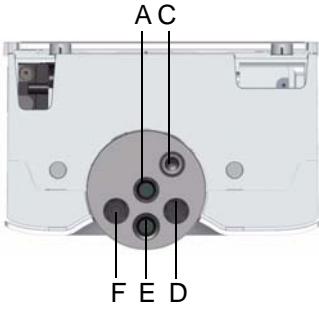
### 3.2 Versions

The flow cell module DEPOLOX Pool E is configured in the factory according to the customer's specific requirements, with the electronic module 700 P according to the variant code. The scope of delivery differs in the version of the flow cell module DEPOLOX Pool E, the sensors, electronic components and accessories. The variant code consists of 12 digits and is printed on both the type plate and packaging sticker.

Example

	C	P	M	N	L	4	R	L	B	DE	O	O
Selection of sensor measuring module for free chlorine												
<input type="checkbox"/> C	Sensor measuring module DEPOLOX Pool E											
<input type="checkbox"/> 5	Sensor measuring module DEPOLOX 5 E											
Selection of sensor measuring module for pH value												
<input type="checkbox"/> P	Sensor measuring module pH value											
<input type="checkbox"/> O	No sensor measuring module pH value											
Selection of sensor measuring module for Redox voltage												
<input type="checkbox"/> M	Sensor measuring module Redox voltage											
<input type="checkbox"/> O	No sensor measuring module Redox voltage											
Selection of sensor measuring module for total chlorine												
<input type="checkbox"/> N	Sensor measuring module total chlorine TC2											
<input type="checkbox"/> S	Sensor measuring module total chlorine TC2-S											
<input type="checkbox"/> O	No sensor measuring module total chlorine											
Selection of sensor measuring module for conductivity												
<input type="checkbox"/> L	Sensor measuring module conductivity											
<input type="checkbox"/> O	No sensor measuring module conductivity											
Selection of analog output												
<input type="checkbox"/> 4	4-way mA analog output											
<input type="checkbox"/> O	No mA analog output											
Selection of relay board												
<input type="checkbox"/> R	Additional relay board 4-way											
<input type="checkbox"/> O	No additional relay board											
Selection of flow cell module DEPOLOX POOL E												
<input type="checkbox"/> L	Flow cell module DEPOLOX POOL E unpressurized											
<input type="checkbox"/> F	Flow cell module DEPOLOX POOL E pressurized											
Selection of LED lighting												
<input type="checkbox"/> B	LED glow stick for flow cell module											
Selection of language for instruction manual												
<input type="checkbox"/> DE	Instruction manual in German											
<input type="checkbox"/> EN	Instruction manual in English											
<input type="checkbox"/> FR	Instruction manual in French											
Not used												
Not used												

*Configuration options*

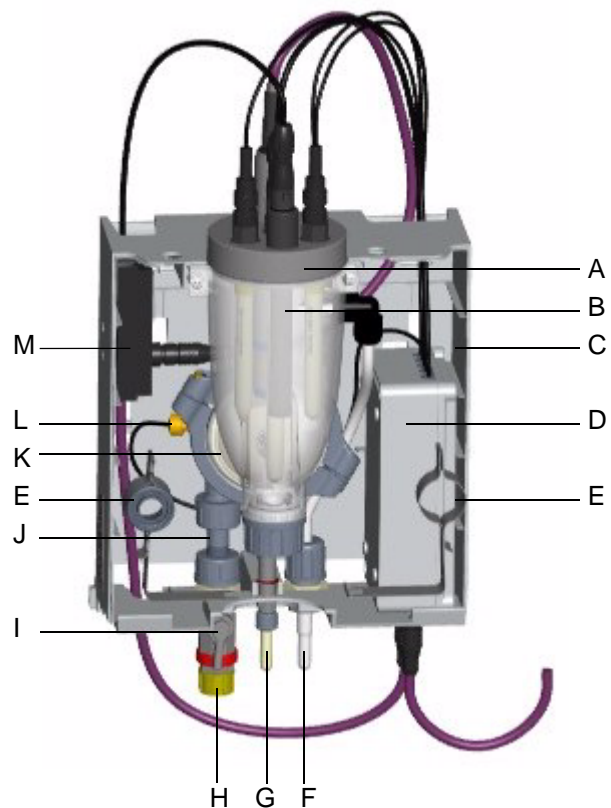
Description	DEPOLOX POOL E Non-pressurized version	DEPOLOX POOL E pressurized version
		
		
	<p>A Chlorine sensor (free chlorine)            B Total chlorine membrane sensor            C LED glow stick            D Redox single-rod measuring chain            E Conductivity sensor            F pH single-rod measuring chain</p>	
Chlorine sensor (free chlorine)	X	X
Total chlorine membrane sensor	X	-
pH single-rod measuring chain	X	X
Redox single-rod measuring chain	X	X
Conductivity sensor	X	X
Sample water temperature (multi-sensor)	X	X
Flow rate monitor (multi-sensor)	X	X
Sample water earthing (multi-sensor)	X	X
Sample water fine filter	(X) only when using the total chlorine membrane sensor	-
LED glow stick	X	X
Ball valve (sample water inlet)	X	X
Ball valve (sample water outlet)	-	X



### 3.3 Design

The flow cell module DEPOLOX Pool E essentially consists of (from the sample water inlet to the sample water outlet):

- Sample water inlet (H) with ball valve (I)
- Fine filter (J)
- Multi-sensor (L) for monitoring the flow rate, measuring the temperature and for sample water earthing
- Flow control valve (K) for constant flow of sample water
- Cell body (B) with cover (A) to hold sensors
- Sample water outlet(F), in pressurized version also with ball valve
- Drain/extract specimen (G)
- Electronic box DFMe (D)
- Module SiDiSens LF (M) (optional)
- Plastic housing (C) with removable housing cover
- Calibration holding clip (E) in housing cover



### 3.4 Function

#### 3.4.1 General

The sample water is connected on the input side via the G1/2" connection to the ball valve. The input pressure must be around 0.25 to 4.0 bar. To guarantee a constant flow, the minimum input pressure must not be less than 0.25 bar.

In the flow direction, the connected filter unit gives the option to install a stainless steel fine filter with a mesh size  $w=500\ \mu\text{m}$ . The fine filter is only used in conjunction with membrane sensors.

The return ball valve housing that is connected after the filter unit, offers a kickback function and guides the ball for monitoring the flow rate.

The multi-sensor combines the function of temperature measurement of the sample water with a Pt1000, flow rate monitoring following the float principle with reed switch and wide area sample water earthing with stainless steel sensor housing.

A flow of the sample water that is not dependent on the operating pressure is assured by the flow control valve. The correct sample water flow of 33 l/h is preset at the factory, checked and logged. The flow control valve is maintenance-free. If the admission pressure rises, the valve ball moves towards the closing direction, if the admission pressure drops, the ball moves towards the opening direction.

The clear cell body holds the sensors and due to its design, is able to provide good cleaning and service options. The sensors are installed in the cover of the cell body with standardized threaded connections or in special sensor holders.

The flow distributor cap screwed into the cell body from the bottom enables the continuous hydromechanical cleaning of the electrode of the chlorine sensor using special cleaning sand and thereby effectively prevents the natural contamination of the electrode surfaces. Clean electrode surfaces and a constant flow of sample water are decisive criteria for a qualitative good chlorine measurement and quick responsiveness.

The sample water runs across the top cell body outlet and directly via a discharge nozzle for hoses with ID 6 mm or, in the case of the pressurized version, via a ball valve with G 1/2" thread connection. With the pressurized version, a maximum back pressure of 1.5 bar is permitted here.

For calibration purposes, there is also a specimen extraction device. It is used to extract sample water from the low-pressure side of the flow control valve in the cell body or to drain the cell body for servicing purposes.

Two calibration holding clips are attached in the cover of the flow cell module. The calibration holding clips are pushed through the side of the basic housing of the flow cell module, thereby enabling the "hand-free" calibration of the sensors with a buffer solution from bags or in the calibration beaker.

The electronic box DFMe is used to convert the analog sensor signals for the digital transfer to the electronic module 700 P. The electronic box DFMe is integrated directly in the basic housing. The sensors and sensor cables are built in and preconfigured in the DFMe housing and are splash-proof in accordance with IP66.

If optional sensors are used, this occurs via the module SiDiSens LF (conductivity). This measurement module is also built into the plastic housing of the flow cell module.

An LED glow stick is screwed into the cover of the cell body as an optical warning indicator.



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*Please note*

When disinfecting the inline electrolysis systems, the chlorine sensor and Redox single-rod measuring chain must be used, gold version (gold electrode).

For applications in brine water with conductivity levels of 2.5 to 60 mS/cm (approx. 4 % NaCl), the total chlorine membrane sensor TC2-S must be used.

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### 3.4.2 Electronic box DFMe

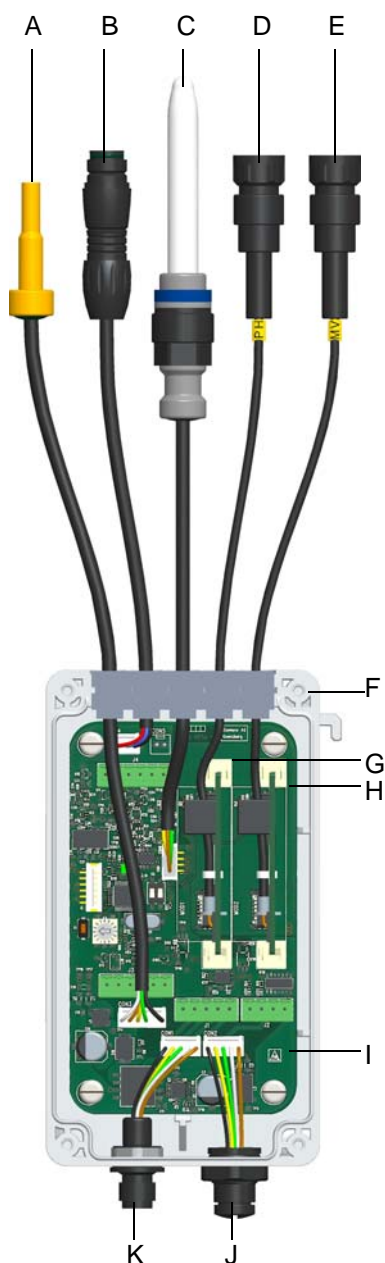
The electronic box DFMe consists of a spray-proof housing with built-in sensor electronics.

The base plate of the electronic box DFMe includes the sensor input for the chlorine sensor and the evaluation electronics for the multi-sensor for the temperature measurement and flow rate monitoring.

Two additional slots are integrated on the base plate for the pH and Redox single-rod measuring chain.

Via the integrated CAN connection socket, the electronic box is connected to the electronic module 700 P using the CAN connection cable.

If additional sensors, such as total chlorine and/or conductivity are installed, the electronic box DFMe is equipped with a second CAN connection socket. Sensors can be retrofitted at any time (see „retrofit kits” on page 55).



- A Multi-sensor
- B Sensor cable  $Cl_2$  free
- C LED glow stick
- D pH sensor cable
- E Redox sensor cable (mV)
- F Housing DFMe
- G pH sensor module
- H Redox sensor module
- I Base plate DFMe with measurement input  $Cl_2$
- J CAN extension socket
- K CAN connection socket for electronic module 700 P

### 3.4.3 Modul SiDiSens LF (conductivity)



To measure the conductivity, an additional module SiDiSens LF is installed in the flow cell module DEPOLOX Pool E. If this is not already done at the factory, it can be retrofitted (see „retrofit kits” on page 55).

The SiDiSens LF module includes the sensor electronics to connect the conductivity sensor LF325 (4-conductor measurement). The extremely sensitive sensor signals are converted into digital signals in the SiDiSens LF and transferred to the electronic module 700 P via the CAN interface.

- A Sensor cable to conductivity sensor
- B SiDiSens LF module
- C CAN socket for connecting the total chlorine membrane sensor
- D CAN connection cable with plug

### 3.5 Technical data

#### 3.5.1 Flow cell module DEPOLOX Pool E

##### *Housing*

Dimensions (WxHxD)	253 x 375 x 163 mm
Weight	approx. 2.5 kg

##### *Connections*

Non-pressurized version	Inlet: G 1/2" A thread connection  Outlet: Connecting nipple for hoses ID 6 mm
Pressurized version	Inlet and outlet: G 1/2" A thread connection

##### *Flow control valve*

Sample water flow	33 l/h, controlled, preset at the factory
Flow control range	0.25 to 4.0 bar
Back pressure	Non-pressurized version: free drain Pressurized version 1.5 bar

##### *Multi-sensor*

Switching point	21 l/h $\pm$ 3 l/h
Switching hysteresis	2 l/h
Temperature sensor	Pt1000

##### *Operating conditions*

Water quality	Bath water acc. to standard
Storage temperature	-20 to +70°C

**3.5.2 Electronic box DFMe**

Version	Sensor electronics integrated in the flow cell module for connection of: <ul style="list-style-type: none"><li>• Chlorine sensor</li><li>• Multi-sensor</li></ul> 2 slots for sensor modules: <ul style="list-style-type: none"><li>• pH</li><li>• Redox</li></ul>
Power supply	24 V DC
Connection	5-pole M12 socket for CAN interface and 24 V DC supply  Extension option for second 5 pole M12 socket
Storage temperature	-20 to +70 °C
Ambient temperature	0 to 50 °C
Environment	No direct sunlight
Atmospheric pressure	75 to 106 kPA
Max. working height	2000 m
Relative humidity	< 80 %, non-condensing
Noise emission	< 45 dB

**3.5.3 Modul SiDiSens LF (conductivity)**

Version	Sensor electronics integrated in the flow cell module for connection of the conductivity sensor:
Connection	5-pole M12 socket for CAN interface extension  CAN connection cable with 5-pole M12 plug for connection to the DFMe  Sensor cable for connection of the conductivity sensor LF325 (4-electrode system)
Power supply	24V DC via CAN connection cable
Storage temperature	-20 to +70 °C
Ambient temperature	0 to 50 °C
Environment	No direct sunlight
Atmospheric pressure	75 to 106 kPA
Max. working height	2000 m
Relative humidity	< 80 %, non-condensing
Noise emission	< 45 dB



### 3.5.4 Sensors

*Chlorine sensor (free chlorine in platinum version)*

Version	Amperometric 3-electrode sensor with platinum electrodes, salt reserve, zirconium dioxide diaphragm, polymerized solid electrolyte, Ag/AgCl drain system
Measurement range	0 to 50 mg/l Cl <sub>2</sub>
Working temperature range	-10 to +135°C (14 to 275°F)
Operating pressure	0 to 6 bar (6 x 10 <sup>5</sup> Pa)
Minimum conductivity of the sample water	50 µS/cm
Installation length	165 mm
Screw-in thread	PG 13.5
Screw-in tightening torque	< 3 Nm
Storage temperature	-5 to +30°C (23 to 86°F)

*Chlorine sensor (free chlorine in gold version)*

Version	Amperometric 3-electrode sensor with gold electrodes, salt reserve, zirconium dioxide diaphragm, polymerized solid electrolyte, Ag/AgCl drain system
Measurement range	0 to 50 mg/l Cl <sub>2</sub>
Working temperature range	-10 to +135°C (14 to 275°F)
Operating pressure	0 to 6 bar (6 x 10 <sup>5</sup> Pa)
Minimum conductivity of the sample water	50 µS/cm
Installation length	165 mm
Screw-in thread	PG 13.5
Screw-in tightening torque	< 3 Nm
Storage temperature	-5 to +30°C (23 to 86°F)



*Please note*

When disinfecting inline electrolysis systems, the gold version of the chlorine sensor must be used.

*pH single-rod measuring chain*

Version	Single-rod measuring chain with universal membrane glass, salt reserve, zirconium dioxide diaphragm, polymerized solid electrolyte, Ag/AgCl drain system
Measurement range	pH 0 to 12 (temporarily to pH 14)
Working temperature range	-5 to +80°C (23 to 176°F)
Operating pressure	0 to 6 bar (6 x 10 <sup>5</sup> Pa)
Minimum conductivity of the sample water	50 µS/cm
Installation length	120 mm
Screw-in thread	PG 13.5
Screw-in tightening torque	< 3 Nm
Storage temperature	-5 to +30°C (23 to 86°F)

*Redox single-rod measuring chain  
(platinum version)*

Version	Single-rod measuring chain with platinum electrode, salt reserve, zirconium dioxide diaphragm, polymerized solid electrolyte, Ag/AgCl drain system
Measurement range	±2000 mV
Working temperature range	-10 to +135°C (14 to 275°F)
Operating pressure	0 to 6 bar (6 x 10 <sup>5</sup> Pa)
Minimum conductivity of the sample water	50 µS/cm
Installation length	120 mm
Screw-in thread	PG 13.5
Screw-in tightening torque	< 3 Nm
Storage temperature	-5 to +30°C (23 to 86°F)

*Redox single-rod measuring chain (gold version)*

Version	Single-rod measuring chain with gold electrode, salt reserve, zirconium dioxide diaphragm, polymerized solid electrolyte, Ag/AgCl drain system
Measurement range	±2000 mV
Working temperature range	-10 to +135°C (14 to 275°F)
Operating pressure	0 to 6 bar (6 x 10 <sup>5</sup> Pa)
Minimum conductivity of the sample water	50 µS/cm
Installation length	120 mm
Screw-in thread	PG 13.5
Screw-in tightening torque	< 3 Nm
Storage temperature	-5 to +30°C (23 to 86°F)

*Please note*

When disinfecting the inline electrolysis systems, the chlorine sensor and Redox single-rod measuring chain must be used, gold version (gold electrode).

*Conductivity sensor*

Version	4-electrode measurement, integrated temperature sensor NTC 30, graphite electrodes, epoxy shaft
Measurement range	1 µS/cm to 2 S/cm
Cell constant	0,475 cm <sup>-1</sup> ±1,5%
Working temperature range	-5 to +100°C (23 to 212°F)
Operating pressure (electrode shaft)	0 to 10 bar (1 x 10 <sup>6</sup> Pa)
Installation length	120 mm
Installation	Loose or pressurized with clamp connection
Protection rating	IP 67 (in plugged in state)
Storage temperature	0 to +50°C (32 to 122°F), store in the fresh air

*Total chlorine membrane sensor  
(= free chlorine + combined  
chlorine)*

Version	Membrane-covered, amperometric 3-electrode sensor with integrated temperature compensation, digital interface (CAN bus)
Measurement range	0 to 20 mg/l Cl <sub>2</sub>
Working temperature range	+5 to +45°C (23 to 113°F)
Area of application pH value	4 to 12 pH
Operating pressure	unpressurized recommended, max. 1 bar
Running-in time	For first commissioning approx. two hours
Dimensions	ø 25 mm x 205 mm
Connection	5-pole M12, flange plug
Cross-sensitivities	Chlorine dioxide, ozone
Response time t <sub>90</sub>	approx. 2 min.
Storage temperature	+5 to +45°C (23 to 113°F), dry and without electrolyte

## 4. Installation

### 4.1 Scope of delivery



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#### *Please note*

The flow cell module DEPOLOX Pool E is configured in the factory according to the customer's specific requirements, with the Electronic module 700 P according to the variant code. The scope of delivery differs in the version of the Flow cell module DEPOLOX Pool E, the sensors, electronic components and accessories.

The variant code is printed on the type plate and on the packaging sticker. See chapter 3.2 "Versions".

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The scope of delivery of the flow cell module DEPOLOX Pool E includes the following:

- Flow cell module DEPOLOX Pool E non-pressurized or pressurized version
- Instruction manual
- Top-hat rail
- Assembly accessories

Depending on the configuration ordered, the scope of delivery of the pool management system DEPOLOX Pool E 700 P includes:

- Electronic module 700 P
- Instruction manual
- Sensors
  - Free chlorine
  - Total chlorine
  - pH
  - Redox
  - Conductivity
- LED glow stick
- 4-way mA analog output
- Additional relay board 4-way

## 4.2 Transport and storage

*Transport* The pool management system DEPOLOX Pool E 700 P is shipped in standard packaging. During transport, the packaged system must be handled carefully and should not be exposed to wet weather or moisture.

Check that the transport packaging is undamaged. In the event of damage, please inform the transport company immediately, as your rights to compensation will otherwise be lost.

If a component is damaged, please contact your affiliate immediately.

Keep the packaging until the pool management system DEPOLOX Pool E 700 P has been commissioned and put into operation.

*Storage* The electronic module 700 P, flow cell module DEPOLOX Pool E and sensors must be stored in a dry condition without any residual water in a dry place that is not exposed to the weather. Storage temperature, see chapter 3.5 "Technical data".

### 4.3 Mechanical installation



*Warning!*

#### **Risk of injury or damage to the installation!**

Electrical work on the electronic module 700 P and flow cell module DEPOLOX Pool E may only be performed by authorized and qualified electricians.

Modifications to the device other than those described in this instruction manual are not permitted.



*Please note*

Correct and safe operation can only be guaranteed if the requirements for the ambient conditions are met. All applicable national and local regulations must be observed!

#### *Installation site*

- The pool management system DEPOLOX Pool E 700 P must be protected against rain, frost and direct sunlight and may therefore not be installed outdoors.
- Protect the pool management system against moisture, spray, heat exposure and direct sunlight.
- Do not use the pool management system in environments where there are flammable gases, fumes or dust or conductive dust.
- Do not subject the pool management system to strong shocks or vibrations.
- The air in the room should be non-condensing.

#### *Mechanical installation*

For the mechanical installation of the flow cell module DEPOLOX Pool E and electronic module 700 P, the following installation variations are available:

- with top-hat rail
- without top-hat rail



*Please note*

The electronic module 700 P is not suitable for electrical connection with permanently installed cable conduits. If the cable glands do not meet local installation rules and regulations, these glands must be replaced with suitable ones.

*Installation variant with top-hat rail*

---

*Please note*

Leave a clearance of at least 250 mm above the pool management system DEPOLOX Pool E 700 P for working with the electrodes.

---

Proceed as follows, see dimension drawing on the next page:

- 1 Secure the top-hat rail to a solid wall using the supplied dowels and screws. (screws and dowels for fixing to a solid wall are included in the scope of delivery.)



---

*Please note*

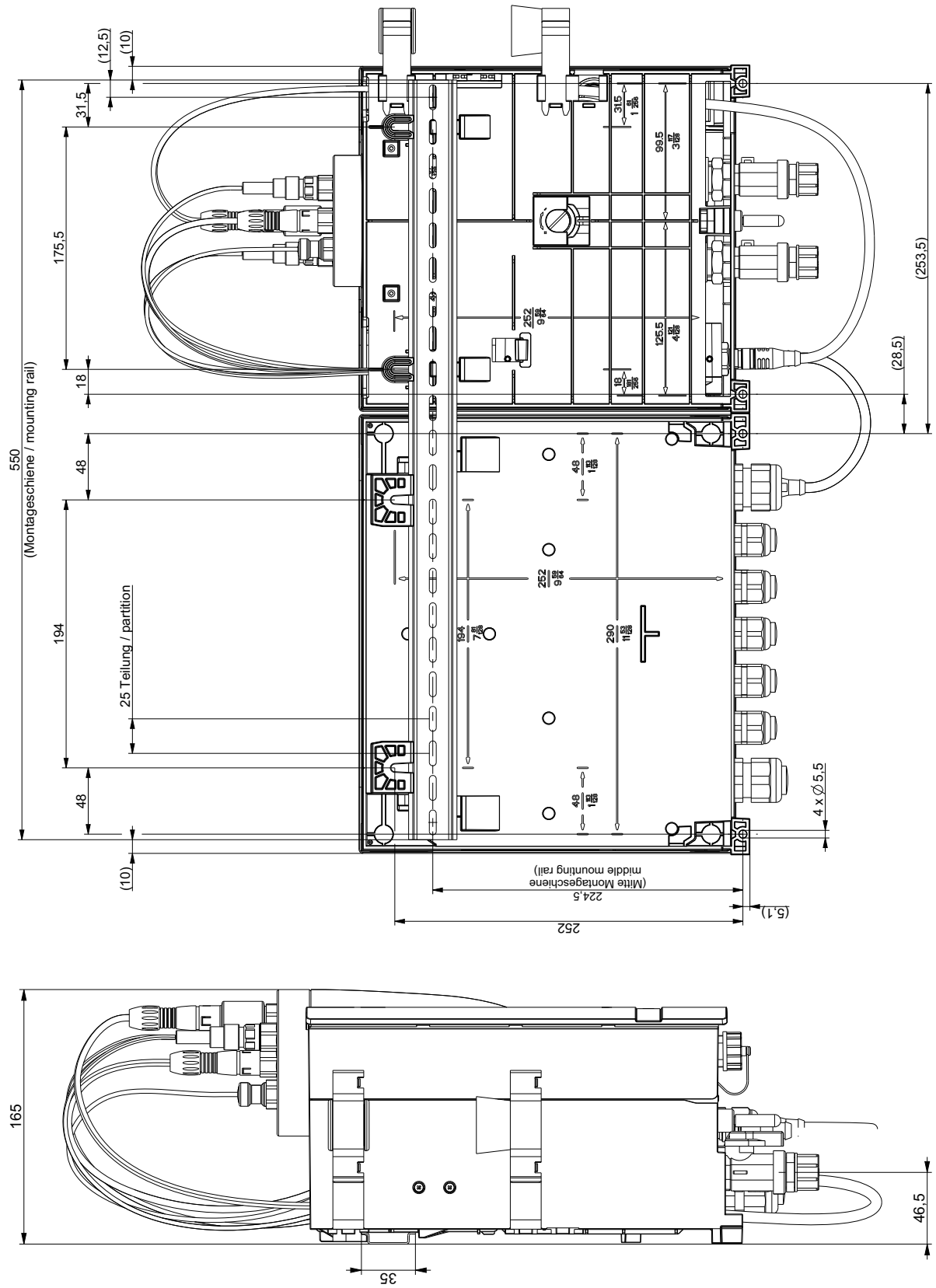
If the device is to be installed on a suitable lightweight wall, use the relevant mounting fixtures (not included in the scope of delivery).

---

- 2 Hook the electronic module 700 P onto the top-hat rail so that it is flush at the right.
- 3 Fasten the electronic module to the solid wall at the bottom by the holders using dowels and screws.
- 4 Hook the flow cell module DEPOLOX Pool E onto the mounting rail on the left next to the electronic module 700 P.
- 5 Fasten the flow cell module to the solid wall at the bottom by the holders using dowels and screws.



Dimension drawing



*Installation variant without top-hat rail*

---

*Please note*

Leave a clearance of at least 250 mm above the pool management system DEPOLOX Pool E 700 P for working with the electrodes.

---



---

*Please note*

The dimensions for the drilling pattern can be found on the back of the plastic housing.

---

Instead of hooking the flow cell module DEPOLOX Pool E and electronic module 700 P onto the top-hat rail, they can also be hooked onto suitable tallow-drop screws by the top holding clips.

Proceed as follows:

- 1 Affix the supplied tallow-drop screws and dowels to the solid wall. (tallow-drop screws and dowels for fixing to a solid wall are included in the scope of delivery.)



---

*Please note*

If the device is to be installed on a suitable lightweight wall, use the relevant mounting fixtures (not included in the scope of delivery).

---

- 2 Hook the electronic module 700 P into the tallow-drop screws.
- 3 Fasten the electronic module to the solid wall at the bottom by the holders using dowels and screws.
- 4 Hook the flow cell module DEPOLOX Pool E onto the tallow-drop screws.
- 5 Fasten the flow cell module to the solid wall at the bottom by the holders using dowels and screws.



---

*Please note*

If the electronic module 700 P and flow cell module DEPOLOX Pool E are mounted at separate locations, you must use CAN cable extensions. The length of 1000 m must not be exceeded.

---

**4.3.1 Connecting the sample water**

*Connecting the sample water inlet*

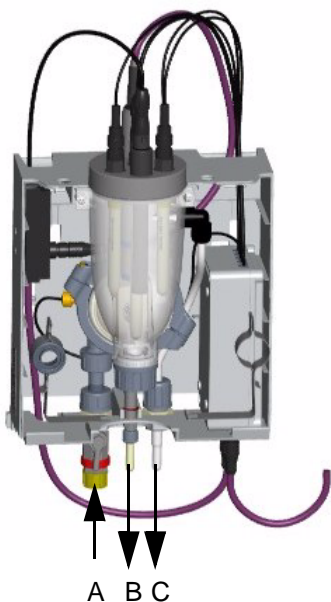
A distinction must be made between a sample water inlet with hose connection and rigid pipes.

To connect the sample water inlet, note the following:



*Please note*

Never use copper tubing in the sample water lines.



- The pressure in the sample water inlet must always be within a range of min. 0.25 to max. 4 bar. At the same time, the pressure in the sample water inlet must generally be 0.2 bar higher than in the sample water outlet.
- If the admission pressure is below 0.25 bar, use a booster pump (see "Examples of sample water extraction using a booster pump").
- If the admission pressure exceeds 4 bar, a pressure reducing valve must be used.
- To prevent long loop lag times, ensure that the lines in the sample water inlet are as short as possible.
- An external strainer with a mesh width of 0.5 mm is provided for the sample water inlet.

- A *Sample water inlet with ball valve*
- B *Drain on the drain screw*
- C *Sample water outlet, on pressurized version with ball valve*

### With hose connection

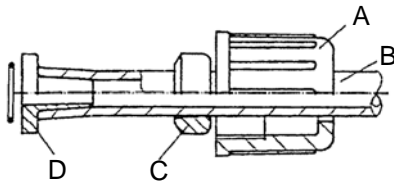
For a sample water inlet with hose connection, proceed as follows:



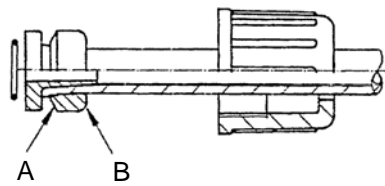
#### *Please note*

The water-tightness of the hose screw connection is only guaranteed if the following installation instructions are followed!

- 1 Insert the hose (B) until it hits the hose bushing (D).
- 2 Push the locking ring (C) out until the union nut (A) engages the connecting threads.



- A Union nut  
 B Hose  
 C Locking ring  
 D Hose bushing



- A 30° pitch on this side  
 B Rounding on this side

### With rigid pipes

For a sample water inlet with rigid pipework, proceed as follows:

- 1 Connect the sample water pipework to the connection thread of the (G1/2" A) ball valve.
- 2 Ensure that the sample water pipes are installed so that it is free of mechanical stress.

*Connecting the sample water outlet*

With the sample water outlet, a distinction must be made between the non-pressurized and pressurized version.

**Non-pressurized version**

For the sample water outlet of the non-pressurized version, proceed as follows:



---

*Please note*

Never use copper tubing in the sample water lines.

---

- 1 On the non-pressurized version, no back-pressure is permitted in the cell body.
- 2 The sample water outlet must be open.
- 3 The sample water outlet must be laid in such a way as to prevent siphoning.



---

*Please note*

We recommend using a funnel above the outlet.

---

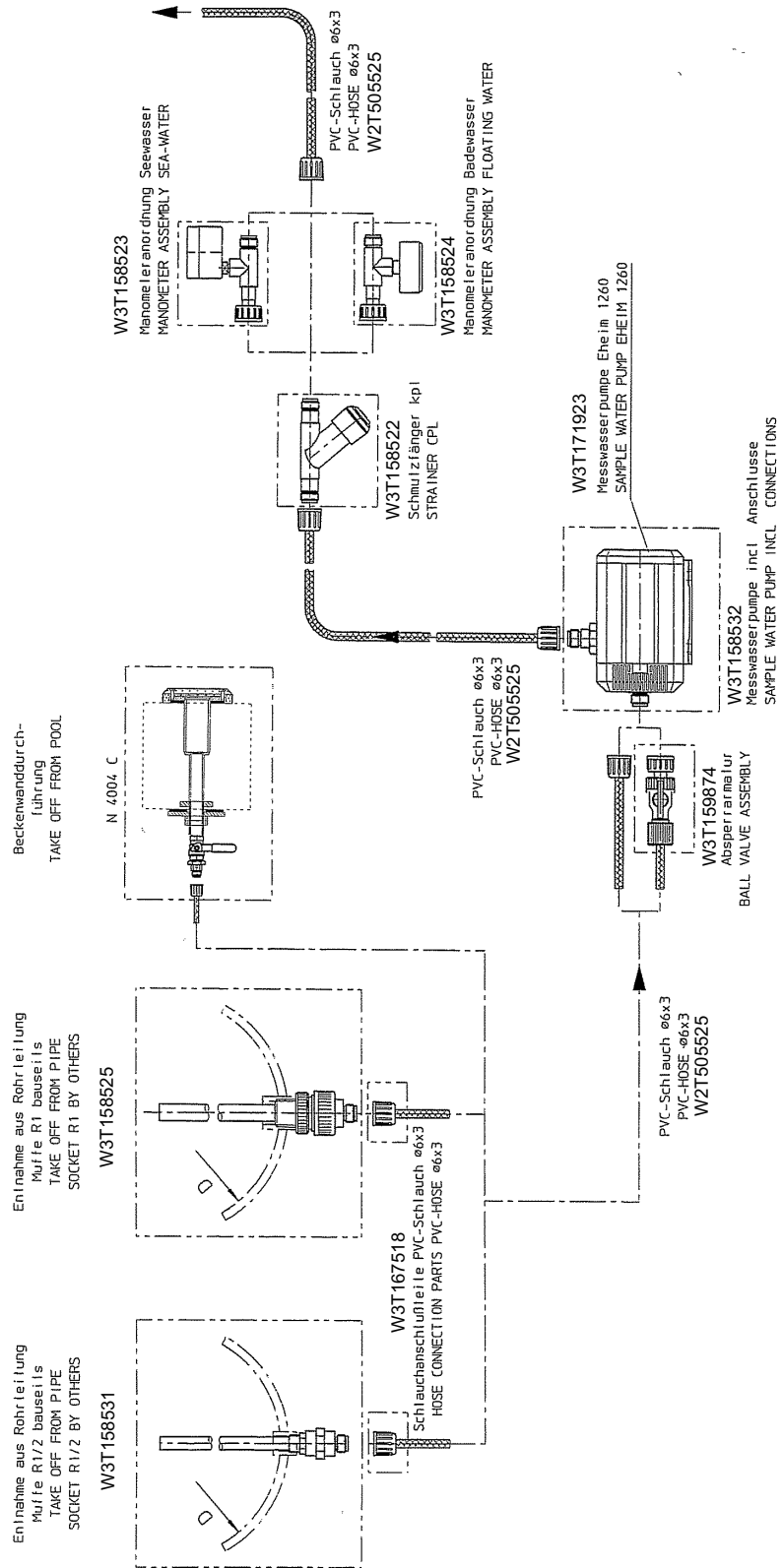
**Pressurized version**

For the sample water outlet of the pressurized version, proceed as follows:

- 1 On the pressurized version, a maximum back-pressure of 1.5 bar is permitted on the sample water outlet.
- 2 Ensure that the drain screw is always closed.

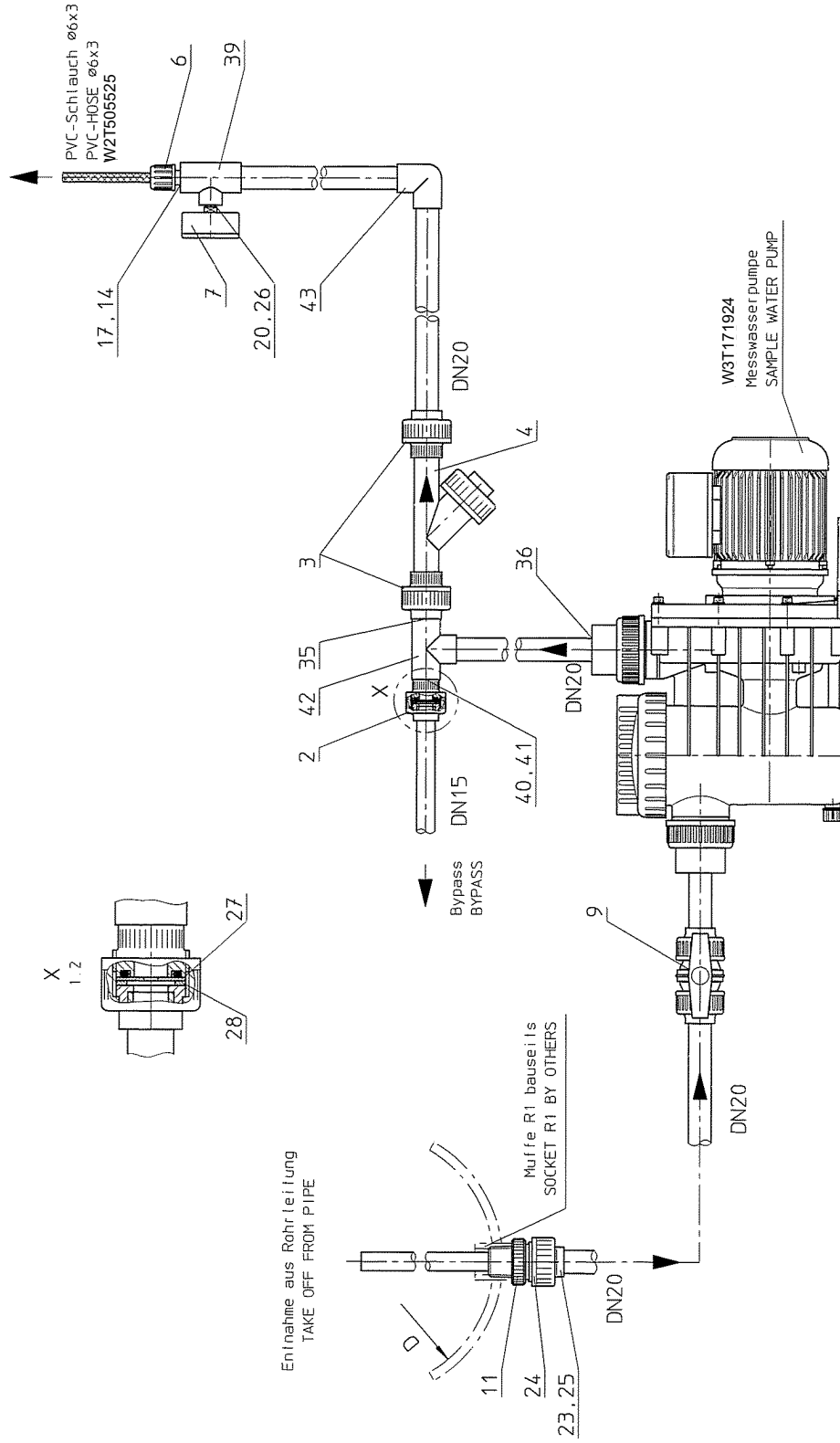
Examples for sample water extraction using a booster pump

Example 1



Only operate with sample water inlet

Example 2



Only operate with sample water inlet

*Parts list*

Sample water extraction for fresh water (part no. W3T158528)

Sample water extraction for salt water (part no. W3T158529))

Item	Quantity	Part No.	Description
2	1	W2T505181	Screw joint
3	2	W2T505182	Screw joint
4	1	W3T171416	Strainer complete
6	1	W3T167518	Hose connection parts
7	1	W3T173160 W3T173198	Pressure gauge (fresh water) Pressure gauge (salt water)
9	1	W2T505945	Ball valve
11	1	W3T163670	Sample pipe
14	1	W3T172948	Threaded part
17	1	W2T505600	Reduction
20	1	W3T163500	Reduction nipple
23	1	W2T507288	Insert
24	1	W2T506934	Union nut
25	1	W3T172720	O-ring
26	1	W3T161254	Flat gasket
27	1	W3T171146	Nozzle washer
28	1	W3T172727	Flat gasket
35	1	W3T166090	Pipe segment
36	2	W2T506782	Reducing junction, short
39	1	W2T506527	T-piece
40	1	W3T166089	Pipe segment
41	1	W2T506778	Reducing junction, short
42	1	W2T507525	T-piece
43	1	W2T507535	Elbow bend



### 4.3.2 Installing sensors



*Please note*

Please follow the relevant instructions for the sensors!



*Please note*

For the pressurized version, do not place a total chlorine membrane sensor into the cell body.

Proceed as follows:

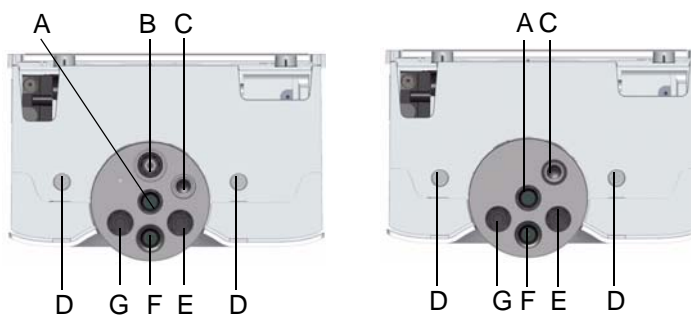
- 1 Remove the plug from the mount hole on the cover of the cell body.
- 2 Remove the protection cap from the chlorine sensors.
- 3 Remove the KCl tank and stand for the pH and Redox single-rod measuring chain.



*Please note*

Keep the protection cap or KCl tank with stand for later use.

- 4 With the conductivity sensor, remove the blind plug and O-ring.
- 5 Plug the sensors into the mount hole on the cover of the cellbody, or screw in (depending on the design of the sensor).



Non-pressurized version

Pressurized version

- A Chlorine sensor (free chlorine)
- B Total chlorine membrane sensor
- C LED glow stick
- D Unlocking buttons
- E Redox single-rod measuring chain
- F Conductivity sensor
- G pH single-rod measuring chain

- 6 Depending on the design of the sensor, either plug or screw the sensor cable in place.

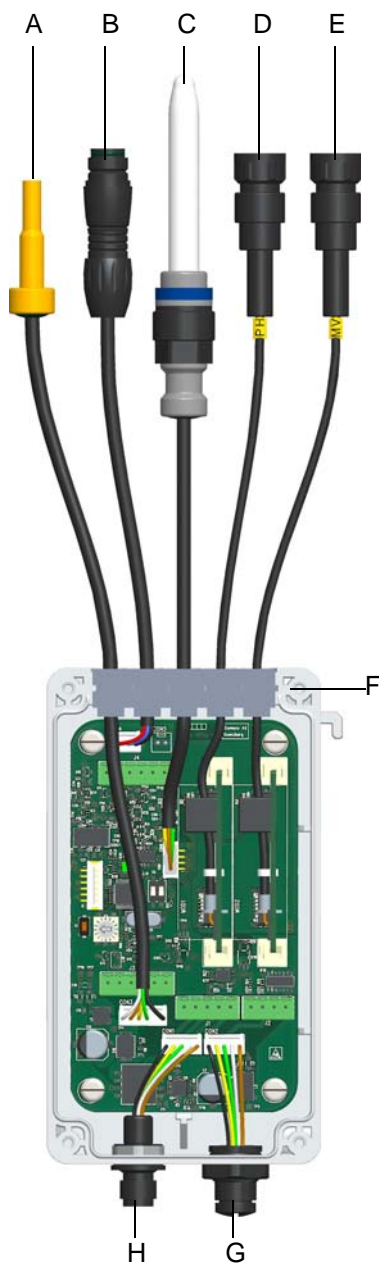


*Please note*

With the pressurized version, the sensors must be screwed in or secured to prevent them from being pushed out.

### 4.3.3 Plugging sensors into the electronic box DFMe

The sensors are connected to the electronic box DFMe as follows.



- A Multi-sensor
- B Sensor cable Cl<sub>2</sub> free
- C LED glow stick
- D pH sensor cable
- E Redox sensor cable (mV)
- F Housing DFMe
- G CAN extension socket
- H CAN connection socket for electronic module 700 P

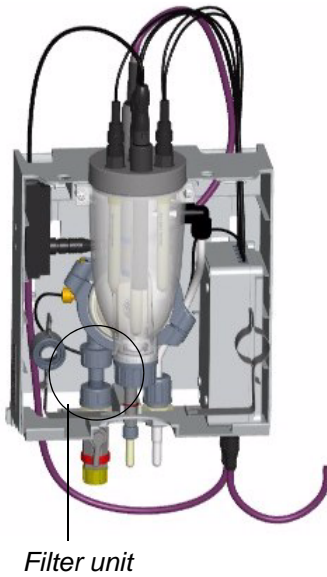
#### 4.3.4 Inserting the fine filter



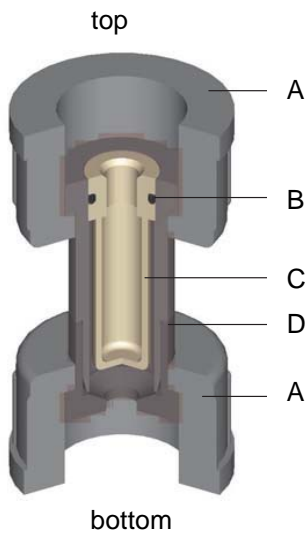
##### *Please note*

A fine filter must only be installed when a total chlorine membrane sensor is employed.

Proceed as follows to insert the fine filter:



- 1 Remove the housing cover of the flow cell module DEPOLOX Pool E.  
To do this, press both unlocking buttons on the top of the housing and remove the housing cover forwards.
- 2 Release both knurled nuts (A).
- 3 Remove the complete filter unit (D).
- 4 Push the fine filter (C) into the filter unit.  
Ensure that the O-ring (B) is fitted correctly.
- 5 Fit the complete filter unit (D).  
Ensure that it is in the correct position (top/bottom).
- 6 Tighten the knurled nuts (A).
- 7 Refit the housing cover of the flow cell module DEPOLOX Pool E and engage.



### 4.3.5 Filling the electrode cleaning sand

The continuous hydromechanical cleaning of the electrode of the chlorine sensor using special electrode cleaning sand effectively prevents the natural contamination of the electrode surface.

The electrode cleaning sand (part no. W3T171317) is supplied in a plastic bottle, the cap serves as a measure.



---

*Please note*

A distinction must be made between the non-pressurized and pressurized version of the flow cell module DEPOLOX Pool E.

---

#### **Non-pressurized version**

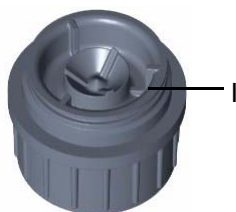
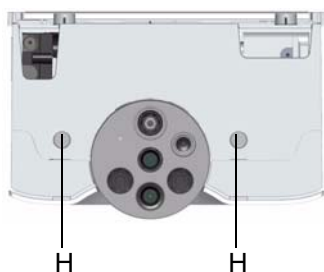
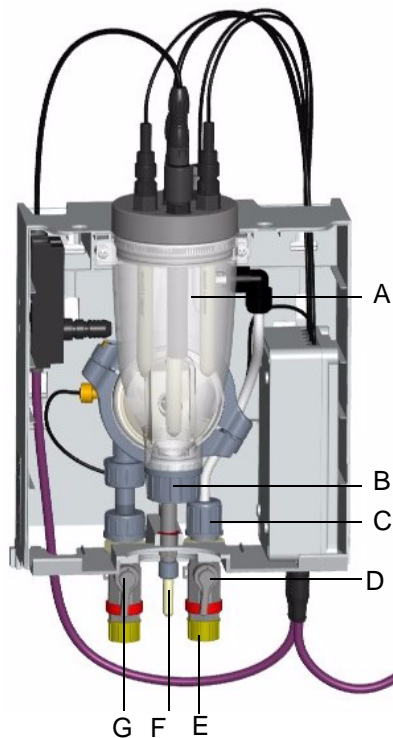
With the non-pressurized version, the electrode cleaning sand can also be added in a simplified form over the mount hole of a sensor in the cell cover.

Proceed as follows:

- 1 Pull out or unscrew the sensor
- 2 Pour cleaning sand over the mount hole into the cellbody.
- 3 Plug the sensor back in again or screw it on.

**Pressurized version**

Proceed as follows:

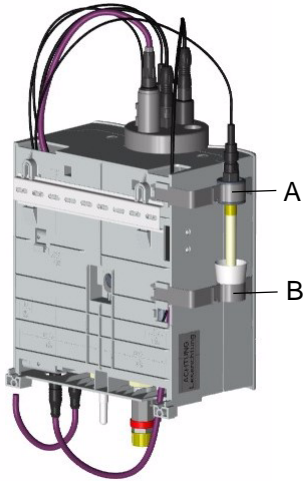


- 1 Close the ball valve (G) at the sample water inlet and sample water outlet (D).
- 2 Open the drain screw on the drain (F) and empty the cell body. To do so, temporarily loosen a plug or sensor to allow air to flow in.
- 3 When the cell body (A) is empty, close the drain screw once more.
- 4 Remove the housing cover of the flow cell module DEPOLOX Pool E. To do this, press both unlocking buttons (H) on the top of the housing and remove the housing cover forwards.
- 5 Unscrew the flow distributor cap (B). Hold the container underneath as the remaining water will drip out.
- 6 Fill the cap of the cleaning sand bottle until it is one third full and then pour into the middle of the flow distributor cap (I). The inner indentation of the flow distributor cap is filled to the half-point with electrode cleaning sand.
- 7 Screw the flow distributor cap (B) back on.
- 8 Open the ball valve (G) at the sample water inlet and sample water outlet (D).
- 9 The cell body (A) fills with sample water.
- 10 Refit the housing cover of the flow cell module DEPOLOX Pool E and engage.
- 11 After 2 to 3 hours running-in time, perform a chlorine calibration. If necessary, repeat the chlorine calibration after 24 hours. See Section on Calibration in the instruction manual "Electronic module 700 P".

*Please note*

An initially rotating air bubble at the bottom of the cell body does not affect the measurement.

### 4.3.6 Installing calibration aids



Two calibration clips are installed in the housing cover. These clips can be inserted into the rear panel of the housing.

The clip with the plastic inserts for the sensor is pushed into the top catch (A).

The bottom clip position (B) is designed for calibration with the calibration solution bag.

## 4.4 First commissioning

After the electronic module 700 P and flow cell module DEPOLOX Pool E and sensors are installed, you can perform the initial startup.

See instruction manual “Electronic module 700 P”, and instructions for the sensors.

## 4.5 Shut-down



---

### *Attention!*

If the installation site of the flow cell module DEPOLOX Pool E is not frost-free, the system must be taken out of operation in good time!

See instruction manual “Electronic module 700 P” and the corresponding instructions for the sensors.

---

### 4.5.1 Emptying the flow cell module DEPOLOX Pool E

Proceed as follows:

- 1 Switch off the power supply.
- 2 Drain the sample water supply line and drainage line.
- 3 Remove the housing cover of the flow cell module DEPOLOX Pool E.  
To do this, press both unlocking buttons on the top of the housing and remove the housing cover forwards.
- 4 Empty the cell body and remove the cleaning sand.  
See Chapter 4.3.5 Filling the electrode cleaning sand.
- 5 Dismantle the filter housing and the check valve housing.  
See chapter 5.7 “Cleaning the flow rate monitor and non-return ball valve”.
- 6 When the remaining water has drained from the flow control valve, refit the filter housing and the check valve housing.
- 7 Dismantle the sensors from the cover of the cell body and disconnect from the cable.
- 8 Refit the housing cover of the flow cell module DEPOLOX Pool E and engage.

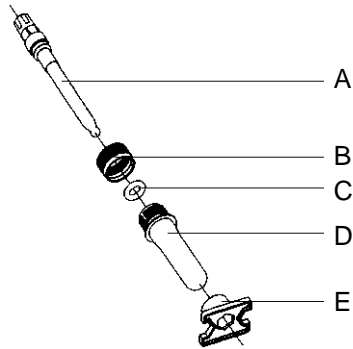
### 4.5.2 Shutting down the sensors



*Please note*

Please follow the relevant instructions for the sensors!

For the chlorine sensor and pH or Redox single-rod measuring chain, proceed as follows:



- A Sensor
- B Sealing cap
- C O-ring
- D Tank
- E Stand

- 1 Pull out or unscrew the sensors.
- 2 Chlorine sensor has protection cap and install pH or Redox single-rod measuring chain into the KCl tank and stand with KCl solution.
- 3 Store the sensors in a frost-free place.

### 4.6 Renewed start up

- 1 Prepare the sensors.  
See relevant instructions for the sensors.
- 2 Refit the sensors. See Chapter 4.3.2 Installing sensors.
- 3 Disconnect the electronic module 700 P from the power supply.  
See instruction manual "Electronic module 700 P".



## 5. Maintenance

### 5.1 Maintenance intervals



*Please note*

Liability for defects can only be accepted if maintenance work is performed as specified. Adhere to the applicable standards and national and regional regulations.

Activity	Period/Interval	
Check for leakages	daily	Chapter 5.3
Cleaning the fine filter	As required	Chapter 5.6
Doing a comparative measurement chlorine, combined chlorine, total chlorine and pH, if necessary a calibration	Acc. to standard	See instruction manual Electronic module 700 P
Replacing the electrolyte for the total chlorine membrane sensor	Every six months	See instructions on Sensors
Replacing the membrane cap for the total chlorine membrane sensor	Annually	See instructions on Sensors
Checking the electrode cleaning sand	Weekly	Chapter 5.4
Replacing the electrode cleaning sand	Every six months	Chapter 5.5
Checking the Redox in the buffer solution	Every 4 to 6 weeks	See instructions on Sensors
Checking the conductivity	Every 4 to 6 weeks	See instructions on Sensors



*Please note*

The parts required for the service are included in the maintenance parts kits. In the process, we distinguish maintenance parts kits for wear parts for 1 year and for 4 years. For details see chapter 5.2 Maintenance parts kit.

## 5.2 Maintenance parts kit

### *Non-pressurized version*

<b>Part No.</b>	<b>Description</b>
W3T166181	Maintenance parts kit, annual maintenance
W3T170073	Maintenance parts kit, 4 years
W3T158882	Spare parts set for flow control valve

### *Pressurized version*

<b>Part No.</b>	<b>Description</b>
W3T158874	Maintenance parts kit, annual maintenance
W3T158878	Maintenance parts kit, 4 years
W3T158882	Spare parts set for flow control valve
W3T166180	Seal set
W3T320611	Sealing kit LED pressurized for LED glow stick

### 5.3 Checking for leakages

Check the entire measuring device every day, including all screw connections, for leakage. Repair any leakage points immediately!



---

*Please note*

Ascending air bubbles in the cell body influence the measuring accuracy. The cause must be determined and remedied.

---

### 5.4 Checking the electrode cleaning sand

Every week, check if there is sufficient electrode cleaning sand in the cell body. The cleaning sand must be swirled around in the bottom part of the cell body.

The electrode cleaning sand is necessary for cleaning the electrode of the chlorine sensor and must be replenished if necessary or replaced.



---

*Please note*

After adding fresh electrode cleaning sand or replacing it, the electrode current can increase slightly for approximately 2 to 3 hours. A calibration is needed after this.

See instruction manual "Electronic module 700 P".

---

### 5.5 Replacing the electrode cleaning sand

The electrode cleaning sand used for constant cleaning of the chlorine sensor grinds itself down with time.

The cleaning sand must be replaced regularly.

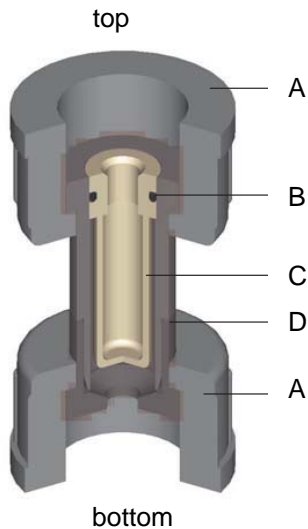
For procedure, see chapter 4.3.5 Filling the electrode cleaning sand.

## 5.6 Cleaning the fine filter



### *Please note*

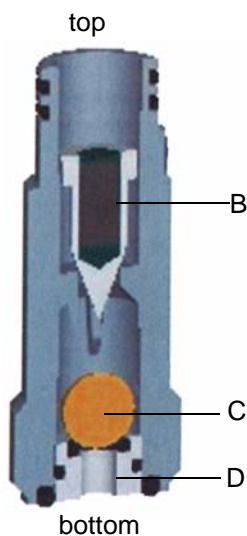
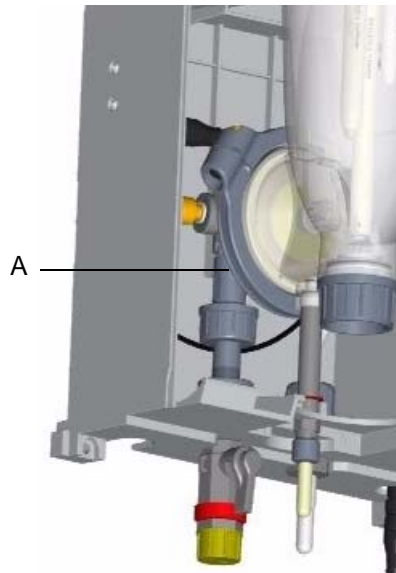
A fine filter must only be installed when membrane sensors are employed.



The fine filter must be cleaned to prevent any gradual blockage. See also chapter 4.3.4 Inserting the fine filter.

- 1 Release both knurled nuts (A).
- 2 Remove the filter unit (D).
- 3 Remove the fine filter (C).  
To do this, screw the M6 screw into the fine filter and pull the fine filter out of the filter unit.
- 4 Rinse the fine filter with water, replace if necessary.
- 5 Push the fine filter into the filter unit. Ensure that the O-ring (B) is fitted correctly.
- 6 Fit the complete filter unit. Ensure that it is in the correct position (top/bottom).
- 7 Tighten the knurled nuts (A).

## 5.7 Cleaning the flow rate monitor and non-return ball valve



- 1 Dismantle the filter unit (see image in Chapter 5.6 Cleaning the fine filter). To do this, loosen both knurled nuts and remove the filter unit.
- 2 Carefully pull the complete non-return ball valve housing (A) down and out.
- 3 Turn the non-return ball valve housing upside down and catch the flow ball (B) or if the ball is jammed, release it with a slight knock.
- 4 Use a suitable blunt tool to now push out the ball seat (D) and glass ball (C) against the direction of flow.
- 5 Clean the empty non-return ball valve housing, flow ball, ball seat and glass ball with clear water.
- 6 During reassembly, make sure that the ball seat and ball are correctly positioned.
- 7 To help push the assembled non-return ball valve housing back into the control valve, we recommend slightly lubricating the gaskets with the supplied grease Unisilikon.
- 8 Check that the non-return ball valve housing is correctly positioned through the guide lugs on the housing.
- 9 Fit the filter unit again.

## 5.8 Cleaning



*Please note*

Never use corrosive cleaning agents (e.g. spirit).  
Use only a damp cloth to clean the device.



## 6. Retrofit kits and spare parts

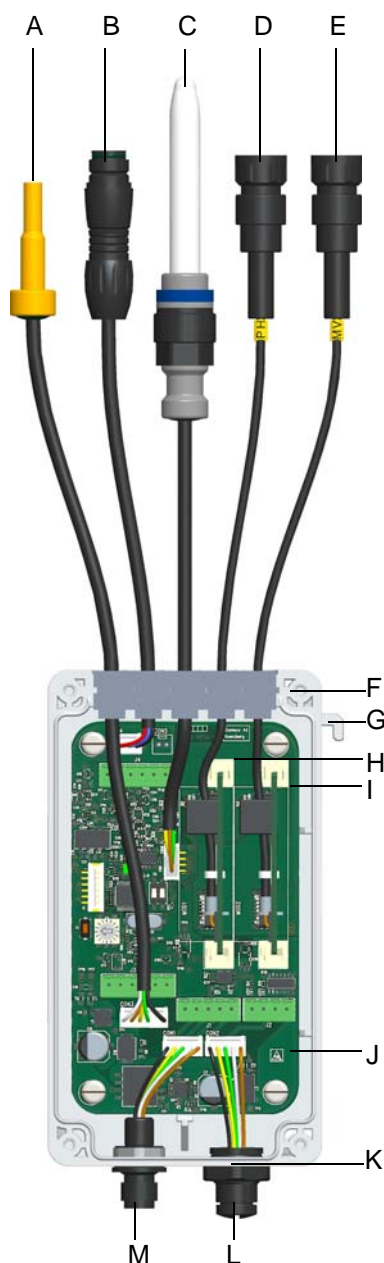
### 6.1 Retrofit kits

#### *Sensor measuring modules*

The flow cell module DEPOLOX Pool E gives the option to retrofit sensor measuring modules.

Part No.	Description
W3T320090	Sensor measuring module DFMe Total chlorine TC2 CAN with CAN bus extension cable 1 m
W3T331062	Sensor measuring module DFMe Total chlorine TC2-S CAN with CAN bus extension cable 1 m
W3T320088	Sensor measuring module DFMe pH with plug-in card and calibration solution
W3T320089	Sensor measuring module DFMe Redox with plug-in card and calibration solution
W3T320091	Sensor measuring module DFMe Conductivity LF325 with cable and calibration solution

## 6.2 Retrofitting sensor measuring modules



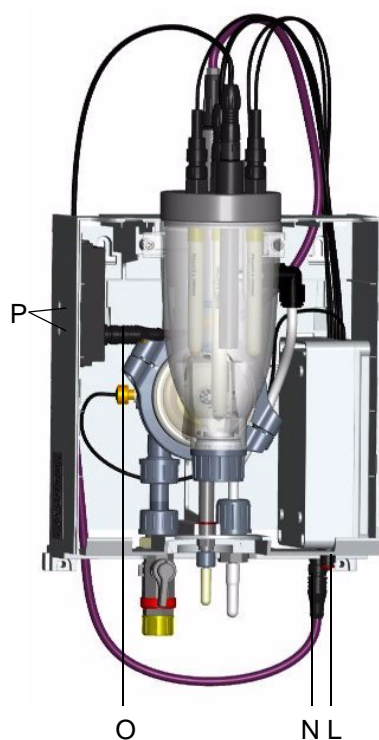
When retrofitting the sensor measuring modules, proceed as follows:

- 1 Disconnect the electronic module 700 P from the power supply.  
See instruction manual "Electronic module 700 P".
- 2 Remove the housing cover of the flow cell module DEPOLOX Pool E.  
To do this, press both unlocking buttons on the top of the housing and remove the cover forwards.
- 3 Remove the electronic box DFMe from the flow cell module. To do so, unplug all sensors, unplug the CAN connection cable and loosen the securing screws on the bottom of the electronic box. See also following image CAN connection.
- 4 Unhook the electronic box DFMe from the mounting hook (G) of the flow cell module DEPOLOX Pool E and loosen the four cover screws of the electronic box.
- 5 Open the housing of the electronic box.
- 6 Plug in the sensor measuring modules at the designated site.

- A Multi-sensor  
 B Sensor cable  $Cl_2$  free  
 C LED glow stick  
 D pH sensor cable  
 E Redox sensor cable (mV)  
 F Housing DFMe  
 G Mounting hook  
 H pH sensor module  
 I Redox sensor module  
 J Base plate DFMe with measurement input  $Cl_2$   
 K Protrusion for CAN extension socket  
 L CAN extension socket  
 M CAN connection socket for electronic module 700 P

- 7 When installing the retrofit kits for conductivity or total chlorine, the CAN extension socket (L) must also be retrofitted.  
To do so, pinch off the housing at position K at the indent and fit the CAN extension socket, and then plug in.
- 8 Check that all gasket inserts are correctly mounted and refit the housing cover of the electronic box and tighten the four cover screws.



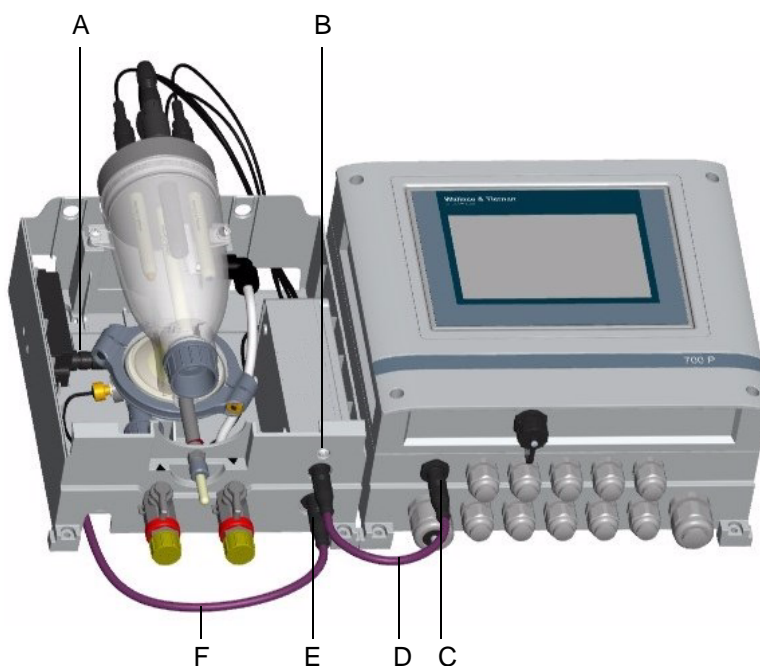


**9** Hook the electronic box DFMe by the mounting hook (G) back onto the flow cell module DEPOLOX Pool E and secure on the bottom using the securing screws.  
See also following image CAN connection.

**10** When retrofitting the SiDiSens LF (conductivity), the module SiDiSens LF must also be installed on the left side in the flow cell module DEPOLOX Pool E and secured at position P using the supplied screws.  
Plug in the CAN sensor cable of the module SiDiSens LF at position N.

**11** The CAN sensor cable of the total chlorine membrane sensor TC2-CAN is plugged directly into position O if the module SiDiSens LF already exists.  
If the option SiDiSens LF is not available, the CAN sensor cable of the total chlorine membrane sensor is plugged into position N.  
The M12 terminating resistor must be screwed on at position O.

The following diagram shows the CAN connection between the flow cell module DEPOLOX Pool E and the electronic module 700 P.



- A CAN connection at SiDiSens LF module for connection of TC2-CAN total chlorine sensor or M12 terminating resistor
- B Securing screw for electronic box
- C CAN socket for connection of CAN connection cable of flow cell module or electronic box DFMe
- D CAN connection cable which is integrated on the flow cell module DEPOLOX Pool E or electronic box DFMe
- E CAN extension socket for use with conductivity measurement and/or conductivity measurement
- F CAN connection cable SiDiSens conductivity or TC2-CAN total chlorine sensor

## 6.1 Spare parts

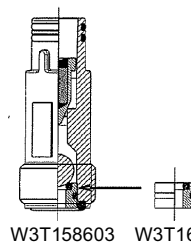
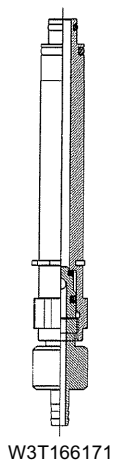
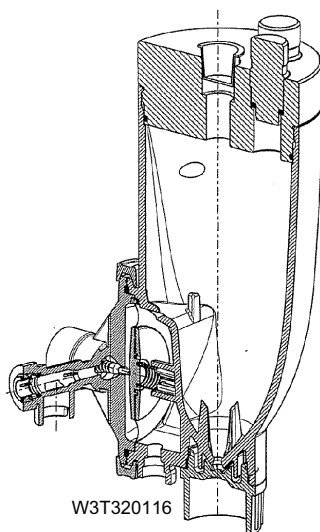
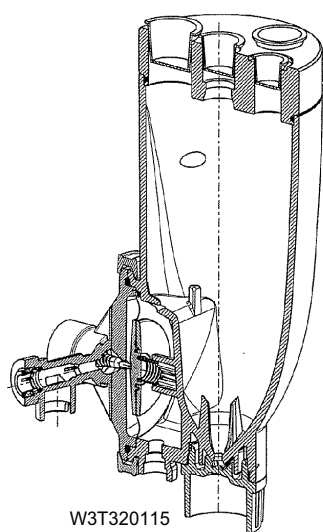


### *Please note*

For reasons of safety, only use original spare parts.  
Please contact our customer service if you need any spare parts.

### 6.1.1 Flow cell module DEPOLOX Pool E

Part No.	Description
W3T320115	Cell body, fully non-pressurized version
W3T320116	Cell body, fully pressurized version
W3T166171	Drainunit
W3T158603	Back pressureunit with float
W3T163739	Spherical set cpl.
W3T166194	Fine filter with O-ring
W3T166180	Seal set



### 6.1.2 Sensors

#### *Chlorine sensor*

Part No.	Description
W3T160652	Chlorine sensor (free chlorine in platinum version)
W3T160991	Chlorine sensor (free chlorine in gold version)
W3T271602	Sensor cable for chlorine sensor
W3T320087	Sensor measuring module DFMe Chlorine with cable and cell sand
W3T164482	KCl tank for 5 ml KCl solution
W3T160410	KCl tank for 250 ml KCl solution
W3T171317	Electrode cleaning sand, white
W3T158600	Measuring beaker (5 pcs)

#### *pH single-rod measuring chain*

Part No.	Description
W3T169297	pH single-rod measuring chain
W3T320081	Plug-in card with sensor cable for pH single-rod measuring chain
W3T165076	Calibration solution pH 7.00 Bottle 250 ml
W3T165084	Calibration solution pH 4.65 Bottle 250 ml
W3T161181	Calibration solution pH 7.00 Bag 12.5 ml
W3T161189	Calibration solution pH 4.65 Bag 12.5 ml
W3T164482	KCl tank for 5 ml KCl solution
W3T160410	KCl tank for 250 ml KCl solution
W3T158600	Measuring beaker (5 pcs)

*Redox single-rod measuring chain*

Part No.	Description
W3T169298	Redox single-rod measuring chain (platinum version)
W3T172356	Redox single-rod measuring chain (gold version)
W3T320082	Plug-in card with sensor cable for Redox single-rod measuring chain
W3T165048	Calibration solution 478 mV Bottle 250 ml
W3T161182	Calibration solution 478 mV Bag 12.5 ml
W3T164482	KCl tank for 5 ml KCl solution
W3T160410	KCl tank for 250 ml KCl solution
W3T158600	Measuring beaker (5 pcs)

*Conductivity sensor LF325*

Part No.	Description
W3T172052	Conductivity sensor LF325
W3T183616	Plug-in card with sensor cable for SiDiSens LF
W3T166180	Sealing kit LF325, pressurized
W3T161187	Calibration solution 60 mS/cm Bottle 1000 ml
W3T166180	Sealing kit LF325, pressurized
W3T158600	Measuring beaker (5 pcs)

*Total chlorine membrane sensor*

Part No.	Description
W3T272889	Total chlorine membrane sensor TC2 CAN
W3T331061	Total chlorine membrane sensor TC2-S CAN
W2T504980	CAN bus extension cable 1 m for total chlorine membrane sensor
W3T164339	Spare parts kit (incl. lapping paper, elastomer seal, O-ring)
W3T171792	Membrane cap

**6.1.3 LED glow stick**

<b>Part No.</b>	<b>Description</b>
W3T277062	LED glow stick

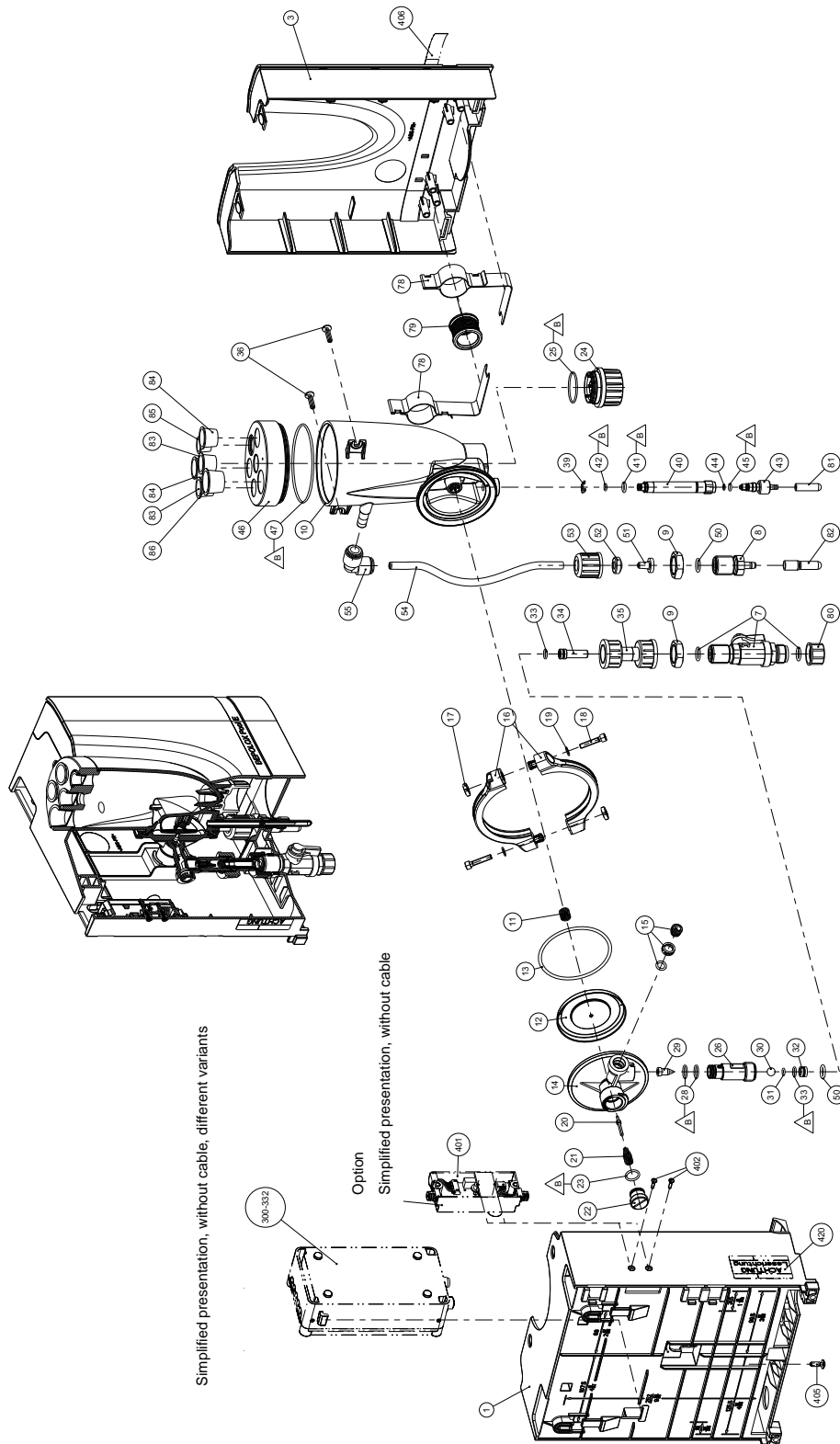
**6.1.4 CAN bus extension cable**

<b>Part No.</b>	<b>Description</b>
W2T504979	CAN bus extension cable 0.3 m
W2T504980	CAN bus extension cable 1.0 m
W2T504981	CAN bus extension cable 2.0 m
W2T504982	CAN bus extension cable 5.0 m
W2T504850	CAN bus extension cable 10.0 m



## 7. Drawings

### 7.1 Flow cell module DEPOLOX Pool E non-pressurized version



O-ring slightly greased with special grease UNISILIKON L250L (W2T504248/W2T504249)

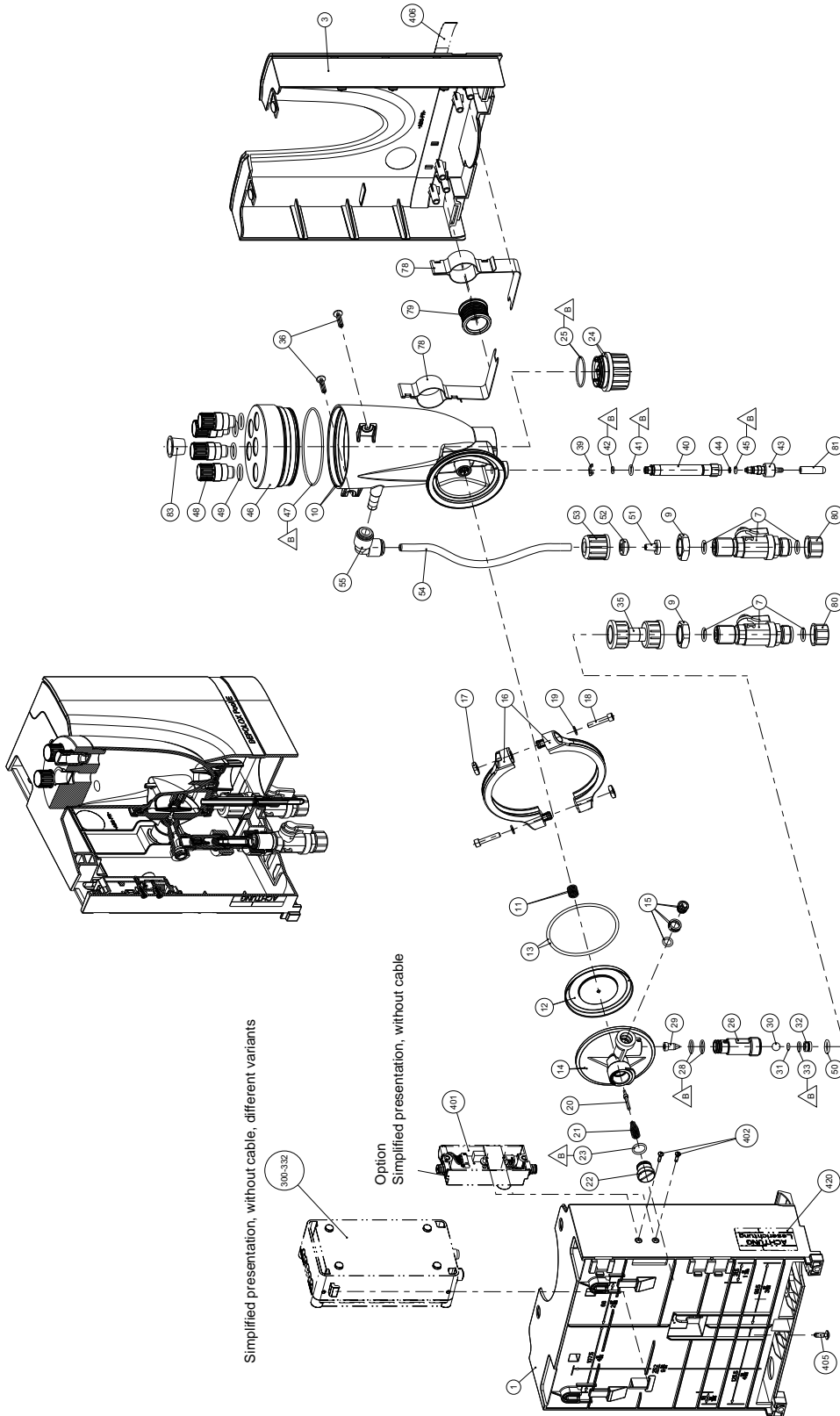
*Parts list* Flow cell module DEPOLOX Pool E non-pressurized version

Item	Part No.	Description
1	W3T247776	Basic housing
2	W2T507548	Type plate
3	W3T247777	Housing cover
7	W3T166170	Shut-off valve
8	W3T158593	Discharge nozzle
9	W2T507615	Flat nut
10	W3T158594	Cell body
11	W3T164226	Compression spring
12	W3T158569	Membrane unit
13	W3T160654	O-ring
14	W3T158595	Control valve body
15	W2T504209	Plastic cartridge
16	W3T160649	V profile clamp
17	W3T158567	Square nut
18	W2T504659	Cheese-head screw
19	W2T506019	Washer
20	W3T158572	Valve pin
21	W3T172795	Compression spring
22	W3T158573	Adjusting screw
23	W3T160357	O-ring
24	W3T160650	Flow distributor cap
25	W3T160655	O-ring
26	W3T160648	Check valve housing
28	W3T161396	O-ring
29	W3T169827	Cone
30	W3T172946	Ball
31	W3T172949	O-ring
32	W3T159707	Insert
33	W3T172975	O-ring
34	W3T168189	Fine filter
35	W3T158602	Filter unit
36	W2T505463	Pan head screw
39	W3T172041	Securing ring
40	W3T158576	Outlet drain pipe

Item	Part No.	Description
41	W3T172997	O-ring
42	W3T164597	O-ring
43	W3T158575	Drain screw
44	W3T166160	EPDM flat gasket
45	W3T172556	O-ring
46	W3T320101	Cell body cover
47	W3T160657	O-ring
50	W3T172861	O-ring
51	W3T161501	Hose bushing
52	W3T169815	Locking ring
53	W3T161502	Union nut
54	W3T158601	Hose
55	W2T505093	Angle-reducing connector
78	W3T166169	Clip
79	W3T172045	Electrode mount
80	W3T161561	Screw cap
81	W3T168162	Protective cap
83	W3T161453	Protection plug
84	W3T169029	Protection plug
85	W3T169044	Protection plug
86	W3T164574	Protection plug
401	W3T183616	SiDiSens LF
402	W2T807965	Plastic self-tapping screw A2
405	W2T807968	Plastic self-tapping screw A2
406	W3T309477	Product strip
420	W2T507548	Type plate



**7.2 Flow cell module DEPOLOX Pool E  
pressurized version**



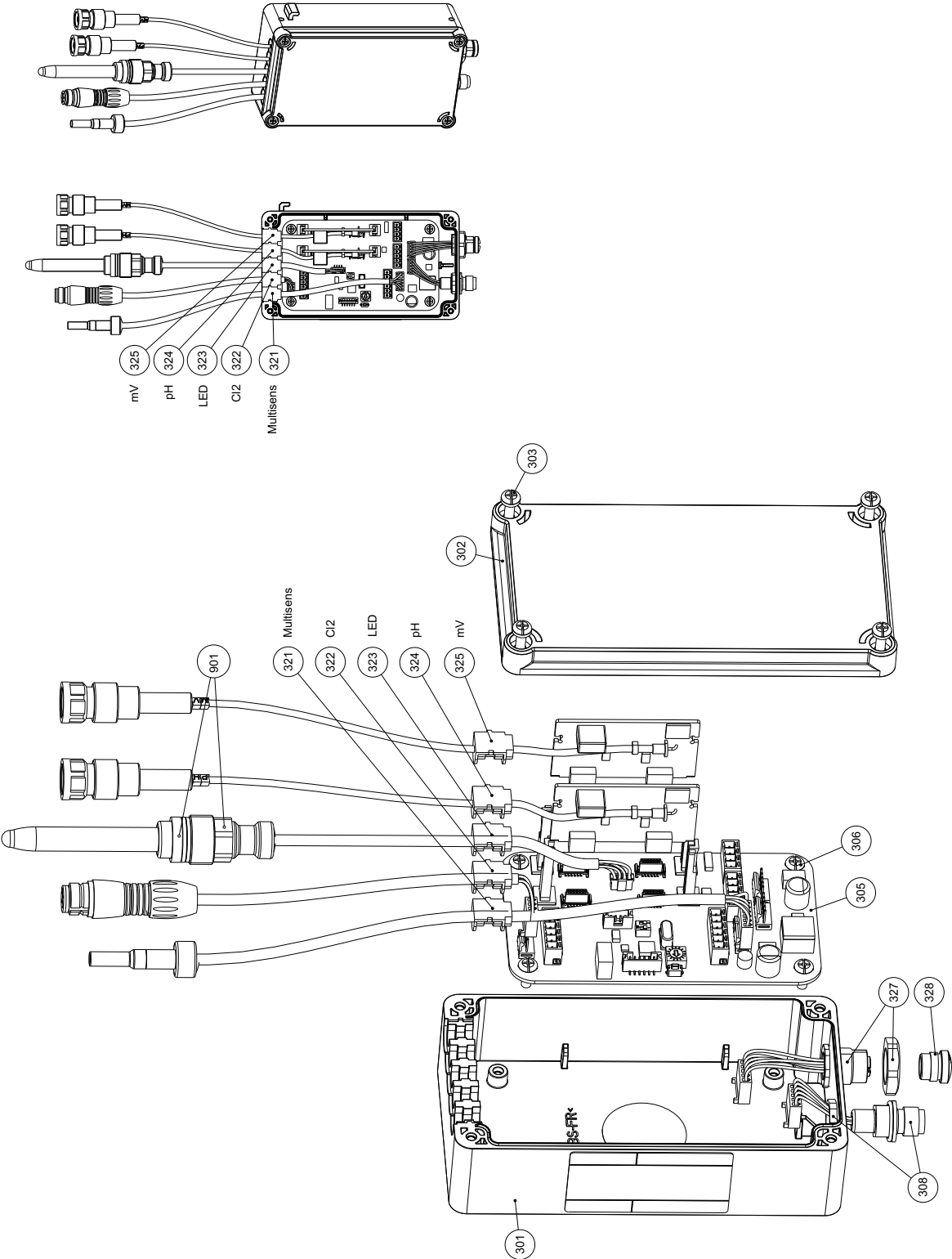
B O-ring slightly greased with special grease UNISILIKON L250L (W2T504248/W2T504249)

## Parts list Flow cell module DEPOLOX Pool E pressurized version

Item	Part No.	Description
1	W3T247776	Basic housing
2	W2T507548	Type plate
3	W3T247777	Housing cover
7	W3T166170	Shut-off valve
9	W2T507615	Flat nut
10	W3T158559	Cell body
11	W3T164226	Compression spring
12	W3T158569	Membrane unit
13	W3T160654	O-ring
14	W3T158595	Control valve body
15	W2T504209	Plastic cartridge
16	W3T160649	V profile clamp
17	W3T158567	Square nut
18	W2T504659	Cheese-head screw
19	W2T506019	Washer
20	W3T158572	Valve pin
21	W3T172795	Compression spring
22	W3T158573	Adjusting screw
23	W3T160357	O-ring
24	W3T160650	Flow distributor cap
25	W3T160655	O-ring
26	W3T160648	Check valve housing
28	W3T161396	O-ring
29	W3T169827	Cone
30	W3T172946	Ball
31	W3T172949	O-ring
32	W3T159707	Insert
33	W3T172975	O-ring
34	W3T168189	Fine filter
35	W3T158602	Filter unit
36	W2T505463	Pan head screw
39	W3T172041	Securing ring
40	W3T158576	Outlet drain pipe

Item	Part No.	Description
41	W3T172997	O-ring
42	W3T164597	O-ring
43	W3T158575	Drain screw
44	W3T166160	EPDM flat gasket
45	W3T172556	O-ring
46	W3T320060	Cell body cover
47	W3T160657	O-ring
48	W3T161450	Plug
49	W3T168859	O-ring
50	W3T172861	O-ring
51	W3T161501	Hose bushing
52	W3T169815	Locking ring
53	W3T161502	Union nut
54	W3T158601	Hose
55	W2T505093	Angle-reducing connector
78	W3T166169	Clip
79	W3T172045	Electrode mount
80	W3T161561	Screw cap
81	W3T168162	Protective cap
82	W3T164588	Protective cap
83	W3T161453	Protection plug
98	W3T158600	Beaker
401	W3T183616	SiDiSens LF
402	W2T807965	Plastic self-tapping screw A2
405	W2T807968	Plastic self-tapping screw A2
406	W3T309477	Product strip
420	W2T507548	Type plate

7.3 Electronic box DFMe



*Parts list*      Electronic box DFMe

Item	Part No.	Description
301	W3T262803	Basic housing DFMe
302	W3T256343	Housing cover DFMe
303	W2T807967	Plastic self-tapping screw A2
305	W3T256342	PCB assembled CAN board DES-DP5e
306	W2T504397	Plastic self-tapping screw d4x10
308	W3T263401	DFMe connection - M12 plug
321	W3T271603	Multi-sensor DFMe
322	W3T271602	Sensor cable DFMe - DES
323	W3T320106	LED rod with cable
324	W3T256298	PCB assembled I2C modules I60-1 pH
325	W3T256299	PCB assembled I2C modules I60-1 mV
327	W3T308952	DFMe connection - M12 socket
328	W3T206059	Protective cap for jack M12x1, IP67
332	W2T507548	Type plate 68x35
901	W3T320611	Sealing kit; LED; pressurized

## 8. Certificates



### EG-Konformitätserklärung EC Declaration of Conformity Déclaration CE de conformité

No. MAE1563

Ausgabe/issue/édition 01

Hersteller/Manufacturer/Constructeur:	Evoqua Water Technologies GmbH
Anschrift/Address/Adresse:	Auf der Weide 10, D-89312 Günzburg
Produktbezeichnung: Product description:	Durchflussmodul DEPOLOX Pool E Flow block assembly DEPOLOX Pool E
Description du produit:	Module de la cellule de mesure DEPOLOX Pool E

Das bezeichnete Produkt stimmt in der von uns in Verkehr gebrachten Ausführung mit den Vorschriften folgender europäischer Richtlinien überein:

*The product described above in the form as delivered is in conformity with the provisions of the following European Directives:*

**Le produit désigné est conforme, dans la version que nous avons mise en circulation, avec les prescriptions des directives européennes suivantes :**

- |             |  |
|-------------|--|
| 2004/108/EG | <p>Richtlinie des Europäischen Parlaments und des Rates vom 15. Dezember 2004 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit.</p> <p><i>Directive of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility.</i></p> <p><b>Directive du Parlement européen et du Conseil du 15 décembre 2004 relative au rapprochement des législations des Etats membres concernant la compatibilité électromagnétique.</b></p>   |
| 2006/95/EG  | <p>Richtlinie des Europäischen Parlaments und des Rates vom 12. Dezember 2006 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen.</p> <p><i>Directive of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.</i></p> <p><b>Directive du Parlement européen et du Conseil du 12 décembre 2006 concernant le rapprochement des législations des Etats membres relatives au matériel électrique destiné à être employé dans certaines limites de tension.</b></p> <p>CE-Kennzeichnung / CE marking / Marquage CE: 2014</p> |



Die Konformität mit den Richtlinien wird nachgewiesen durch die Einhaltung der in der Nachweisdokumentation aufgelisteten Normen.  
*Evidence of conformity to the Directives is assured through the application of the standards listed in the relevant documentation.*  
 La conformité avec les directives est assurée par le respect des normes listés dans la documentation technique correspondante.

Benannte Person für technische Unterlagen:

*Authorized person for the technical file:*

**Personne désignée pour la documentation technique:**

Name / name / nom: Evoqua Water Technologies GmbH

Adresse / address / adresse: Auf der Weide 10, D-89312 Günzburg

Günzburg, den / the 2014-09-30

Evoqua Water Technologies GmbH

Klaus Andre  
Technischer Leiter / Director Engineering

Unterschrift  
signature / signature

Helmut Fischer  
Leiter QM / Quality Manager

Unterschrift  
signature / signature

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB. Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten.

*This declaration certifies the conformity to the specified directives but does not imply any warranty for properties. The safety documentation accompanying the product shall be considered in detail.*

**La présente déclaration atteste de la concordance avec les directives citées, elle n'offre cependant pas de garantie quant à la nature ou la durabilité selon l'article 443 du code civil allemand. Les consignes de sécurité de la documentation du produit fournie sont à respecter.**

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**Wallace & Tiernan® products worldwide**

**Australia**  
+61 3 8720 6597  
info.au@evoqua.com

**Bahrain**  
+973 39 78 66 54  
wtbah@evoqua.com

**Germany**  
+49 8221 9040  
wtger@evoqua.com

**France**  
+33 1 41 15 92 20  
wtfra@evoqua.com

**UK**  
+44 1732 771777  
info.uk@evoqua.com

**Canada**  
+1 905 944 2800  
canadainfo@evoqua.com

**Singapore**  
+65 6830 7165  
sales.sg@evoqua.com

**USA**  
+1 856 507 9000  
information@evoqua.com



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**evoqua**  
WATER TECHNOLOGIES

Auf der Weide 10, 89312 Günzburg, Germany

+49 (8221) 904-0 [www.evoqua.com](http://www.evoqua.com)

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