KUNTZE

Product catalog

Disinfection
valid from 01. January 2020

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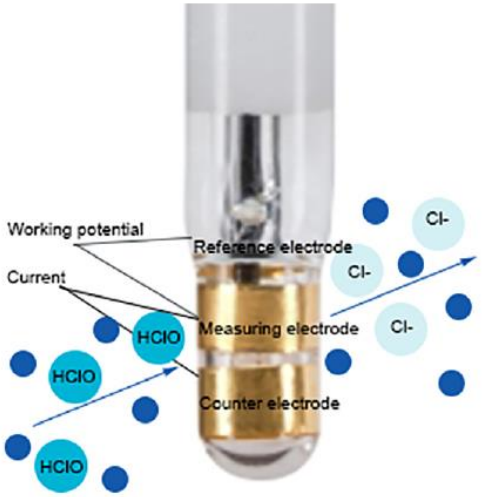
Content

1. Things to know

1.1 Measurement

The disinfectant measurement by Kuntze GmbH is based on the potentiostatic method. The instrument applies a potential to the measuring electrode that corresponds to a specific reaction of the disinfectant, leading to an electrical charge on the measuring electrode. Disinfectant particles that hit the electrode surface take away some of the charge. The instrument measures the potential against the reference electrode and readjusts the electrical charge to its intended value. The required current is a direct measure for the concentration of the disinfectant.



Desinfectant measurement by Kuntze

The electrodes of the sensors are made from very high-quality, chemically inert materials such as glass, carbon, and precious metals. These electrodes are in direct contact with the water to be measured. Compared with membrane-covered sensors, this design has several advantages:

Stable zero point and quick response

The measurement is selective for the disinfectant to be measured. In absence of disinfectant it drops to zero. Due to the direct contact with the water the sensor reacts fast to any concentration change – without memory effect.

Pressure proof and robust

The measuring systems can work under pressure of up to 6 bar (20°C) and is not affected by long periods without disinfectant. The sensors contain no pressure-sensitive membrane that might tear or get blocked.

Low maintenance

The sensor design minimizes adhesion of dirt particles and fibers. Additionally, coatings on the electrode surfaces can be prevented with the automatic sensor cleaning ASR®.

ASR® - automatic sensor cleaning

The automatic sensor cleaning is a patented highly efficient process to clean electrode surfaces. During the cleaning process, Hydrogen and Oxygen are produced at the electrode surfaces, blasting away even persistent coatings. Additionally, Oxygen oxidizes organic coatings, and Hydrogen reduces organic and inorganic substances, especially iron and manganese oxides.

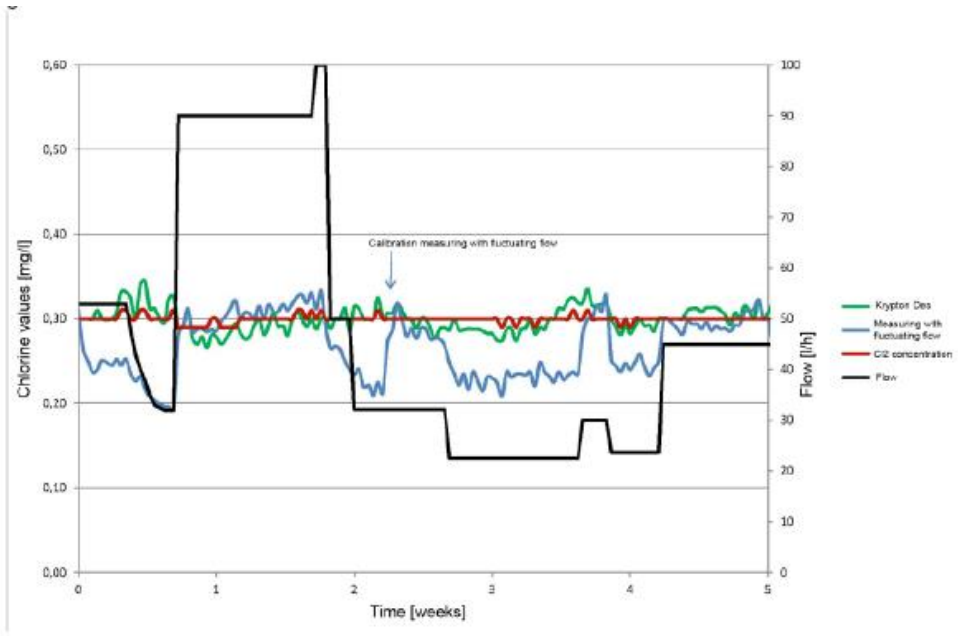
Excess gas recombines to water and do not interfere with the measurement or the process.

ASR® reduces maintenance requirements:

- No manual cleaning
- No exchange/refill of chemical or mechanical cleaning agents
- Drastically prolonged calibration cycles

Flow influence

All disinfectant molecules that hit the electrode surface add to the measured signal. It follows that the measurement is not only dependent on the concentration but also on the flow rate: For a given concentration the measured signal increases with increasing flow rate. Reducing the flow from 50 l/h to 40 l/h reduces a measured value of 0.3mg/l to 0.28 mg/l. Below 20 l/h the flow influence is much more pronounced.
Therefore in our DIS systems Krypton® Multi we have set the switch point of the flow monitor to ca. 30 l/h. In our new assembly Argon® Stabiflow, which is part of the new system Krypton® DIS, the flow rate is kept constant at ca. 30 l/h as long as the inlet flow rate does not drop below 35 l/h.



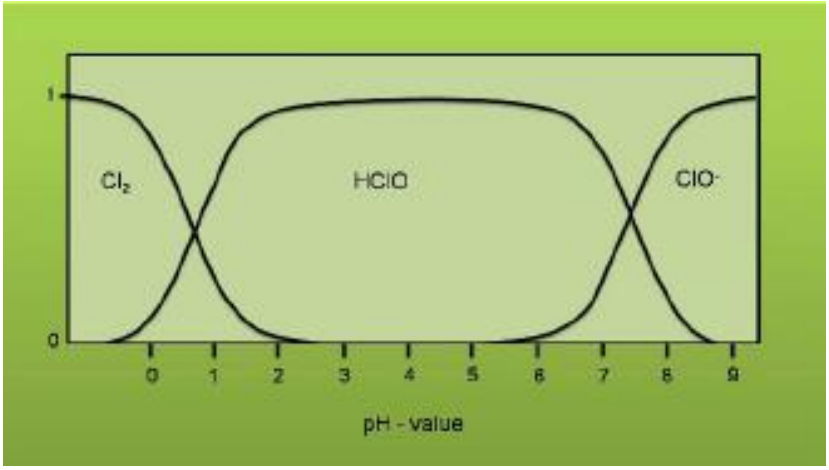
Flow dependence

Temperature influence

With increasing temperature the signal increases slightly – at a concentration of 0.3 mg/l a signal change of 0.004 mg/l per °C can be expected (with a slope of 25 mV/0.1 mg).
You can compensate the temperature influence when using a temperature measurement. However, the temperature compensation is mainly useful in cold water applications, to correctly interpret low slope values and to avoid slope alarm messages.

pH influence on the Chlorine measurement

At different pH values, Chlorine forms different species in water. At pH 0, Chlorine is present as Chlorine gas (Cl2). With increasing pH, the gas reacts with the water to form hypochloric acid. Above pH 2, hypochloric acid is the predominant species.



Dependence of chlorine measurement on pH value

Above pH 6, the hypochloric acid is neutralized. Hypochloric acid is turned into hypochlorite ions ‑ ClO- . Above pH 9 almost all Chlorine is turned into hypochlorite. The Chlorine measurement detects only the hypochloric acid, not the hypochlorite ions. Therefore the signal strength decreases between pH 6 and 8. For a reliable measurement, pH has to be kept constant or measured and compensated. At constant pH values, the pH influence is taken care of by calibration, which results in a lower or higher slope. At fluctuating pH values, a pH measurement is necessary to allow pH compensation of the Chlorine signal. Howeever, pH compensation is possble only as long as a signal is still detectable. Therefore the pH-range for the Chlorine measurement even with pH compensation is limited to pH 6.. 8. Above pH 8 only higher concentrations can be measured.

Measurement of total Chlorine

Total Chlorine is the sum of free Chlorine and organically bound Chlorine. Besides Cl2, hypochloric acid and hypochlorite ions this comprises a variety of organic Chlorine compounds that stem from reactions of Chlorine with organic substances in the water. The total Chlorine measurement shows a noticeably lower pH influence compared with the free Chlorine measurement and can be used in a broader pH range (pH 4.. 12). The measurement takes place in a defined environment after a chemical reaction with Iodide, to allow an equal detection of the various compounds. At the measuring electrode, instead of Chlorine the Iodine produced by the chemical reactions is reduced.

2. Systems

2.1 Krypton® Multi

2.1.1 Description

Krypton® Multi

Multi channel water monitoring system

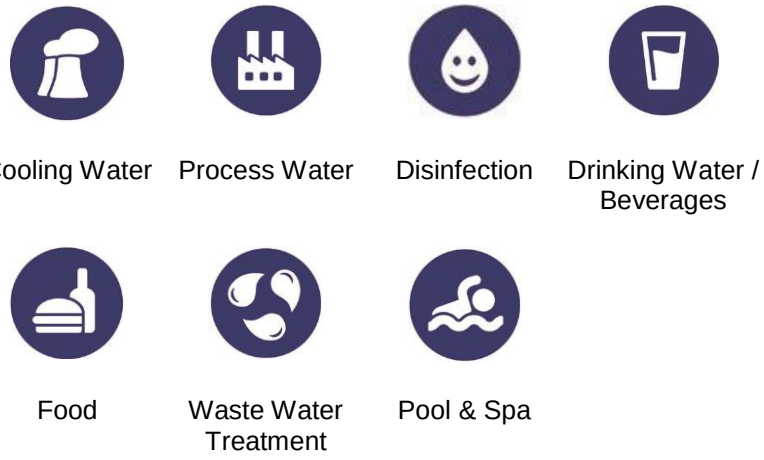
The measuring system Krypton® Multi includes all you need for disinfection and pH measurement: instrument, sensors, assembly and wiring. The system is used for measurement and control of industrial disinfection applications as in food & beverage or water works.

The integrated modular assembly Argon® Stabiflow ensures a constant flow of approx. 30 l/h. As a consequence the system provides stable, precise and reliable measuring values. Flow fluctuations not any longer shown up in your measuring curves as long as you guarantee a water inlet above 35 l/h. The entry level version of Neon® Multi is equipped with 3 measurements: disinfection, pH, and temperature. The disinfection measuring input can be configured to measure Free Chlorine, Chlorine dioxide, Total chlorine, Ozone or Hydrogen peroxide via menu.

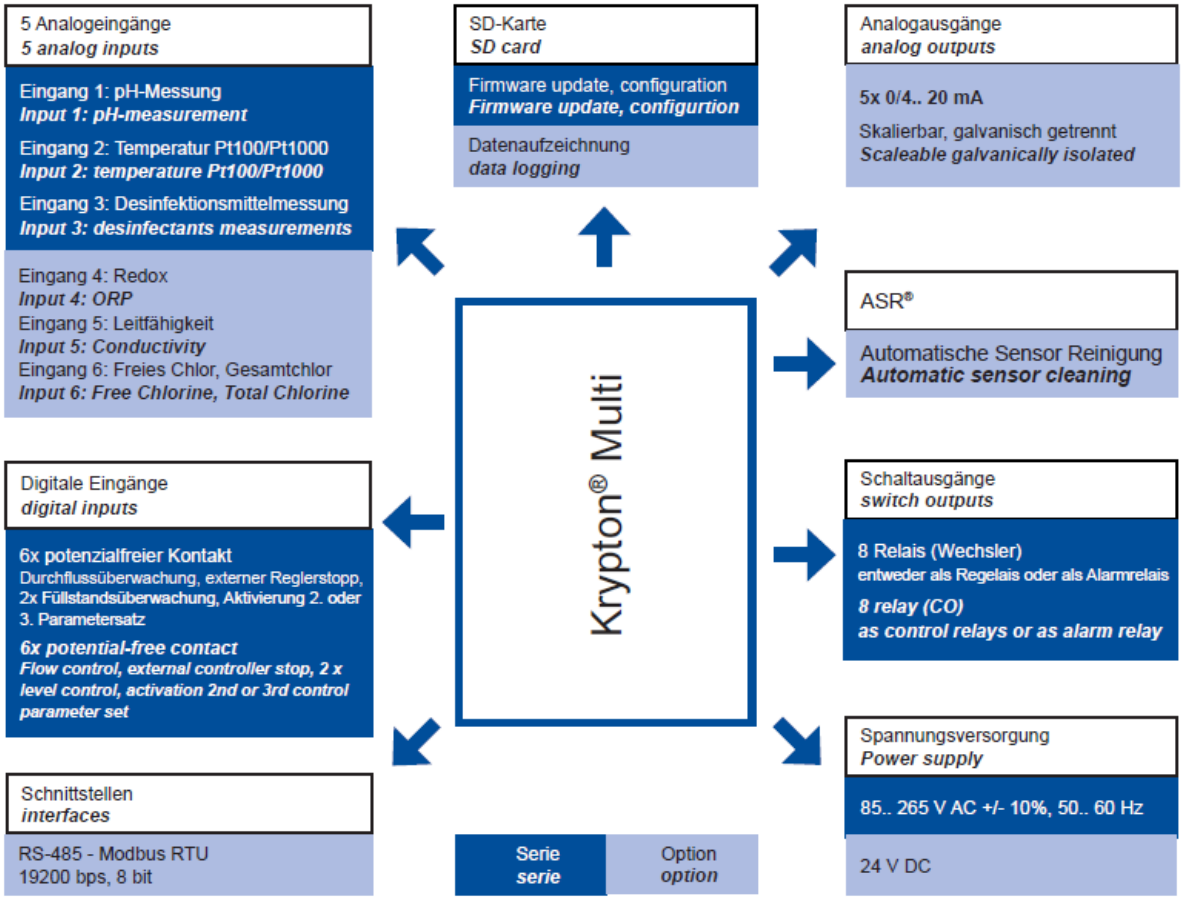
The measuring range is adjustable. An ORP measurement can be added or a second EC or DIS input CL2/ TCL. The entry level version offers 6 digital inputs and 8 potentialfree CO relays as control or as alarm relays. The instruments offers PID as well as 3 point control function with and without position feedback. The System is expandable through software upgrades or add on modules.

It is possible to add up to five analog outputs, Modbus, automatic sensor cleaning ASR® and a datalogger. The complete system is pressure resistant up to 6 bar (at 20 °C) and brine resistant.

2.1.2 Applications



2.1.3 Interface diagram



2.1.4 Technical data

Measuring range

Desinfection	Free Chlorine, Chlorine Dioxide, Total Chlorine:	Up to 1000 µg/l, 5.00 / 10.00 / 20.00 mg/l
	Ozone:	Up to 1000 µg/l, 5.00 / 10.00 mg/l
	Hydrogen Peroxide:	Up to 30.00 mg/l
Temperature	0.. 50.0 °C (32.. 122 °F)	
pH	0.. 14.00 pH	
ORP (optional)	-1500.. + 1500 mV	
5th measuring input (optional)	Conductivity:	Up to 2.000, 20.00, 200.0 mS/cm
6th measuring input (optional) (DIS 2)	Free Chlorine, Total Chlorine:	Up to 1000 µg/l, 5.00 / 10.00 / 20.00 mg/l

Input characteristics

Limit of Detection DIS	+/- 2 % from measuring range end (except Hydrogen Peroxide)	
Temperature measuring range	0..50 °C (32.. 122 °F)	
Temperature compensation	0.0.. 8.0 %/K, adjustable coefficient (DIS), nonlinear (pH)	
pH compensation	Nonlinear (DIS)	
Digital input	Flow control, external controller stop, 2 x level control, activation 2nd or 3rd control parameter set, leakage	
Process conditions chemistry	pH range:	6.. 8 pH (Free Chlorine) 6.. 9 pH (Chlorine Dioxide, Ozone, Hydrogen Peroxide) 6.. 10 pH (Total Chlorine)
	Min. conductivity:	Depending on sensor
Precess conditions assembly	Flow Input:	> 0.5 bar, >30 l/h
	Flow Output after Stabiflow®:	~ 30 l/h
	Temperature:	0.. 50 °C
	Pressure:	< 6 bar at 20 °C

Output characteristics

Alarm relay	Up to 4 potential free CO, max. 250 V; 2 A, 550 VA (insertable)	
Output signal	Optional: 5 x 0/4.. 20 mA (scalable, galvanically isolated)	
	Load:	Max. 500 Ohm
	Registration range:	Scalable within the measuring range
Storage media	SD card up to 1 GB	Industry standard
Serial interface	Option:	RS 485 Modbus RTU
	Baud rate:	19200 kbs (Modbus)
	Data format:	8 bit

Power supply

Line voltage	85.. 265 V AC / DC, 50.. 60 Hz; Option: 24 V AC 10 VA
Power consumption	10 VA

Process conditions

Temperature	Storage:	-20 °.. +65 °C (-4 °..149 °F)
	Operation:	0.. +50 °C
Humidity	Max. 90 % rH at 40 °C (non-condensing)	
Ingress Protection	Wall mounted:	IP 65

Controller

Control parameter	Free Chlorine, pH and other parameter optional
Control response	On / off controller (adjustable hysteresis) P / PI / PID controller (pulse-pause, pulse-frequency or continuous output) 3-point controller with or without position feedback)
Relay	4 relays, each a potential-free CO contact, max. 250 V, 2A, 550 VA
Start delay	0.. 200 sec till controller activation
Digital input	See input characteristics
Control parameter set	2nd and optional 3rd parameter set for night operation etc.

Language

Default language	English, German
Other options	Russian, Danish, Dutch, French, Polish, Spanish

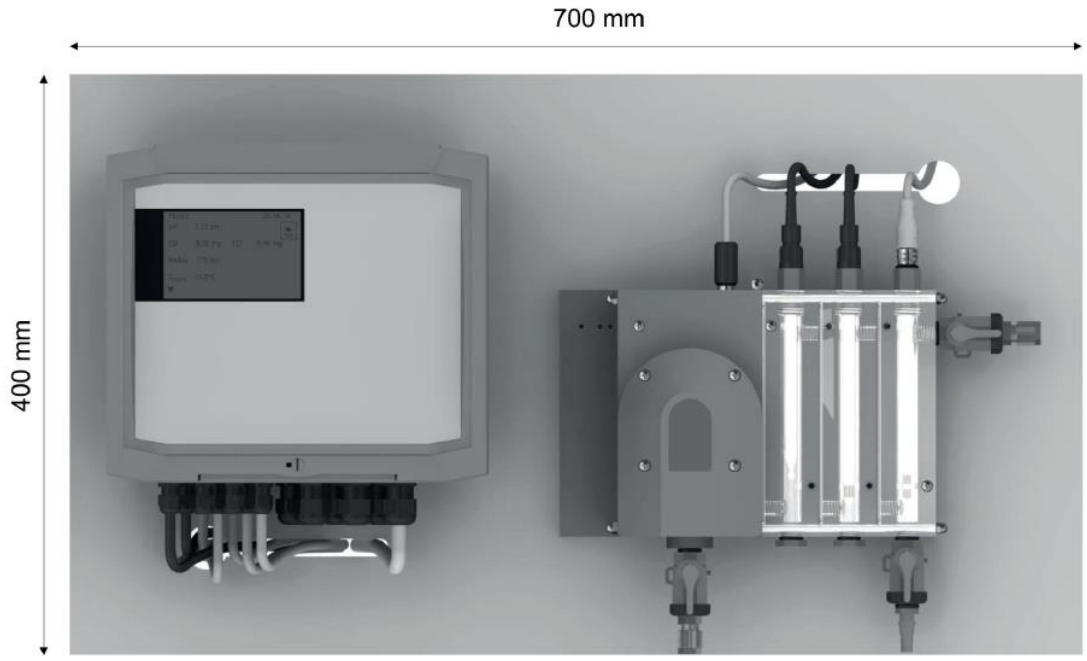
Certificates and approvals

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives	
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326-1	

Design configuration

Material	Board:	PVC
	Assembly:	PVC
	Instrument (housing):	ABS
	Sensor:	Glass, Plastic / Gold / Platinum
Dimensions	700 x 400 mm	
Weight	1.9 kg	
Connection	6 x M16, 10 x M12,	6 x M16, 10 x M12
	Plug-in terminal:	Rigid / flexible 0.14 - 1.5 mm²
	Relays / Power supply:	Rigid / flexible 0.2-1 / 0.2 - 1.5 mm²
	Distribution block:	Rigid / flexible 0.5 - 1.5 / 0.5 - 1.5 mm²
	Water hose connection:	DN 6/8

2.1.5 Mechanical drawing



Krypton® Multi

2.1.6 Order information

	Artikel Nr. / *Article No.*	**Beschreibung** / *Description*
Type	7053000K	Krypton® Multi (assembly: StabiFlow®; measuring range: disinfection, pH, temperature), 85.. 265 V AC
	70153001K	Krypton® Multi (assembly: StabiFlow®; measuring range: disinfection, pH, temperature) 24 V DC
	71153000K	Krypton® Multi Flow (assembly: Flow; measuring range: disinfection, pH, temperature), 85.. 265 V AC
Further measurement parameters	57150000K	ORP (Add-on)
	57150003K	Conductivity (Add-on)* *not in combination with DIS 2
	57150001K	Free Chlorine (DIS 2; Add-on)
	57150004K	Total Chlorine (DIS 2, Add-on)
Interfaces	19515002K	Modbus RTU
Outputs	19515007K	Five mA outputs
Special functions	19515008K	Datalogging
Cleaning	19515009K	ASR® Automatic Sensor Cleaning (only DIS 1 and CL2, Clo2, O3 and H202)

Note!

Choose the components you need and that´s how your ”assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

2.2 Krypton DIS®

2.2.1 Description

Krypton® DIS

Single channel water monitoring system

The measuring solution Krypton® DIS includes everything you need for disinfection measurements: instrument, sensor, flow assembly and wiring. The system is used for measuring free Chlorine, Chlorine dioxide, Ozone and Hydrogen peroxide. Measuring parameter and measuring range can be chosen in the menu.

The integrated flow assembly Argon® Stabiflow ensures a constant flow of approx. 30 l/h across the sensors. As a consequence the system provides stable, precise and reliable measuring values. Flow fluctuations not any longer shown up in your measuring curves as long as you guarantee a water inlet above 35 l/h.

For measuring free Chlorine, Chlorine dioxide and Ozone the double gold sensor Zirkon® DIS 231612500 is used, for Hydrogen peroxide the double platinum sensor Zirkon® DIS 231714500 und for measuring in brine graphite-platinum sensor Zirkon® DIS Pool 237813500.

Temperature and flow are guarded by Zirkon® FTG, which additionally can be used for grounding. The measuring and control instrument Neon® in the entry level version contains input / outputs for measurement and temperature, a digital input and an alarm relay.

The Neon® is expandable through software upgrades and addon modules. It is possible to add two additional analog outputs, control functions (concentration-based or volume-based), Modbus interface and Datalogger. Of course, you can also unlock our patented automatic sensor cleaning ASR® to your system by an addon code.

The complete system is pressure resistant up to 6 bar (at 20 °C) and brine resistant. Measuring parameter and range can be chosen via the user interface. Kuntze Krypton® DIS is delivered fully assembled and ready to use.

The water measurement process can be controlled at any time, from any place, on any device via Kuntze‘s Cloud Connect® service. All Kuntze products are Made in Germany.

2.2.2 Applications

Cooling Water

Process Water

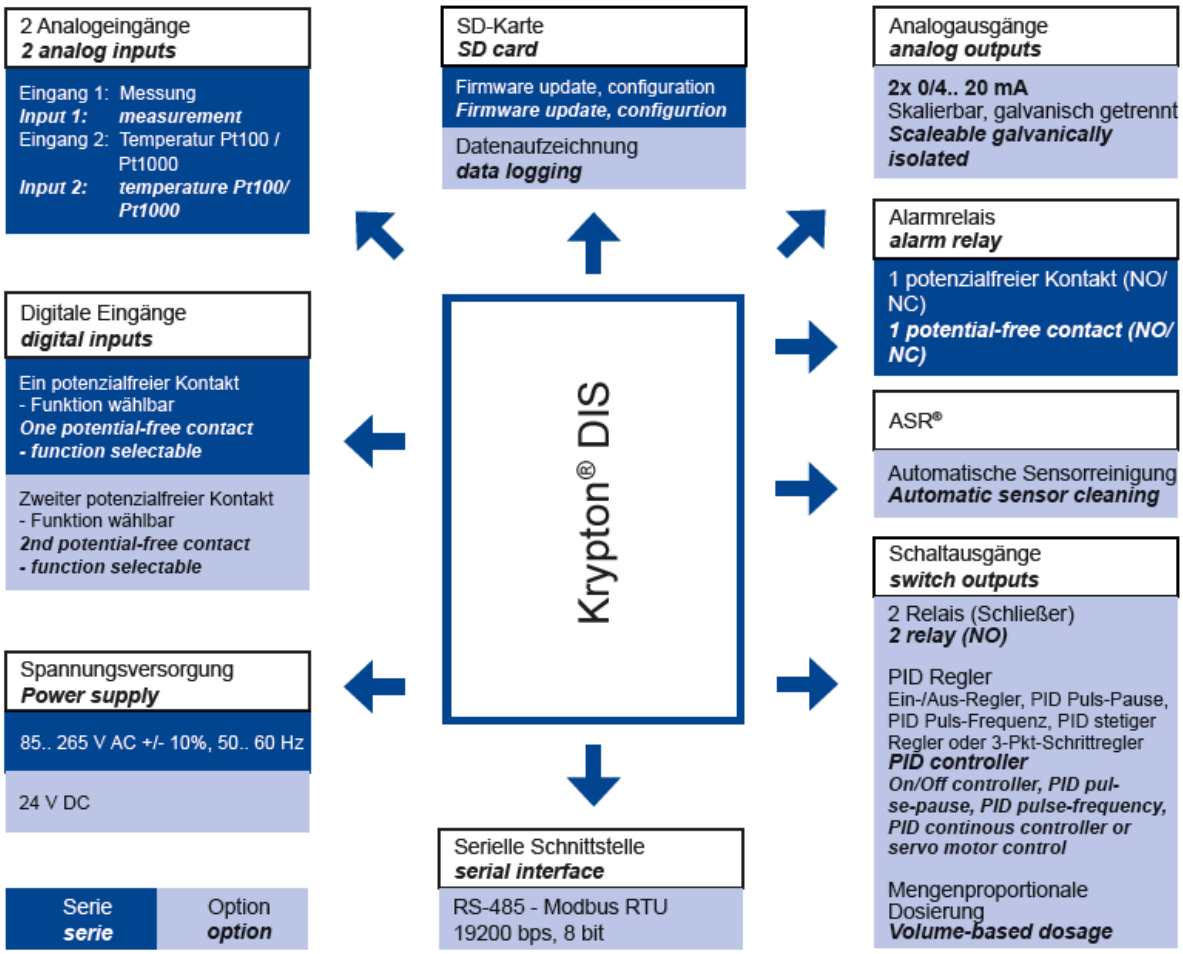
Disinfection

Drinking Water / Beverages

Waste Water Treatment

Pool & Spa

2.2.3 Interface diagram



2.2.4 Technical Data

Measuring range

Free Chlorine, Chlorine Dioxide	Up to 1000 µg/l, 5,00 / 10,00 / 20,00 mg/l	
Ozone	Up to 1000 µg/l, 5,00 / 10,00 mg/l	
Hydrogen Peroxide	Up to 30,00 mg/l	

Input characteristic

Temperature measuring range	-30,0.. +140,0 °C (-22.0 °.. 284 °F)	
Temperature compensation	0,0.. 8,0 %/K adjustable coefficient	
Digital input	1 as controller stop by external contact, option: 2nd as controller stop or flow measurement for volume based dosing	
Process conditions assembly	Flow input:	> 0.5 bar (7.3 psi)
	Flow ouput after Stabiflow®:	~30 l/h (7.9 gph)
	Temperature:	0..50 °C
	Pressure:	< 6 bar at 20 °C (87psi at 68 °F)

Output characteristics

Alarm relay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA (insertable)	
Output signal	Optional: 2 x 0/4 .. 20 mA (scalable, galvanically isolated)	
	Load:	Max. 500 Ohm
	Registration range:	Scalable within the measuring range
Storage media	SD card up to 1 GB - Industry standard	
Serial interface	Option:	RS 485 Modbus RTU
	Baud rate:	19200 bps
	Data format:	8 bit

Power supply

Line voltage	85.. 265 V AC, +6/-10 %, 50.. 60 Hz; option: 24 V DC	
Power consumption	10 VA	

Process conditions

Temperature	Storage:	-20°.. +65 °C (-4 °..+149 °F) exception sensor: 0..+30 °C (32 °..86 °F)
	Operation:	0 .. +50 °C (32 °.. 122 °F)
pH range	Free Chlorine: Chlorine Dioxide, Ozon	pH 6...8
	Hydrogen Peroxid:	pH 6...9
Humidity	Max. 90 % rH at 40°C (non-condensing)	
Ingress protection	Wall mounted:	IP 65

Controller

Control response	Option: on/off controller (adjustable hysteresis) P/PI/ PID controller (pulse-pause, pulse-frequency or continuous output) 3-point controller
Relay	2 relays, each with a potential-free N/O contact, max. 250 V, 6 A, 550 VA
Start delay	0.. 200 sec until controller activation
Controller stop	Digital input

Proportion to volume

Control mode	Option: volumed based by flow measurement	
Flow measurement	Impuls measurement NPN (by digital input 2)	
Flow measurement	Engine speed:	0.030.. 9.999 l/Imp
Relay 1	Potential-free N/O contact, max. 250 V, 6 A, 550 VA (pulse-pause, pulse-frequency)	
Relay 2	Activating circulation pump	

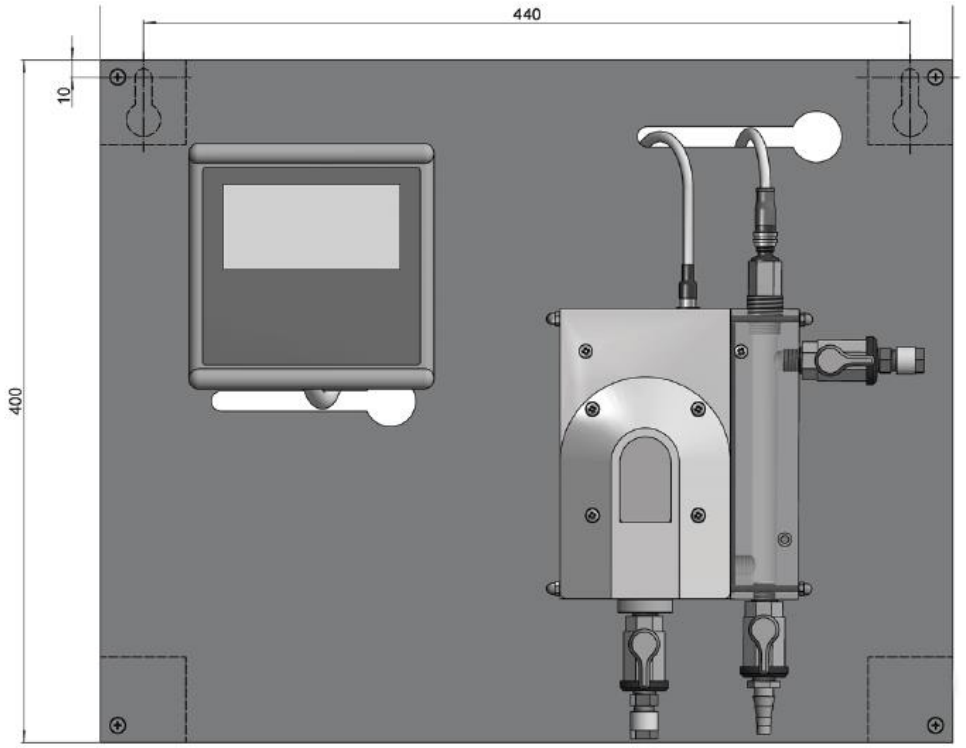
Certificates and approval

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326

Design configuration

Material	Board:	PVC
	Assembly:	PVC
	Instrument:	ABS
	Sensor:	Glass, Plastic / Gold / Platinum / Hastelloy
Dimensions	400 x 500 mm	
Connection	Cable inlet:	1 x M16, 2 x M12
	Plug-in terminal:	Rigid / flexible 0.14 - 1.5 mm²
	Relays / Power supply:	Rigid / flexible 0.2 - 1 / 0.2 - 1.5 mm²
	Distribution block:	Rigid / flexible 0,5 - 1,5 / 0,5 - 1,5 mm²
	Water hose connection:	DN 6/8

2.2.5 Mechanical drawing



Krypton® DIS

2.2.6 Order information

	Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
Type	70142000K	Krypton® DIS (assembly: StabiFlow®), 85.. 265 V AC
	19514101K	24 V DC
	70142010K	Krypton® DIS (assembly: Flow)
Interfaces	19514100K	Modbus RTU
Controller	19514200K	PID with 2 control relays
	19514201K	Volume based dosing with 2 relays* (*only in combination with 2nd digital input: Art. 19514202K)
Inputs	19514202K	Second digital input
Outputs	19514203K	First mA-output
	19514204K	Second mA-output
Special functions	19514205K	Datenlogger

Note!

Choose the components you need and that´s how your “assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

2.3 Krypton® DIS Total

2.3.1 Description

Krypton® DIS Total

Single channel water monitoring system

The Kuntze Krypton® DIS Total is used to measure Total Chlorine and temperature. The measuring solution Krypton® DIS Total includes everything you need for measurements: instrument, software, sensors, flow assembly and cables.

The integrated flow assembly Argon® Stabiflow ensures a constant flow of approx. 30 l/h across the sensors. The measuring and control instrument Neon® in the entry level version contains input / outputs for measurement and temperature, a digital input and an alarm relay. The Neon® is expandable through software upgrades and addon modules. It is possible to add two additional analog outputs, control functions (concentration-based or volume-based), Modbus interface and Datalogger. The complete system is pressure resistant up to 6 bar (at 20 °C) and brine resistant. Kuntze Krypton® DIS Total is delivered fully assembled and ready to use.

The water measurement process can be controlled at any time, from any place, on any device via Kuntze‘s Cloud Connect® service. All Kuntze products are Made in Germany.

2.3.2 Applications

Cooling Water

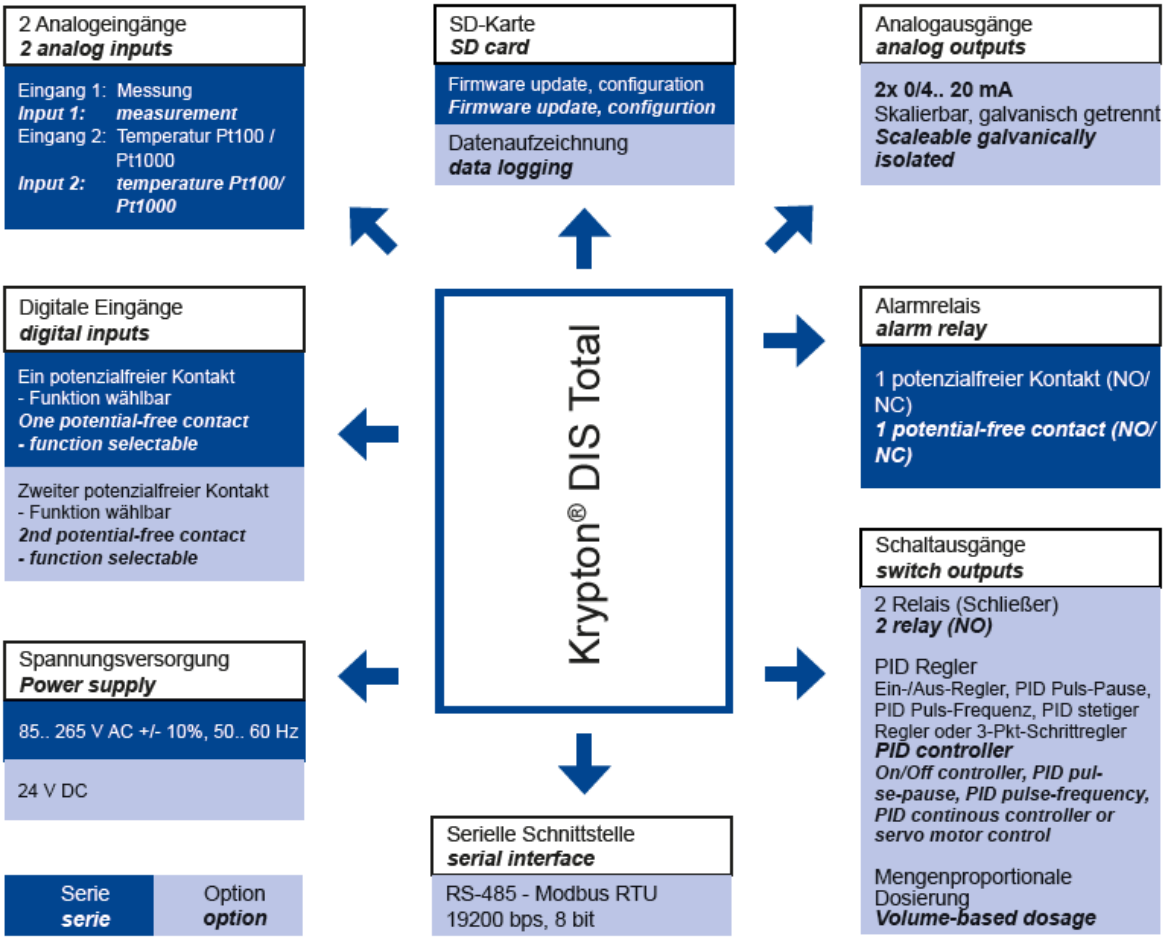
Process Water

Disinfection

Drinking Water / Beverages

Waste Water Treatment

2.3.3 Interface diagram



2.3.4 Technical data

Measuring range

Total Chlorine	Up to 1000 µg/l, up to 5.00 mg/l / 10.00 mg/l / 20.00 mg/l

Input characteristics

Temperature measuring range	-30.0 °.. +140.0 °C (-22.0 °.. 284 °F)	
Temperature compensation	0,0.. 8,0 %/K adjustable coefficient	
Digital input	1 as controller stop by external contact, option: 2nd as controller stop or flow measurement for volume based dosing	
Process conditions assembly	Flow input: Flow output after Stabiflow®: Temperature: Pressure:	> 0.5 bar (7.3 psi) ~30 l/h (7.9 gph) 0..50 °C < 6 bar, 20 °C (87psi, 68 °F)

Output characteristics

Alarmrelay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA (insertable)	
Output signal	Option: 2 x 0/4 .. 20 mA (scaleable, galvanically isolated)	
	Load: Registration range:	Max. 500 Ohm Scaleable with the measuring range
Storage media	SD card up to 1 GB:	Industry standard
Serial interface	Option: Baud Rate: Data format:	RS 485 Modbus RTU 19200 bps 8 bit

Power supply

Line voltage	85.. 265 V AC, +6/-10 %, 50.. 60 Hz; option: 24 V DC
Power consumption	10 VA

Process conditions

Temperature	Storage:	-20 °.. +65 °C (-4 °..+149 °F) exception sensor: 0..+30 °C (32 °..86 °F)
	Operation:	0 .. +50 °C (32 °.. 122 °F)
pH range	pH 6.. 10	
Humidity	Max. 90 % rH at 40 °C (non-condensing)	
Ingress protection	Wall mounted:	IP 65

Controller

Control response	Option: on/off controller (adjustable hysteresis) P/PI/ PID controller (pulse-pause, pulse-frequency or continuous output) 3-point controller
Relay	2 relays, each with a potential-free N/O contact, max. 250 V, 6 A, 550 VA
Start delay	0.. 200 sec until controller activation
Ontroller stop	Digital input

Proportional to volume

Control mode	Option: volumed based by flow measurement	
Flow measurement	Impuls measurement NPN (by digital input 2)	
Flow measurement	Engine speed:	0.030.. 9.999 l/Imp
Relay 1	Potential-free N/O contact, max. 250 V, 6 A, 550 VA (pulse-pause, pulse-frequency)	
Relay 2	Activating circulation pump	

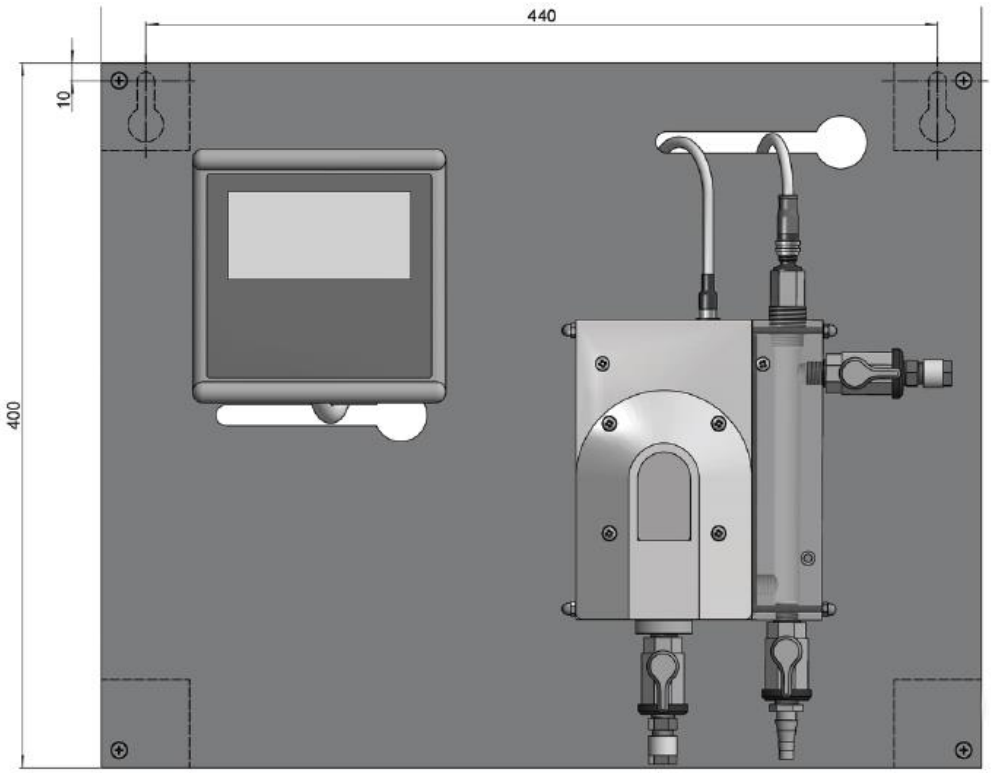
Certificates and approval

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326

Design configuration

Material	Board:	PVC
	Assembly:	PVC
	Instrument:	ABS
	Sensor:	Glass, Plastic / Platinum / InnoDisk®
Dimension	400 x 500 mm	
Connection	Cable inlet:	1 x M16, 2 x M12
	Plug-in terminal:	Rigid / flexible 0.14 - 1.5 mm²
	Relays / Power supply:	Rigid / flexible 0.2 - 1 / 0.2 - 1.5 mm²
	Distribution block:	Rigid / flexible 0.5 - 1.5 / 0.5 - 1.5 mm²
	Water hose connection:	DN 6/8

2.3.5 Mechanical drawing



Krypton® DIS Total

2.3.6 Order information

	Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
Type	70142000K	Krypton® DIS Total (assembly: StabiFlow®), 85.. 265 V AC
	19514101K	24 V DC power supply
Interfaces	19514100K	Modbus RTU
Controller	19514200K	PID with 2 control relays
	19514201K	Volume based dosing with 2 relays* (*only in combination with 2nd digital input: Art. 19514202K)
Inputs	19514202K	Second digital input
Outputs	19514203K	First mA-output
	19514204K	Second mA-output
Special functions	19514205K	Datalogger
Cleaning	19514206K	ASR® Automatic Sensor Cleaning

Note!

Choose the components you need and that´s how your “assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

3. Instruments

3.1 Neon® Multi

3.1.1 Description

Neon® Multi

Multi channel water monitoring instrument

Neon® Multi is a cutting-edge measuring and control instrument for industrial disinfectant applications like in breweries or water worlds.

The entry level version of Neon® Multi is equipped with 3 measurements: disinfection, pH, and temperature. The disinfection measuring input can be configured to measure Free Chlorine, Total Chlorine, Chlorine dioxide, Ozone or Hydrogen peroxide via menu. The measuring range is adjustable. An ORP measurement can be added and even a 5th measuring input for total Chlorine. The entry level version of Neon® Multi offers 6 digital inputs and 8 potential free CO relays as control or as alarm relay. The instruments offers PID as well as 3 point control function with and without position feedback.

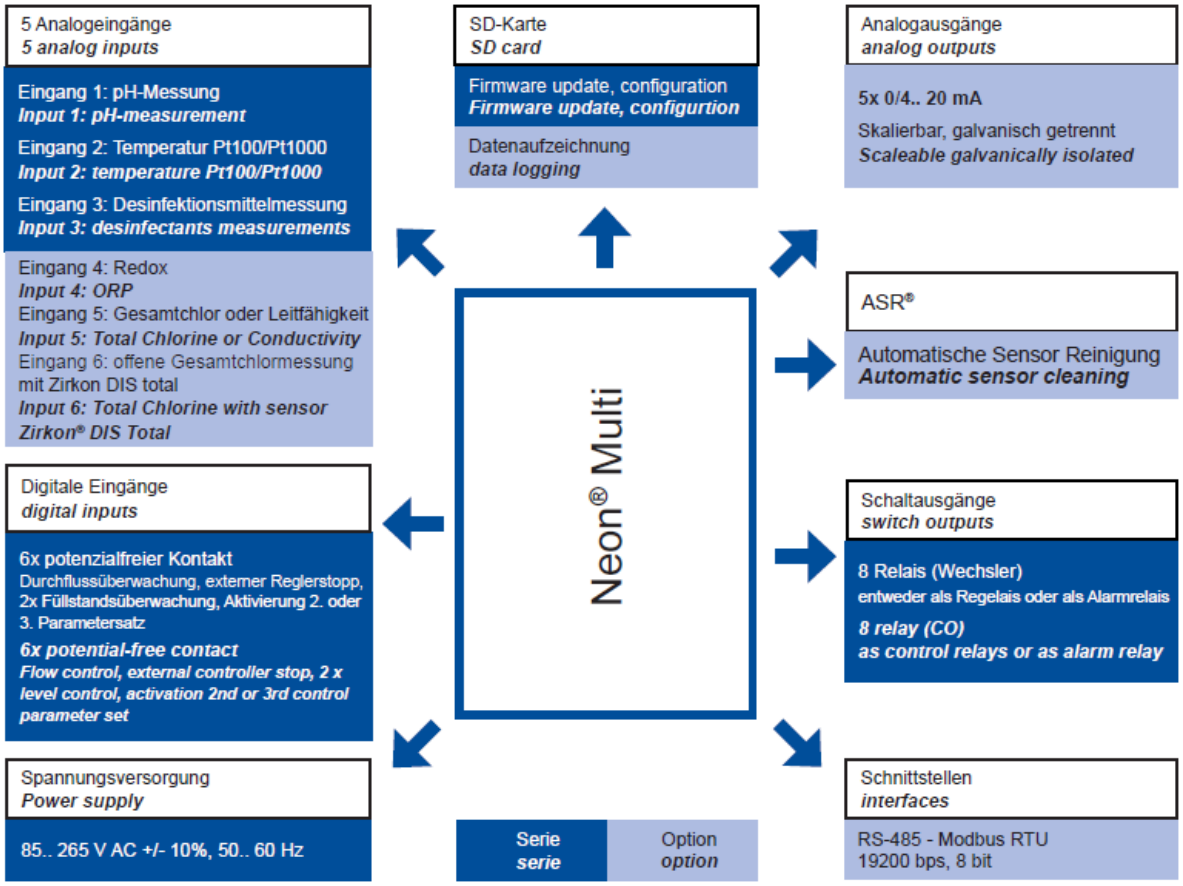
Neon® Multi is expandable through software upgrades or add on modules. It is possible to add up to five analog outputs, automatic sensor cleaning ASR®, Modbus and datalogger. Operation is easy and intuitive by an up to date touch screen and a graphical menu. Additionally Neon® Multi assists the operator, e.g. guiding the operator step by step through the calibration procedure, or in the controller parameter settings showing only those parameters relevant for the chosen controller type.

3.1.2 Applications

Cooling Water | Process Water | Disinfection | Drinking Water / Beverages

Food | Waste Water Treatment | Pool & Spa

3.1.3 Interface diagram



3.1.4 Technical data

Measuring range

Desinfection	Free Chlorine, Chlorine Dioxide, Total Chlorine:	Up to 1000 µg/l, 5.00 / 10.00 / 20.00 mg/l
	Ozone:	Up to 1000 µg/l, 5.00 / 10.00 mg/l
	Hydrogen Peroxide:	Up to 30.00 mg/l
Temperature	0.. 50.0 °C (32.. 122 °F)	
pH	0.. 14.00 pH	
ORP (optional)	-1500.. + 1500 mV	
5th measuring input (optional)	Conductivity:	Up to 2.000, 20.00, 200.0, 500,0 mS/cm
6th measuring input (optional) (DIS 2)	Free Chlorine, Total Chlorine:	Up to 1000 µg/l, 5.00 / 10.00 / 20.00 mg/l

Input characteristics

Temperature measuring range	0.. 50 °C (32.. 122 °F)	
Temperature compensation	0.0.. 8.0 %/K adjustable coefficient (DIS), nonlinear (pH)	
Digital input	Flow control, external controller stop, 2 x level control, activation 2nd opr 3rd, control parameter set, leakage	
Process conditions	pH-range:	6.. 8 pH (free Chlorine) 6.. 9 pH (Chlorine dioxide, Ozone, Hydrogen-peroxide) 6.. 10 pH (Total Chlorine)
Process conditions	Flow:	Depending on assembly
	Min. conductivity:	> 150 µS/cm
	Temperature:	Depending on sensor, assembly and reference measurement
	Pressure:	Depending on sensor, assembly and reference measurement

Output characteristics

Alarmrelay	Up to 4 potentialfree CO, max. 250 V; 2 A, 550 VA ((insertable)	
Output signal	Optional: 5 x 0/4.. 20 mA (scalable, galvanically isolated)	
	Load: Registration range:	Max. 500 Ohm Scalable within the measuring range
Storage media	SD card up to 1 GB:	Industry standard
Serial interface	Option: Baud Rate: Dataformat:	RS 485 Modbus RTU 19200 bps 8 bit

Power supply

Line voltage	85.. 265 V AC / DC, 50.. 60 Hz	
Power consumption	10 VA	

Process conditions

Temperature	Storage: Operation:	-20 °.. +65 °C (-4 °..149 °F) 0 °.. +50 °C (32 °.. 122 °F)
Humidity	Max. 90 % rH at 40 °C (non-condensing)	
Protection class	Wall mounted:	IP 65

Controller

Control parameter	Free Chlorine, pH and other parameter optional
Control response	On / off controller (adjustable hysteresis) P / PI / PID controller (pulse-pause, pulse-frequency or continous output) 3-point controller with or without position feedback)
Relay	4 relays, each a potential-free CO contact, max. 250 V, 2 A, 550 VA
Start delay	0.. 200 sec till controller active
Digital input	See input characteristics
Control parameter set	2nd and optional 3rd parameter set for night operation etc.

Language

Default language	English and German
Other options	Russian, Danish, Dutch, French, Polish, Spanish

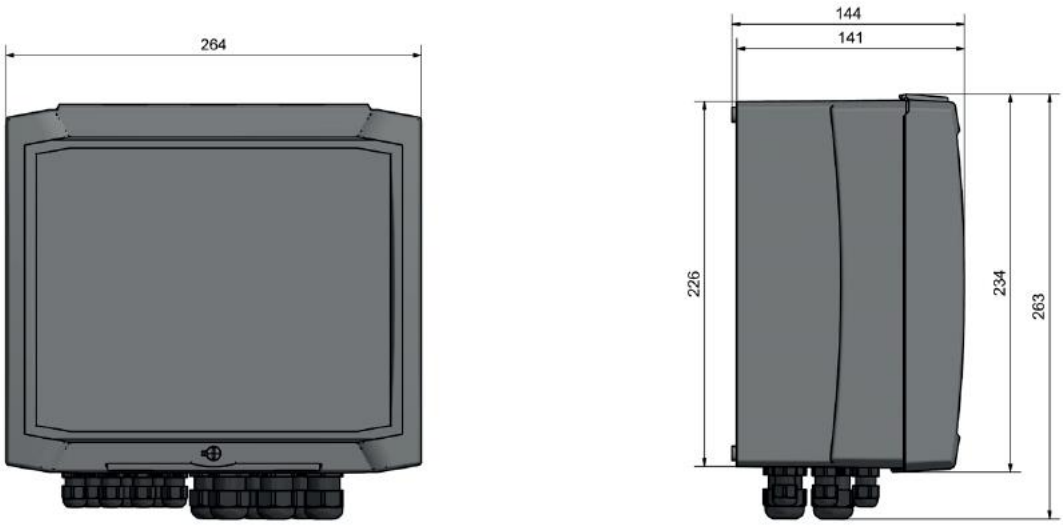
Certificates and approvals

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives	
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326-1	

Design configuration

Material	ABS	
Dimension	260 x 254 x 140 mm	
Weight	1,9 kg	
Connection	Cable inlet:	6 x M16, 10 x M12
	Plug-in terminal:	Rigid / flexibel 0.14 – 1.5 mm^2
	Relays / Power supply:	Rigid / flexibel 0.2 - 1 / 0.2 – 1.5 mm^2
	Distribution block:	0,5 - 1,5 / 0,5 - 1,5 mm^2

3.1.5 Mechanical drawing



Neon® Multi

3.1.6 Order information

	Artikel Nr. / *Article No.*	**Beschreibung** / *Description*
Type	153000K	Neon® Multi (Measuring range: desinfection, pH, Temperatur), 85.. 265 V AC
	153001K	Neon® Multi (Measuring parameter: desinfection, pH, Temperatur), 24 V DC
Further measuring parameter	19515010K	ORP (Software Add-on)
	49015000K	Conductivity (Software Add-on, Conductivity sensor measuring cable, measurement converter)* *not in combination with DIS 2
	19515001K	Second free or Total Chlorine measurement (Software Add-on; DIS 2)
Interfaces	19515002K	Modbus RTU
Output	19515007K	Five mA-outputs
Special functions	19515008K	Datalogger
Cleaning	19515009K	ASR® - Automatic Sensor Cleaning (only DIS 1)

Note!

Choose the components you need and that´s how your “assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

3.2 Neon® DIS

3.3 Description

Neon® DIS

Single channel water monitoring instrument

The Neon® DIS is a leading edge measurement and control instrument and its range of functions can be tailored according to your application.

The entry level version contains input / outputs for measurement and temperature, touch screen, a digital input and a alarm relay. The Neon® is expandable through software upgrades and add on modules. It is possible to add up to two additional analogue outputs, control functions either concentration-based or volume-based, modbus interface and Datalogger. The information displayed on the screen can be selected by the user. With multiple installations the same settings within the software can be duplicated in additional instruments using industry standard SD- cards.

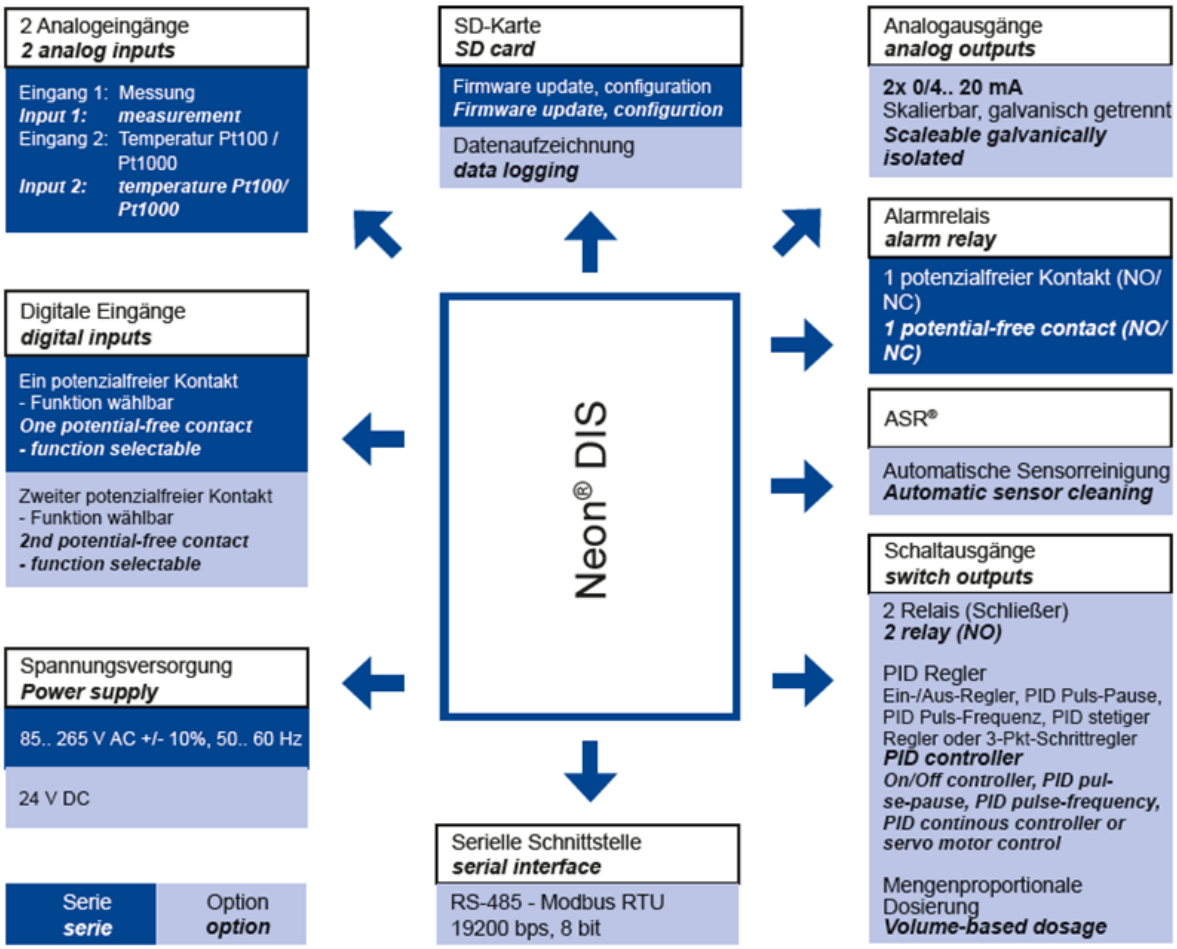
The Neon® 'Touch' is simplicity in a small package, it has an up to date touch screen to navigate through the Neon® menus easily and intuitively. The Neon® DIS can be used for the measurement of Free Chlorine, Chlorine dioxide, Ozone, and Hydrogen peroxide.

3.3.1 Applications

Cooling Water | Process Water | Disinfection | Drinking Water / Beverages

Waste Water Treatment | Pool & Spa

3.3.2 Interface diagram



3.3.3 Technical data

Measuring data

Free Chlorine, Chlorine Dioxide	Up to 1000 µg/l, 5.00 mg/l / 10.00 mg/l / 20.00 mg/l	
Ozone	Up to 1000 µg/l, 5.00 mg/l / 10.00 mg/l	
Hydrogen Peroxide	Up to 30.0 mg/l	
Total Chlorine	Up to 1000 µg/l, 5.00 mg/l / 10.00 mg/l / 20.00 mg/l	

Input characteristics

Temperature measuring range	-30.0 °.. +140.0 °C (-22.0 °.. 284 °F)	
Temperature compensation	0.0 .. 8.0 %/K adjustable coefficient	
Digital input	1 as controller stop by external contact, option: 2nd as controller stop or Flow measurement for volume based dosing	
Mesurement conditions	Pressure:	Depending on assembly

Output characteristics

Alarmrelay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA ((insertable))	
Output signal	Option: 2 x 0/4 .. 20 mA (scalable, galvanically isolated)	
	Load:	Max. 500 Ohm
	Registriation range:	Scalable within the measuring range
Storage media	SD card up to 1 GB:	Industry standard
Serial interface	Option:	RS 485 Modbus RTU
	Baud Rate:	19200 bps
	Dataformat:	8 bit

Power supply

Line voltage	85.. 265 V AC, +6/-10 %, 50.. 60 Hz; option: 24 V DC	
Power consumption	10 VA	

Process conditions

Temperature	Storage:	-20 °.. +65 °C (-4 °..+149 °F)
	Operation:	0 .. +50 °C (32 °.. 122 °F)
Humidity	Max. 90 % rH at 40 °C (non-condensing)	
Protection class	Wall mounted:	IP 65
	Panel mounted:	IP 54 (front), IP 30 (housing)

Controller

Control response	Option: on / off controller (adjustable hysteresis) P / PI / PID controller (pulse-pause, pulse-frequency or continuous output) servo motor control
Relay	2 relays, each with a potential-free N/O contact, max. 250 V, 6 A, 550 VA
Start delay	0.. 200 sec until controller active
Controller stop	Digital input

Proportion to volume

Control mode	Option: volumed based by flow measurement
Flow measurement	Impuls measurement NPN (by digital input 2)
Flow measurement	Engine speed: 0,030.. 9,999 l/Imp
Relay	Potential-free N/O contact, max. 250 V, 6 A, 550 VA (pulse-pause, pulse-frequency)
Relay 2	Activating circulation pump

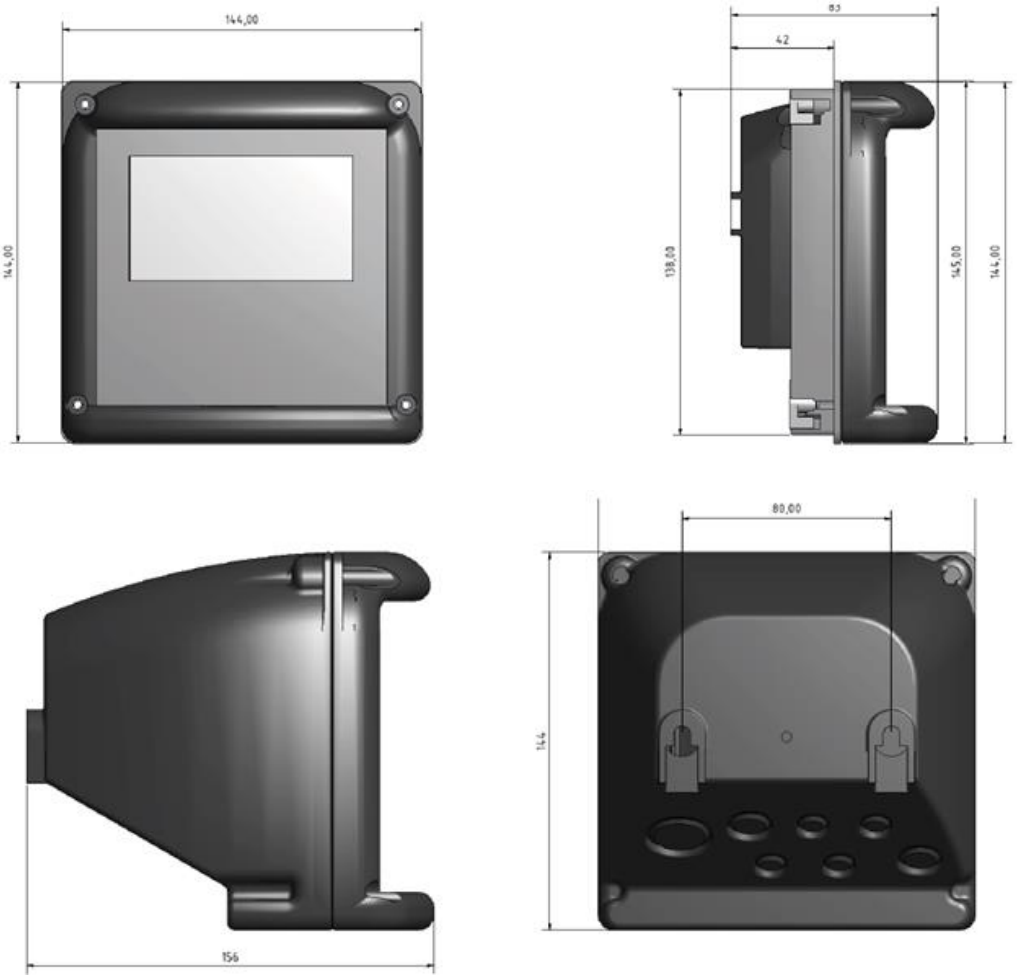
Certificates and approval

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326

Design configuration

Material	ABS	
Dimensions	ABS	
	Panel mounted housing:	138 x 138 x 83 mm (max. wall thickness: 5 mm)
	Wall mounted housing:	144 x 144 x 156 mm
	Panel mounted housing:	138 x 138 x 42 mm
Weight	0.6 kg (wall mounted housing: 1 kg)	
Connection	Cable inlet:	2 x M16, 2 x M12 + optional: 2 x M12 and 1 x M25
	Plug-in terminals:	Rigid / flexible 0.2 - 2.5 mm² / 0.2 - 2.5 mm²
	Measurement:	Rigid / flexible 0.2 - 1 mm² / 0.2 - 1.5 mm²

3.3.4 Mechanical drawing



Neon® DIS

3.3.5 Order information

	Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
Type	142200K	Neon® DIS (1 digital input and alarm relay), 85.. 265 V AC
	19514101K	24 V DC power supply
Interfaces	19514100K	Modbus RTU
Controller	19514200K	PID with 2 control relays
	19514201K	Volume based dosing with 2 relays* *only in combination with 2nd digital input (Art. 19514202K)
Inputs	19514202K	Second digital input
Outputs	19514203K	First mA Output
	19514204K	Second mA Output
Special functions	19514205K	Datalogger
Cleaning	19514206K	ASR® - Automatic Sensor Cleaning (only Cl2, ClO2, O3 and H2O2)
Housing	19514000	Panel mounted(Front IP 54)
	19514001K	Wall mounted (IP 65)

Note!

Choose the components you need and that´s how your “assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

3.4 Neon GAS®

3.4.1 Description

Neon® GAS

Dual channel gas warning instrument

Neon® GAS is a leading edge gas detection and warning instrument. Its range of functions can be tailored according to customers‘ applications. The entry level version contains two inputs for gas detection, one temperature input, one digital input and three alarm relays.

Various add-ons are available to expand the functionality as well as wall mounted or panel mounted housing. Neon‘s® GAS detection can be monitored at any time, from any place, on any device via Kuntze‘s Cloud Connect® service. All Kuntze products are Made in Germany.

3.4.2 Applications

3.4.3 Technical data

Measuring range

Chlorine Gas	Up to 10.00 ppm
Chlorine Dioxide Gas	Up to 1.00 ppm
Ozone Gas	Up to 1.00 ppm

Input characteristics

Temperature measuring range	0°.. +40.0 °C (32 °.. 104 °F)
Humidity	15.. 90 % (non-condensing)
Other influences	Avoid a sudden change in humidity or draught
Digital input	2 (e.g. for switch or door contact)

Output characteristics

Alarm relay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA (insertable) 2 relays, each with a potential-free N/O contact, max 250 V, 6 A, 550 VA	
Output signal	Option: 2 x 0/4 .. 20 mA (scalable, galvanically isolated)	
	Load:	Max. 500 Ohm
	Registration range:	Scalable within the measuring range
Voltage output	2x ±6 V DC for sensors	
Storage media	SD card up to 1 GB - Industry standard	
Serial interface	Option: RS 485 Modbus RTU	
	Baud Rate:	19200 bps
	Dataform:	8 bit

Power supply

Line voltage	85.. 265 V AC, +6/-10 %, 50.. 60 Hz; option: 24 V DC
Power consumption	10 VA

Process conditions

Temperature	Storage:	-20 .. +65 °C (-4 ° .. +149 °F)
	Operation:	0 .. +50 °C (32 ° .. 122 °F)
Humidity	Max. 90 % rH at 40 °C (non-condensing)	
Protection class	Wall mounted:	IP 65
	Panel mounted:	IP 54 (front), IP 30 (housing)

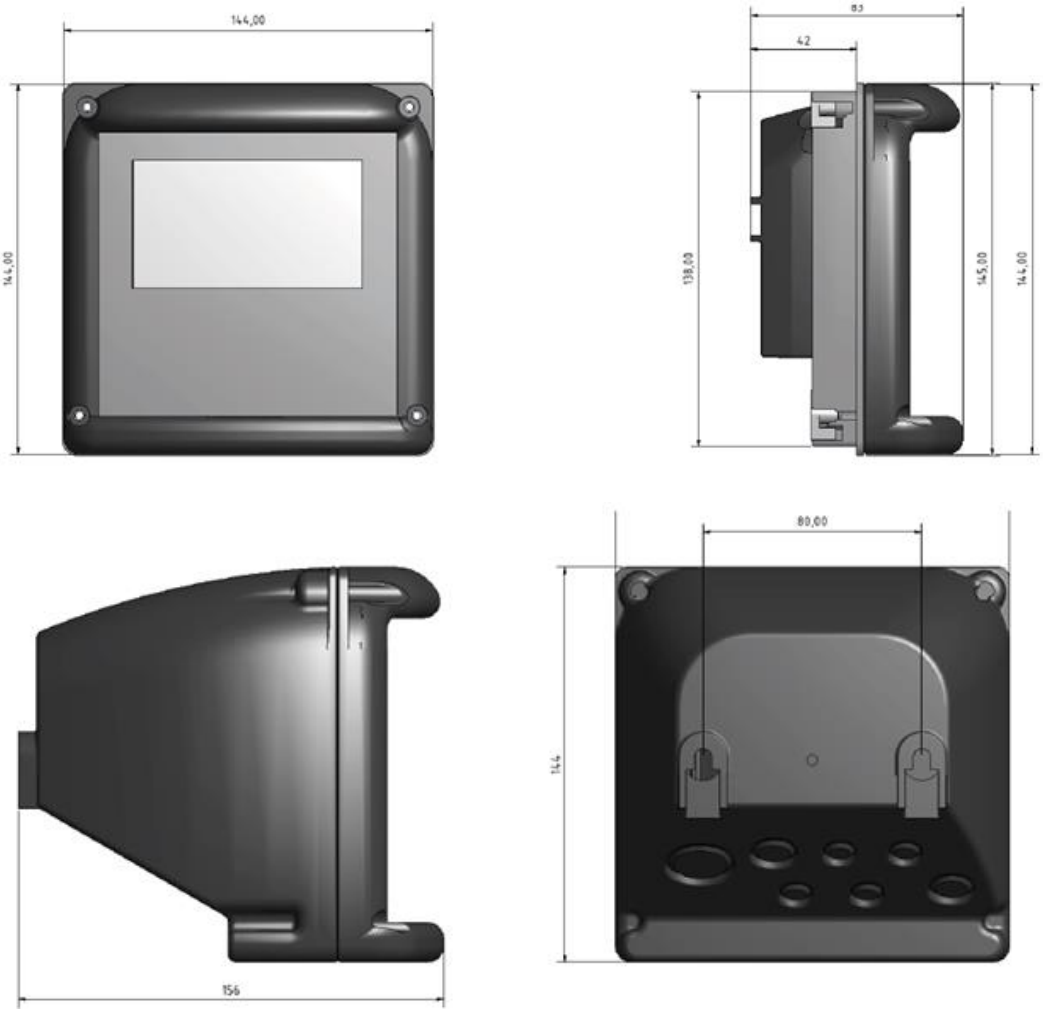
Certificates and approval

CE-Symbol	The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives	
EMC	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326-1	

Design configuration

Material	ABS	
Dimensions	Panel mounted housing:	138 x 138 x 83 mm (max. wall thickness: 5mm)
	Wall mounted housing:	144 x 144 x 156 mm
	Panel mounted housing:	138 x 138 x 42 mm
Weight	0.6 kg (wall mounted housing: 1 kg)	
Connection	Cable inlet:	2 x M16, 2 x M12 + optional: 2 x M12 and 1 x M25
	Plug-in terminal:	Rigid / flexible 0.2 - 2.5 mm² / 0.2 - 2.5 mm²
	Measurement:	Rigid / flexible 0.2 - 1 mm² / 0.2 - 1.5 mm²

3.4.4 Mechanical drawing



Neon® GAS

3.4.5 Order information

	Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
Type	142200K	Neon® GAS (1 digital inputs and 3 Alarm relays) 85.. 265 V AC
	19514101K	24 V DC power supply
Interfaces	19514100K	Modbus RTU
Inputs	19514202K	Second digital input
Outputs	19514203K	First mA output
	19514204K	Second mA output
Special function	19514205K	Datalogger
Housing	19514000	Panel mounted (Front IP 54)
	19514001K	Wall mounted (IP 65)

Note!

Choose the components you need and that´s how your “assembly version” is designed. We will have to technically inspect and approve a free combination of individual key features.

4. ASR© - Automatic Sensor Cleaning

ASR® is Kuntze's patented Automatic Sensor Cleaning process

The automatic sensor cleaning is a patented highly efficient process to clean electrode surfaces. During the cleaning process, Hydrogen and Oxygen are produced at the electrode surfaces, blasting away even persistent coatings. Additionally, Oxygen oxidizes organic coatings, and Hydrogen reduces organic and inorganic substances, especially iron and manganese oxides. Excess gas recombines to water and do not interfere with the measurement or the process.

Benefits

- Without manual cleaning
- No refill of chemical or physical agents
- Strongly reduced calibration demand

4.1.1 ASR® - frequently asked questions

Can I use ASR® on coated sensors?

Yes. You can use ASR® for already coated sensors. You might need more than one cleaning cycle. After cleaning you will probably need to recalibrate, because by removing the coating the slope of the sensor can rise. ASR® should be used from the start, to keep the electrodes clean, because then the slope of the sensor is maintained and there is no need to recalibrate.

How many times is a cleaning necessary?

A cleaning once a week is usually adequate. We recommend to raise the number of cleanings only, if the measured values decrease visible within a few days.

Do I need to recalibrate after cleaning?

No. The cleaning is supposed to maintain the original slope of the sensor, not to change it. If the cleaning runs from the start, the slope should change so little over the time that a recalibration is not necessary. Only calibrate if the value is still much higher immediately before the next cleaning. Generally never calibrate directly after cleaning, so that the calibration does not fall into the abated polarization phase. That`s the reason why we lock the calibration menu for five minutes. During this time the status message „cleaning in progress" is shown in the display.

I cannot use the calibration menu - why?

The measured value is locked for five minutes in the display, in the output signal and also for the controller, in order to give the electrode time to polarize. During this time the status message „cleaning in progress" is shown in the display, and the calibration menu is locked.

Can I use ASR® under all circumstances?

The automatic sensor cleaning should not be used ultra pure water or other deionized media.

Is ASR® also suitable for sea water?

Yes, we developed a special Zirkon DIS pool sensor with platinum-graphite electrodes.

Is ASR® available for pH sensors?

No, sorry. The glass membrane cannot be cleaned electrochemically. However, ASR® is now available for conductivity sensors.

4.1.2 Storage version

Artikel Nr. / *Article No.*	**Beschreibung /** *Description*
19514206K	ASR® Automatic Sensor Cleaning as add-on for Neon® DIS and Krypton® DIS

5. Sensors

5.1 Zirkon® DIS

5.1.1 Description

Art. No.: S24135130K

Order Code:
23152110

Art. No.: S24135140K

Order Code:
231612500

Art. No.: S24135230K

Order Code:
231212110

Art. No.: S24135260K

Order Code:
231712500

Zirkon® DIS are potentiostatic sensors, measuring parameter and range are defined by the connected instrument. A defined potential is applied to the measuring electrode resulting in an electrical charge. Disinfectant molecules remove part of the charge in an ORP reaction. Is the counter electrode part of the assembly you should use sensors with one electrode (ring or plate). If you use an assembly without counter electrode choose a Zirkon® DIS with two electrodes (double ring)

Benefits

- Low maintenance
- Automatic cleaning by ASR® possible (Art. No.: S24135140K, S24135260)
- Zero point stable

5.1.2 Applications

Cooling Water | Process Water | Disinfection | Drinking Water / Beverages

5.1.3 Technical data

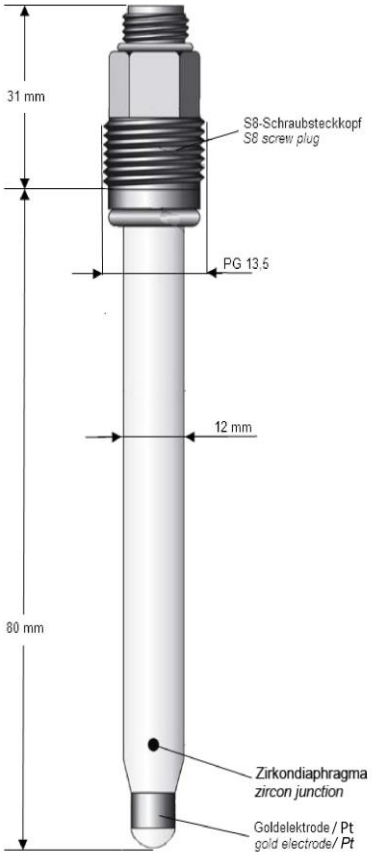
Prozessbedingungen / *Ambient conditions*

Druck. / *Pressure*	10 bar bei 20 °C / *10 bar at 20 °C*
Leitfähigkeit / ‘ *Conductivity*	>150 µS/cm, mit ASR®, > 200 µS/cm / *>150 µS/cm, with ASR®, > 200 µS/cm*
Temperature / *Temperature*	-5 °.. +70 °C (23..158 °F)/ *-5 °.. +70 °C* (23..158 °F)

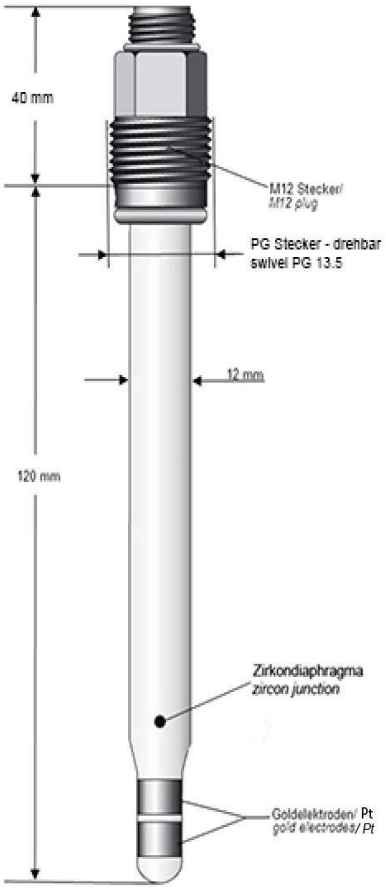
***Konstruktiver Aufbau* / Mechanical construction**

Diaphragma / *Junction*	Zirkon 1 mm / *Zircon 1mm*
Schaftmaterial / *Shaft material*	Glas / *Glass*
Schaftlänge / *Shaft length*	80 mm, 120 mm
Elektrodenmaterial / *Electrode material*	Platinring, Platinkuppe, Goldring, 2 Goldringe oder 2 Platinringe / *Platinum ring, Platinum cap, Gold ring, 2 Gold rings or 2 Platinum rings*
Bezugssystem / *Reference system*	Ag, AgCl, Tepoxgel 3mol KCl / Ag, AgCl, *Tepox gel 3mol KCl*
Mechanischer Anschluss / *Process connection*	S8-Stecker (PG 13,5 - drehbar), M12-Stecker (PG 13,5 - drehbar) / *S8-plug (PG 13.5 - swivel), M12-plug (PG 13.5 - swivel)*
Elektrischer Anschluss / *Electrical Connection*	S8 (2-polig), M12 (5-polig) / *S8 (2-poles), M12 (5-poles)*

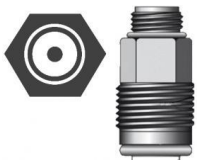
5.1.4 Mechanical drawing



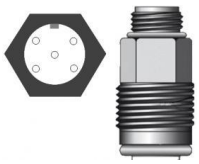
Art. No.: S24135130K / S24135230K
Order Code: 23152110 / 231212110



Art. No.: S24135140K / S24135260K
Order Code: 231612500 / 231712500



S8-plug



M12-plug

5.1.5 Order information

	Article Nr. / ***Article No.***	**Description /** ***Description***
Gruppe / ***Group***	231	Zirkon® DIS
Elektrodenmaterial / ***Electrode Material***	2	Platinring *Platinum ring*
	5	Goldring / *Gold ring*
	6	2 Goldringe / *2 Gold rings*
	7	2 Platinringe / *2 Platinum rings*
	9	Sonderanfertigung / *Special*
Diaphragma / ***Junction***	1	Zirkon 1 mm / *Zircon 1 mm*
	9	Sonderanfertigung / *Special*
Elektrolyt / ***Electrolyte***	2	Tepoxgel 3mol KCL / *Tepox gel 3mol KCL*
	9	Sonderanfertigung / *Special*
Anschluss / ***Connection***	1	S8-Stecker (PG 13,5 - drehbar) / *S8-plug (swivel PG 13.5)*
	5	M12-Stecker (PG 13,5 - drehbar) / *M12-plug (swivel PG 13.5)*
	9	Sonderanfertigung / *Special*
	9	Sonderlänge / *Special length*
Länge / ***Length***	0	120 mm
	1	80 mm

Sonstiges/ ***Special***	0	Keine / *None*
	9	Sonderanfertigung / *Special*

Note!

If possible, choose items listed under „storage versions“ or „assembly versions“ for your orders. We will have to technically inspect and approve a free combination of individual key features.

Prices on request

5.1.6 Storage version

Artikel Nr. / *Article No.*	**Typ /** *Type*	**Beschreibung / Description**
S24135130K	231512110	DIS sensor: 1 Gold ring, Zirkon junction 1 mm, Tepox gel 3mol KCl, S8-plug (swivel PG 13.5), 80 mm
S24135140K	231612500	DIS sensor: 2 Gold rings, Zirkon junction 1 mm, Tepox gel 3mol KCl, M12-plug (swivel PG 13.5), 120 mm
S24135230K	231212110	DIS sensor: 1 Platinum ring, Zirkon junction 1 mm, Tepox gel 3mol KCl, S8-plug (swivel PG 13.5), 80 mm
S24135260K	231712500	DIS sensor: 2 Platinum rings, Zirkon junction 1 mm, Tepox gel 3mol KCl, M12-plug (swivel PG 13.5), 120 mm

5.2 Zirkon® DIS Total

5.2.1 Description

Art. No.: S24135440K

Order Code: 239412500

Zirkon® DIS Total is an open potentiostatic sensor for measuring chlorine compounds. Sensors - Made in Germany.

Benefits

- No exchange of membrane
- No exchange of electrolyte
- No delicate plastic membrane
- Immune to air bubbles

5.2.2 Applications

Cooling Water | Disinfection | Drinking Water / Beverages

5.2.3 Technical data

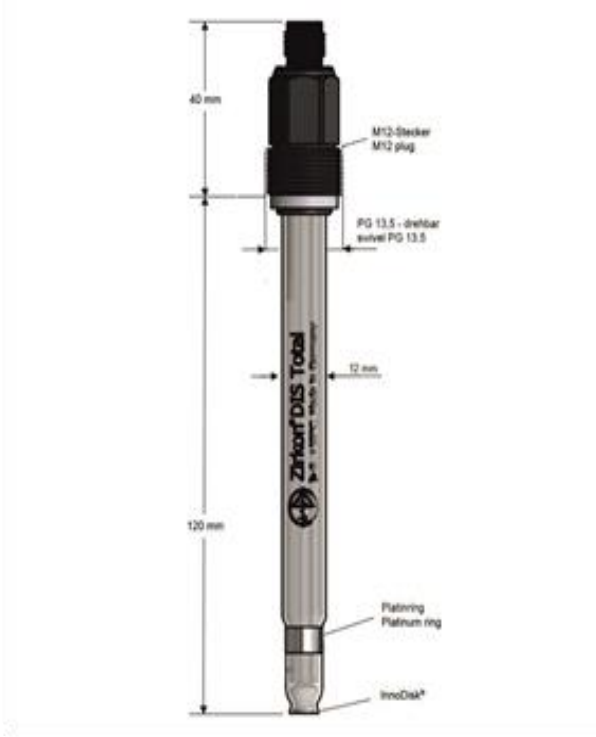
Prozessbedingungen / *Ambient conditions*

Druck. / *Pressure*	< 6 bar bei 20 °C / < 6 bar at 20 °C
Temperature / *Temperature*	0..+50 °C (32..122 °F)

Konstruktiver Aufbau / Mechanical construction

Diaphragma / *Junction*	Zirkon 1 mm / *Zircon 1mm*
Schaftmaterial / *Shaft material*	Glas / *Glass*
Schaftlänge / *Shaft length*	120 mm
Schaftdurchmesser / *Shaft diameter*	12 mm
Elektrodenmaterial / *Electrode material*	Platinring + *Innodisk®* / *Platinum ring + Innodisk®*
Bezugssystem / *Reference system*	Ag, AgCl, Tepoxgel 3mol KCl / Ag, AgCl, *Tepox gel 3mol KCl*
Mechanischer Anschluss / *Process connection*	M12-Stecker (PG 13,5 - drehbar) / *M12-plug (PG 13.5 - swivel)*
Elektrischer Anschluss / *Electrical connection*	5-polig / *5-poles*

5.2.4 Mechanical drawing



Art. No.: S24135440K

Order Code: 239412500

5.2.5 Order information

	Artikel Nr./ ***Article No.***	**Beschreibung/** ***Description***
Gruppe / **Group**	239	Zirkon® DIS Total
Elektrodenmaterial / **Electrode material**	4	Platinring + Innodisk®/ *Platinum ring + Innodisk®*
Diaphragma / ***Junction***	1	Zirkon 1 mm / *Zircon 1 mm*
	9	Sonderanfertigung / *Special*
Anschluss / ***Connection***	2	M12-Stecker / M12-plug
	9	Sonderanfertigung / *Special*
Elektrolyt / ***Electrolyte***	2	Tepoxgel 3mol KCl/ *Tepox gel 3mol KCl*
	9	Sonderanfertigung / *Special*
Länge / ***Length***	0	120 mm
	9	Sonderlänge / *Special length*
Sonstiges / ***Special***	0	Keine / *None*
	9	Sonderanfertigung / *Special*

Note!

If possible, choose items listed under „storage versions“ or „assembly versions“ for your orders. We will have to technically inspect and approve a free combination of individual key features

Prices on request.

5.2.6 Storage version

Artikel Nr. / *Article No.*	**Typ /** *Type*	**Beschreibung /** *Description*
S24135440K	239412500	DIS Total-Sensor: InnoDisk®, Platinum ring, Zirkon junction 1 mm, Tepox gel 3mol KCl, M12-plug (swivel PG 13.5)

5.3 Zirkon® DIS Pool

5.3.1 Description

Art. No.:
S24135145K

Order Code:
237613500

Art. No.:
S24135150K

Order Code:
237813500

Art. No.:
S24135155K

Order Code:
237913990

Art. No.:
S24135156K

Order Code:
23791379K016

Art. No.:
S24135288K

Order Code:
237513110

Zirkon® DIS Pool are potentiostatic sensors, measuring parameter and range are defined by the connected instrument. A defined potential is applied to the measuring electrode resulting in an electrical charge. Disinfectant molecules remove part of the charge in an ORP reaction. Is the counter electrode part of the assembly you should use sensors with one electrode (ring or plate). If you use an assembly without counter electrode choose a sensor with two electrodes (double ring). The salt reservoir of the reference electrodes leads to a longer lifetime.

Benefits

- Low maintenance
- Automatic cleaning by ASR® or mechanically
- Zero point stable

5.3.2 Applications

Pool & Spa

5.3.3 Technical data

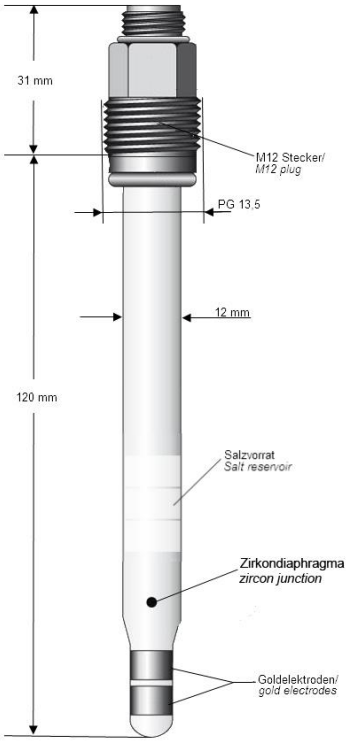
Prozessbedingungen / *Ambient conditions*

Druck / *Pressure*	< 10 bar bei 20 °C / < 10 bar at 20 °C
Temperature / *Temperature*	0..+50 °C (32..122 °F)

Konstruktiver Aufbau / Mechanical construction

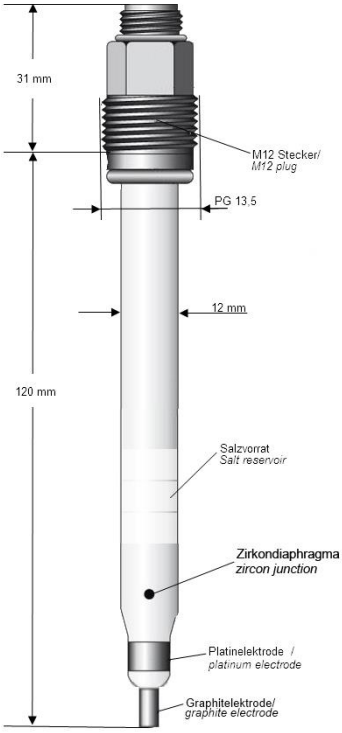
Diaphragma / *Junction*	Zirkon 1mm / *Zircon 1mm*
Schaftmaterial / *Shaft material*	Glas / *Glass*
Schaftlänge / *Shaft length*	80 mm / 120 mm /155 mm / 170 mm
Schaftdurchmesser / *Shaft diameter*	12 mm
Elektrodenmaterial / *Electrode material*	Platinring, Platinkuppe, Goldring, 2 Goldringe oder 2 Platinringe, Grafitstab / *Platinum ring, Platinum cap, Gold ring, 2 Goldrings or 2 Platinum rings, Graphite pin*
Bezugssystem / *Reference system*	Ag, AgCl, Tepoxgel 3mol KCl / *Ag / AgCl, Tepox gel 3mol KCl*
Mechanischer Anschluss / *Process connection*	S8-Stecker (PG 13,5 - drehbar), M12-Stecker (PG 13,5 - drehbar), Flansch (PG 13,5 – drehbar) / *S8-plug (PG 13.5 - swivel), M12-plug (PG 13.5 - swivel), male Socket ((PG 13.5 - swivel)*
Elektrischer Anschluss / *Electrical connection*	2-polig / 3-polig / 5-polig / Festkabel *2-poles / 3-poles / 5-poles / fixed pflug*

5.3.4 Mechanical drawing



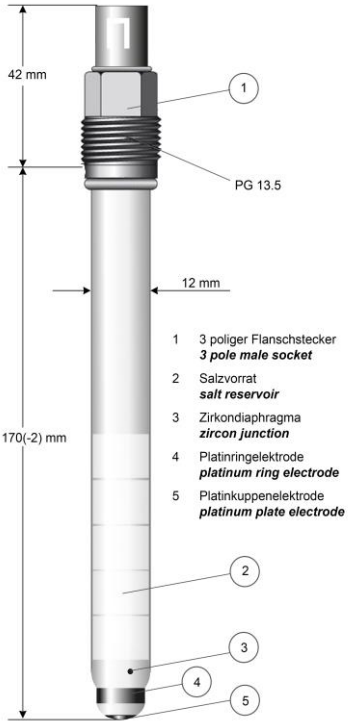
Art. No.: S24134145K

Order code: 237613500



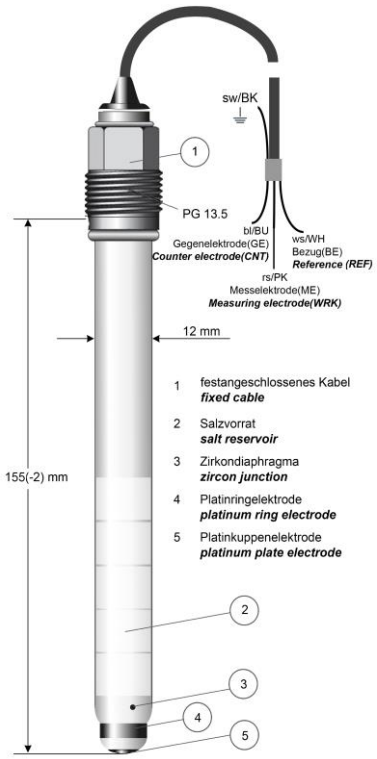
Art. No.: S24135150K

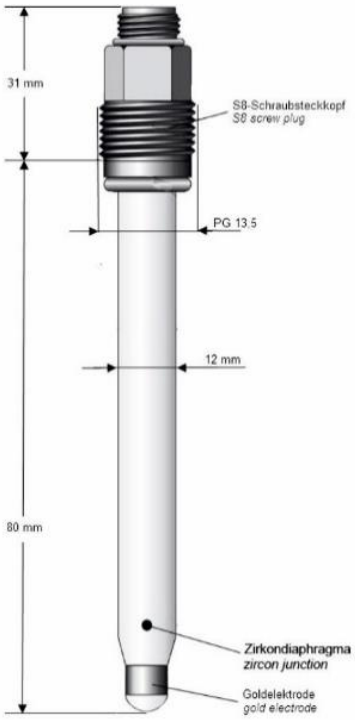
Order code: 237813500



Art. No.: S24135155K

Order code: 237913990





Art. No.: S24135156K

Order code: 23791379K016

Art. No.: S24135288K

Order code: 237513110

Male-socket

S8-plug

M12-plug

5.3.5 Order information

	Artikel Nr./ ***Article No.***	**Beschreibung/** ***Description***
Gruppe / Group	237	Zirkon® DIS Pool
Elektrodenmaterial / Electroden material	2	Platinring / *Platinum ring*
	5	Goldring / *Gold ring*
	6	2 Goldringe / *2 Gold ring*
	7	2 Platinringe / *2 Platinum ring*
	8	Platinring - Graphitstift / *Platinum ring- Graphite pin*
	9	Sonderanfertigung / *Special*
Diaphragma / *Junction*	0	Kein / *None*
	1	Zirkon 1 mm / *Zircon 1 mm*
	9	Sonderanfertigung / *Special*
Elektrolyt / *Electrolyte*	0	Kein / None
	3	Tepoxgel - gesättigt KCl mit Salzvorrat / *Tepox gel - saturated KCI with salt resevoir*
	9	Sonderanfertigung / *Special*

Anschluss / ***Connection***	1	S8-Stecker (PG 13,5 - drehbar) / *S8-plug (swivel PG 13.5)*
	5	M12-Stecker (PG 13,5 - drehbar) / *M12-plug (swivel PG 13.5)*
	7	Festangeschlossenes Kabel / *Fixed cable*
	9	Sonderanfertigung / *Special*
Länge / ***Length***	0	120 mm
	1	80 mm
	9	Sonderlänge / *Special length*
Sonstiges / ***Special***	0	Kein / None
	K	Kabellänge / Cable length Beispiel: 1 Meter = K01, 10 Meter = K10 Example: 1 m =K01, 10 m = K10
	9	Sonderanfertigung / *Special*

Notes!

If possible, choose items listed under „storage versions“ or „assembly versions“ for your orders. We will have to technically inspect and approve a free combination of individual key features.

Prices on request.

5.3.6 Storage version

Artikel Nr. / Article No.	Typ / Type	Beschreibung / Description
S24135145K	237613500	DIS-sensor: 2 gold rings, Zircon junction 1 mm, saturated KCl, M12-plug (swivel PG 13.5), 120 mm
S24135150K	237813500	DIS-sensor for brine water: Zircon junction 1 mm, Platinum ring, Graphit pin, saturated. KCl, M12-plug (swivel PG 13.5), 120 mm
S24135155K	237913990	DIS-sensor: 1 Platinum ring and plate, Zircon junction 1 mm, saturated KCl, male socket (swivel PG13.5), 170 mm
S24135156K	23791379K016	DIS-Sensor: 1 Platinum ring and plate, Zircon junction 1 mm, saturated. KCl, 1.6 m fixed cable (swivel PG 13.5), 155 mm
S24135288K	237513110	DIS-sensor: 1 Gold ring, Zirkon junction 1 mm, saturated. KCl, S8-plug (swivel PG 13.5), 80 mm

5.4 Zirkon® Gas

5.4.1 Description

Zirkon® Gas Cl_2

Art. No: 29111001K

Zirkon® Gas O_3

Art. No: 29111002K

Zirkon® Gas ClO_2

Art. No: 29111011K

Kuntze Gas Sensors are amperometric sensors for the detection of chlorine gas. The matching fitting Ne GSH allows for an easy installation of the gas sensor.

Benefits

- Short response times
- High reliability
- Simple start-up due to printed calibration value

5.4.2 Applications

Ambient Air Monitoring

Warehouse Exhaust Air

5.4.3 Technical data

Messparameter Zirkon® Gas Cl_2 - 29111001K /
Measuring parameters Zirkon® Gas Cl_2 - 29111001K

Chlorgas / *Chlorine gas*	0.. 20 ppm* *Der Messbereich des Geräts kann abweichen. / Range of measurement device can deviate.

Prozessbedingungen / *Process conditions*

Temperatur / *Temperature*	-20.. +50 °C (-4..122 °F)
Luftfeuchtigkeit / *Humidity*	15.. 90 % rH (nicht kondensierend / *uncondensing*)
Einfluss der Feuchtigkeit / *Influence of humidity*	Kein Effekt auf den Nullpunkt / *No effect on the zero point*

Querempfindlichkeit Chlorgas-Sensor bei 20 °C / *Cross-sensitivity Chlorine gas at 20 °C*

Gas	**Konzentration / *Concentration***	**Abgelesener Wert / *Measured value***
Brom / *Bromine*	10 ppm	2,5
Chlordixid / *Chlorine dioxide*	3 ppm	~3
Kohlenmonoxid / *Carbon monoxide*	300 ppm	0
Schwefeldioxid / *Sulphur dioxide*	5 ppm	0
Stickstoffmonoxid / *Nitric oxide*	35 ppm	0

Gas	**Konzentration /** ***Concentration***	**Abgelesener Wert /** ***Measured value***
Wasserstoff / *Hydrogen*	300 ppm	0
Stickstoffdioxid / *Nitrogen dioxide*	20 ppm	~20
Schwefelwasserstoff (H2S)*/ *Hydrogen sulfide (H2S) **		ND

* Kontakt zu H2S vergiftet den Sensor, anschließender Kontakt mit Chlor reaktiviert den Sensor. /
** Contact to H2S poisons the sensor, followed by contact with chlorine reactivates the sensor.*

Note!

The influencing factor can vary from sensor to sensor and over the life span of the individual sensor. No claim to completeness of the data, the sensors can potentially exhibit cross sensitivity to other gases.

5.4.4 Technical data

Messparameter Zirkon® Gas O_3 - 29111002K /
***Measuring parameters* Zirkon® Gas O_3 - 29111002K /**

Ozon / Ozone	0.. 5 ppm* *Der Messbereich des Geräts kann abweichen. / Range of measurement device can deviate.

Prozessbedingungen / Process conditions

Temperatur / *Temperature*	-20.. +50 °C (-4..122 °F)
Luftfeuchtigkeit / *Humidity*	15.. 90 % rH (nicht kondensierend / *uncondensing*)
Lagerdauer / *Storage period*	Max. 6 Monate in Container, bei +4.. 10 °C / *Max. 6 months in container, at +4... 10 °C*
Einfluss der Feuchtigkeit / *Influence of humidity*	Kein Effekt auf den Nullpunkt / *No effect on the zero point*

Querempfindlichkeit Ozon Gas Sensor bei 20 °C / ***Cross sensitivity Ozone gas sensor at 20 °C***

Gas	**Konzentration / *Concentration***	**Abgelesener Wert / *Measured value***
Kohlenmonoxid / *Carbon monoxide*	300 ppm	0
Schwefeldioxid / *Sulphur dioxide*	5 ppm	0
Stickstoffmonoxid / *Nitrogen monoxide*	35 ppm	0
Wasserstoff / *Hydrogen*	300 ppm	0
Stickstoffdioxid / *Nitrogen dioxide*	20 ppm	~10
Schwefelwasserstoff (H2S) * *Hydrogen sulfide (H2S) **		ND

Gas	**Konzentration /** ***Concentration***	**Abgelesener Wert /** ***Measured value***
Ethylene / *Ethylene*	100 ppm	0
Chlor / *Chlorine*	5 ppm	~4

* Kontakt zu H2S vergiftet den Sensor, anschließender Kontakt mit Chlor reaktiviert den Sensor. /
** Contact to H2S poisons the sensor, subsequent contact with chlorine reactivates the sensor.*

Note!

The influencing factor can vary from sensor to sensor and over the life span of the individual sensor. No claim to completeness of the data, the sensor can potentially exhibit cross sensitivity to other gases.

5.4.5 Technical data

Messparameter Zirkon® Gas $Cl0_2$ - 29111011K /
Measuring parameters Zirkon® Gas $Cl0_2$ - 29111011K

Chlordioxid / *Chlorine dioxide*	0.. 5 ppm* *Der Messbereich des Geräts kann abweichen. / Range of measurement device can deviate.

Prozessbedingungen / *Process conditions*

Temperatur/ *Temperature*	-20.. +50 °C (-4..122 °F)
Luftfeuchtigkeit/ *Humidity*	15.. 90 % rH (nicht kondensierend / *uncondensing*))
Lagerdauer / *Storage period*	Max. 6 Monate in Container, bei +4.. 10 °C / *Max. 6 months in container, at +4... 10 °C*
Einfluss der Feuchtigkeit/ *Influence of humidity*	Kein Effekt auf den Nullpunkt / *No effect on the zero point*

Querempfindlichkeit Chlordioxid Gas Sensor bei 20 °C /
Cross sensitivity Chlorine dioxide gas sensor at 20 °C

Gas	**Konzentration / *Concentration***	**Abgelesener Wert / *Measured value***
Kohlenmonoxid / *Carbon monoxide*	100 ppm	0
Schwefeldioxid / *Sulphur dioxide*	10 ppm	0
Stickstoffmonoxid / *Nitrogen monoxide*	10 ppm	0
Wasserstoff / *Hydrogen*	300 ppm	0
Stickstoffdioxid / *Nitrogen dioxide*	5 ppm	~5

Gas	**Konzentration /** ***Concentration***	**Abgelesener Wert /** ***Measured value***
Chlor / *Chlorine*	20 ppm	~20
Schwefelwasserstoff (H2S)* *Hydrogen sulfide (H2S) **		ND

* Kontakt zu H2S vergiftet den Sensor, anschließender Kontakt mit Chlor reaktiviert den Sensor. /
** Contact to H2S poisons the sensor, subsequent contact with chlorine reactivates the sensor.*

Note!

The influencing factor can vary from sensor to sensor and over the life span of the individual sensor. No claim to completeness of the data, the sensor can potentially exhibit cross sensitivity to other gases.

5.4.6 Storage version

Artikel Nr. / ***Article No.***	**Typ /** ***Type***	**Beschreibung /** ***Description***
29111001K	Zirkon® Gas Cl_2	Sensor for measuring Chlorine gas
29111002K	Zirkon® Gas O_3	Sensor for measuring Ozone
29111011K	Zirkon® Gas ClO_2	Sensor for measuring Chlorine dioxide

6. Accessories

6.1 Assembly StabiFlow®

6.1.1 Description

Argon® StabiFlow

Assembly for easy and precise measurement of disinfectants

Potentiostatic measurements are flow dependent. The new assembly Argon® StabiFlow provides a constant flow of approx. 30 l/h. This ensures stable, precise and reliable measurement - and long life expectancy of our electrodes. Flow fluctuations no longer show in your measuring curves as long as you have a water inlet above 35 l/h.

Benefits

- Constant flow for a precise disinfectants measurement
- Brine resistant!
- Pressure resistant up to 6 bar (at 20 °C)

Particular characteristics

- Dirt resistant due to construction
- More safety by ball check valve
- Integrated filter - easy to clean
- Flow control with Zirkon® FTG
- Expandable

6.1.2 Technical data

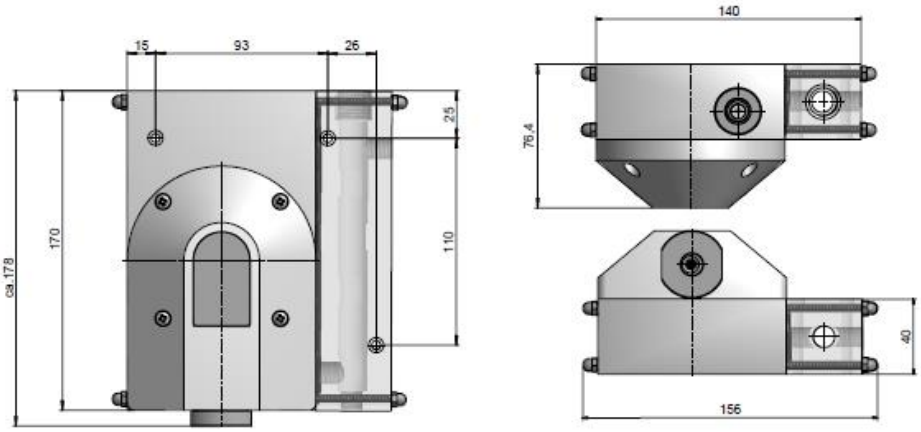
Prozessbedingungen / *Ambient conditions*

Druck / *Pressure*	6 bar (bei 20 °C) / 6 bar (at 20 °C)
Temperatur / *Temperature*	0.. +50 °C (32..122 °T)
Durchfluss / *Flow inlet*	35 -400 l/h

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / *Material*	PVC, PMMA
Maße / *Dimensions*	178 x 156 x 76 mm
Einbau / *Installation*	Zu-/Ablauf: ¼“ Innengewinde; Probenahmehahn: ¼“ Innengewinde In-/outlet: ¼‘‘ female thread, tube connection DN 6/8

6.1.3 Mechanical drawing



Argon® StabiFlow

6.1.4 Order information

Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
39503000K	StabiFlow® flow assembly (for 1 sensor)
39503010K	StabiFlow® flow assembly (for 2 sensors)
39503020K	StabiFlow® flow assembly (for 3 sensors)
39503030K	StabiFlow® flow assembly (for 4 sensors)

6.2 Assembly Argon® Flow

6.2.1 Description

Photo shows accessories: FTG and float

Assembly for a precise desinfectant measurement

Argon® Flow is a modular assembly which excels by its efficient design. It is assembled and tested. The assembly consists of two chamber: one chamber is equipped with a float and the second is meant for a sensor in 12 mm sensor design.

Benefits

- Integrated flow monitor
- Easy at side extendable
- Pressure resistant up to 6 bar (at 20 °C)

6.2.2 Technical data

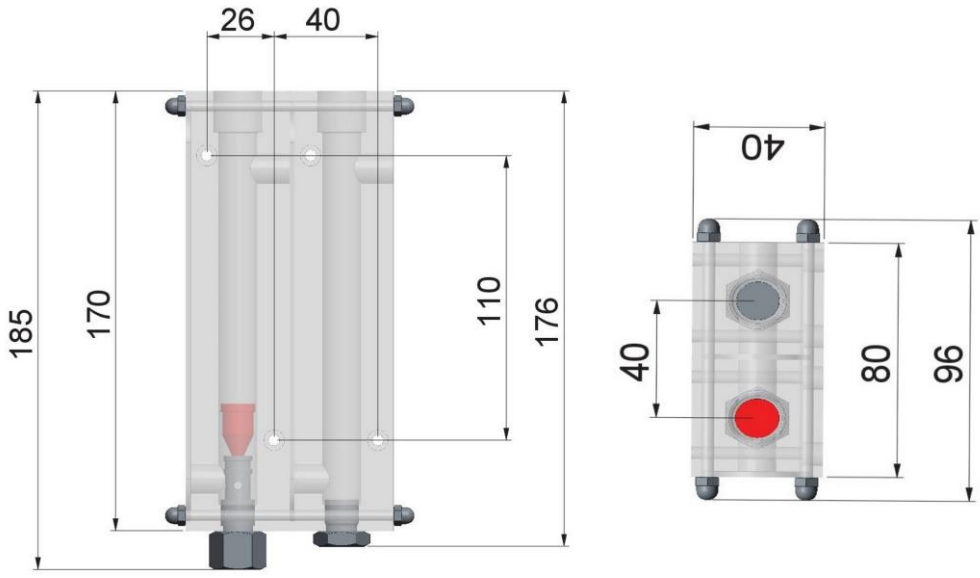
Prozessbedingungen/ *Ambient conditions*

Druck / *Pressure*	Max. 6 bar (bei 20 °C) / *Max. 6 bar (at 20 °C)*
Temperatur / *Temperature*	0.. +50 °C (32..122 °T)

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / *Material*	Körper: PMMA; Anschlüsse: PVC / *Body: PMMA; connectors: PVC*
Maße / *Dimensions*	170 x 80 x 40 mm
Einbau / *Installation*	Zu-/Ablauf: ¼“ Innengewinde; Probenahmehahn: ¼“ Innengewinde *In-/outlet: ¼“ female thread, tube connection DN 6/8*

6.2.3 Mechanical drawing



Different models, see article number

6.2.4 Order information

Artikel Nr. / ***Article No.***	**Typ /** ***Type***
39503003K	Argon® Flow (for 1 sensor)
39503013K	Argon® Flow (for 2 sensors)
39503023K	Argon® Flow (for 3 sensors)

6.3 Assembly GD 3 V (G) (PP)

6.3.1 Description

Assembly GD 3 V (G) (PP)

Flow assembly for installation of a Zirkon® DIS sensor in pipes with *Muffen* for glueing or *Muffen* with 1" female thread. Available in PVC or PP.

All Kuntze products are Made in Germany.

6.3.2 Technical data

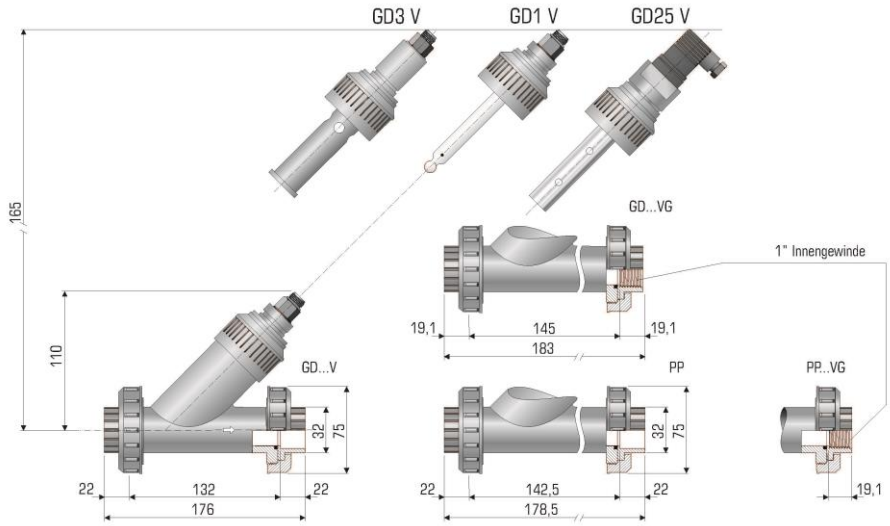
Prozessbedingungen / *Ambient conditions*

Druck / *Pressure*	PVC: 16 bar (bei 20 °C), PP: 10 bar (bei 20 °C)
Temperatur / *Temperature*	PVC: max. 40 °C, PP: max. 90 °C (194 °F)

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / *Material*	PVC, PP
Einbau/ *Installation*	GD 3 V: Muffen (DN 25), zum Einkleben, GD 3 VG (PP): Muffen (DN 25) mit 1“ Innengewinde / *GD 3 V: Muffen (DN 25), for gluing GD 3 VG (PP): Muffen (DN 25) with 1" female thread*

6.3.3 Mechanical drawing



Assembly GD 3 V (G) (PP)

6.3.4 Order information

Artikel Nr. / ***Article No.***	**Typ /** ***Type***	**Beschreibung /** ***Description***
36604280K	GD 3 V	Adhesive coupling (DN 25), PVC
36604281K	GD 3 VG	Pipe coupling (DN 25) with 1" internal thread, PVC
36604285K	GD 3 VG PP	Pipe coupling (DN 25) with 1" internal thread, PP

6.4 Assembly Ne GSH für Gas-Sensors

6.4.1 Description

Assembly Ne GSH

Gas sensor holder for one gas sensor

- Functions displays via LED‘s
- Variable in cable length due to M12-plug
- Easy installation of the sensor by thread adapter nut

6.4.2 Technical data

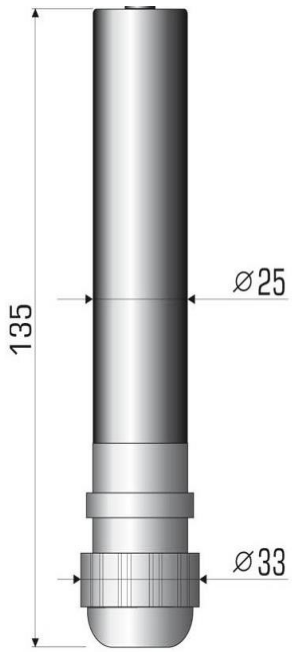
Prozessbedingungen / *Ambient conditions*

Temperatur / *Pressure*	Max. 40 °C (104 °F)

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / *Material*	PVC

6.4.1 Mechanical drawing



Assemblyr Ne GSH

6.4.2 Order information

Artikel Nr. / *Article No.*	**Typ /** *Type*	**Beschreibung /** *Description*
29113001K	Ne GSH	Gas sensor holder, M12-plug

Note!

Matching connection cables can be found in the Accessories chapter.

6.5 Photometer Radon DIS-pH

6.5.1 Description

Photometer Radon DIS-pH

Precise Water Analysis in compact design

The Radon photometer is used for measuring of Chlorine, Chlorine dioxide, Ozone, Hydrogen peroxide and pH. Accurate and consistent results are obtained quickly. Delivery contents is everything needed to measure Chlorine, Chlorine dioxide and Ozone. The delivery content contains everything needed for measuring Chlorine, Chlorine dioxide and Ozone. For measurement of Hydrogen peroxide you need a H_2O_2-addon and for the pH measurement the reagent phenolred.

Benefits

- Comfortable by method memory
- Automatic switch-off
- Waterproof accord to IP68

6.5.2 Technical data

Messparameter / *Measuring parameter*

Freies Chlor / *Free ch*lorine	0,01.. 6,00 mg/l
Chlordioxid / *Chlorine dioxide*	0,01.. 6,00 mg/l
Ozon / Ozone	0,01.. 4,00 mg/l
Wasserstoffperoxid / *Hydrogen peroxide*	1.. 50 mg/l
pH-Wert / pH-value	6,5.. 8,4 pH

Eingangskenngröße / *Input characteristic*

Genauigkeit / *Accuracy*	3 % FS (bei 20 °... 25 °C) / 3 % FS (at 20 °... 25 °C)

Ausgangskenngrößen / *Process conditions*

Speichermedium / *Data storage medium*	Interner Ringspeicher für 16 Datensätze / *Internal ring buffer for 16 data sets*

Hilfsenergie/ *Power supply*

Stromversorgung / *Electric power supply*	4 Microbatterien (AAA/LR 03), Kapazität 17 Stunden oder 5000 Messungen / *4 micro batteries (AAA/LR 03), capacity 17 hours or 5000 measurements*
Auto - OFF	Automatische Geräteabschaltung, 10 Min. nach letzter Tastenbetätigung / *Automatic device switch-off, 10 min. after last button is pressed*

Prozessbedingungen / *Process conditions*

Temperatur/ *Temperature*	-5.. 40 °C (23..104 °F)
Rel. Feuchte / *Relative humidity*	30.. 90 % (nicht kondensierend) / *30-90 % (non-condensing)*

Lieferumfang / *Scope of supply*

	Gerät im Kunststoffkoffer, 4 Microbatterien (AAA), 3 Rundküvetten (Glas) mit Deckel, 1 Rührstab & 1 Bürste, Gewährleistungserklärung, Betriebsanleitung / *Instrument in plastic case, 4 micro batteries (AAA), 3 round cells (glass) with caps, 1 mixer & 1 brush, guarantee declaration, operating instructions*

Zertifikate und Zulassungen / *Certificates and approvals*

CE-Symbol	CE-Zeichen Konformitätserklärung: Das Produkt entspricht den Anforderungen der harmonisierten europäischen Normen. Es entspricht damit den gesetzlichen Anforderungen der EG-Richtlinien. Der Hersteller bestätigt die erfolgreiche Prüfung des Produktes durch Anbringen des CE-Zeichens. / *CE-Symbol Declaration of conformity: The product meets the requirements of the harmonized European standards. It thus complies with the legal requirements of the EC directives. The manufacturer confirms successful testing of the product by affixing the CE-symbol.*
EMV	EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326-1

Konstruktiver Aufbau / *Constructive structure*

Maße Handgerät / *Dimension*	155 x 75 x 35 mm
Gewicht / *Weight*	Ca. 260 g (mit Batterien) / Approx. 260 g (with batteries)

6.5.3 Order information

Artikel Nr. / *Article No.*	**Typ /** *Type*	**Beschreibung /** *Description*
190201K	Radon DIS-pH	Photometer Chlorine, Chlorine Dioxide, Ozone, Hydrogen Peroxide and pH value

6.6 Cable 5SCR-M12-AE-X

6.6.1 Description

Cable 5SCR-M12-AE-X

Screened cable for connecting DIS sensors with M12-plug, available in 5 or 10 m length.

6.6.2 Technical data

Prozessbedingungen / *Process conditions*

Temperatur / Temperature	-20.. +70 °C (-4.. 158 °F)

Konstruktiver Aufbau / *Mechanical construction*

Wertstoff / *Material*	PVC

6.6.3 Order information

Artikel Nr. / ***Article No.***	**Typ /** ***Type***	**Beschreibung /** ***Description***
44136406K	5SCR-M12-AE-1,0	Connection cable for double Gold or double Platinum sensors, 1 m
44136411K	5SCR-M12-AE-5	Connection cable for double Gold or double Platinum sensors, 5 m
44136412K	5SCR-M12-AE-10	Connection cable for double Gold or double Platinum sensors, 10 m
44136413K	5SCR-M12-AE-50	Connection cable for double Gold or double Platinum sensors, 50 m

6.7 Flow monitor Zirkon® FTG

6.7.1 Description

Zirkon® FTG

Zirkon® FTG monitors flow and temperature while measuring disinfectants in Kuntze's assembly StabiFlow®. Additionally it can be used as ground.

Benefits

- Brine resistant
- Fast response
- Chemical resistant

6.7.2 Applications

Drinking Water

Disinfection

Pool & Spa

6.7.3 Technical data

Messparameter / *Measuring parameter*

Temperatur / *Temperature*	-5.. 70 °C (23..158 °F)

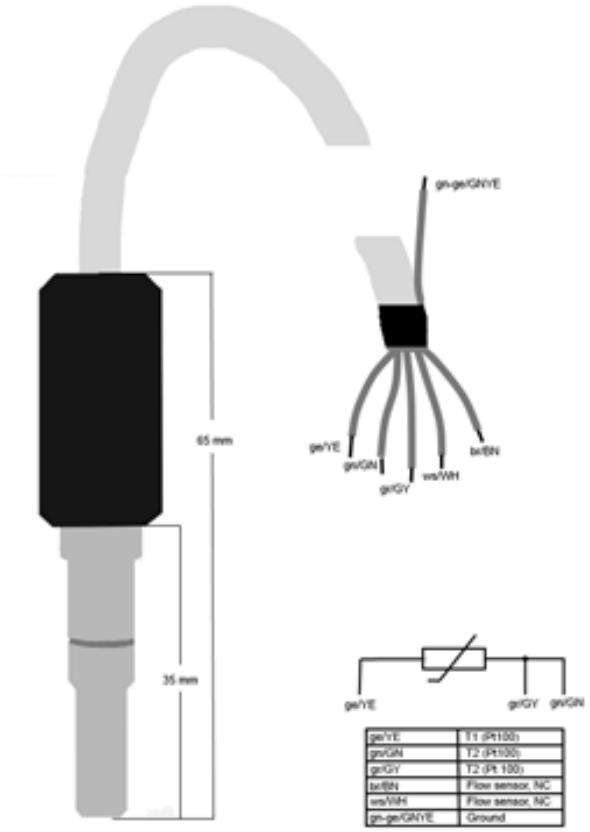
Prozessbedingungen / *Process conditions*

Druck / *Pressure*	< 6 bar bei 20 °C / *< 6 bar at 20 °C*
Temperatur / *Temperature*	5.. 50 °C (41..122 °F)

Konstruktiver Aufbau / *Mechanical construction*

Schaftmaterial / *Shaft Material*	Edelstahl, 1.4404 / *Stainless Steel, 1.4404*
Schaftlänge / *Shaft Length*	35 mm
Mechanischer Anschluss / *Process Connection*	Festangeschlossenes Kabel, 1 cm (Schnellkupplung) / *Fixed Cable, 1 m (Fast Coupling)*
Elektrischer Anschluss / *Electrical Connection*	3-Leiter Pt100 / *3-wire Pt 100*
Temperatursensor / *Temperature Sensor*	Pt100

6.7.4 Mechanical drawing



Zirkon® FTG

6.7.5 Order information

Artikel Nr. / ***Article No.***	**Typ /** ***Type***	**Beschreibung /** ***Description***
24137001K	Zirkon® FTG	Flow monitor, temperature sensor and ground for StabiFlow®

6.8 Zirkon® Temperature sensor Pt-55-W Pt-55-W

6.8.1 Description

Zirkon® Temperature Pt-55-W

Zirkon® Temperature Pt-55-W is a sensor for measuring temperature Sensors - Made in Germany.

Benefits

- Reed switch included
- Based on resistance change of platin

6.8.2 Technical data

Prozessbedingungen / *Process conditions*

Druck / Pressure	6 bar bei 20 °C / 6 bar at 20 °C

Konstruktiver Aufbau / *Mechanical construction*

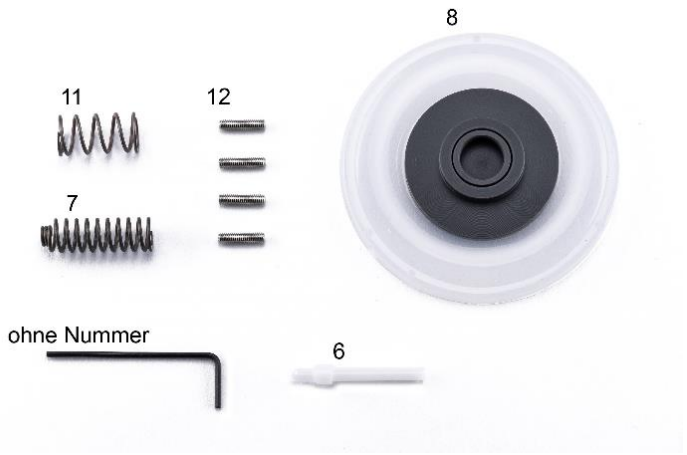
Schaftmaterial / *Shaft Material*	Kunststoff / Plastics
Elektrischer Anschluss / Electrical connection	M12-Stecker (PG 13,5) / M12-plug (PG 13.5)

6.8.3 Order information

Artikel Nr. / *Article No.*	**Typ /** *Type*	**Beschreibung /** *Description*
S24137030K	Pt-55-W	Flow sensor with reed contact and integrated temperature sensor Pt100

6.9 Spare parts packages StabiFlow®

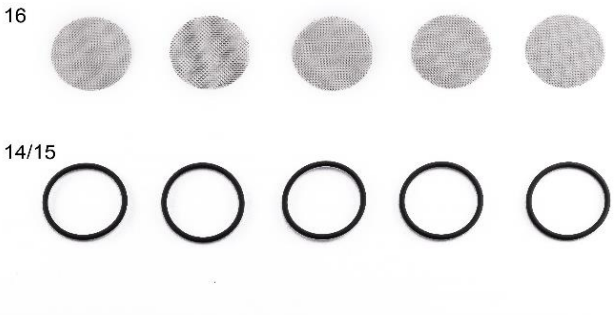
6.9.1 Description



Argon® spare parts package 1

consisting of

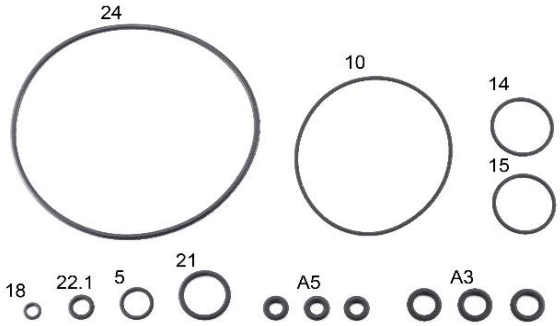
- 1 x No. 08: Membrane
- 1 x No. 07: Spring pressure side
- 1 x No. 11: Sprin chamber side
- 1 x No. 06: Valve pin
- 4 x No. 12: Setscrew M3x12
- 1 x 1,5 mm hex key



Argon® spare parts package 2

consisting of

- 5 x No. 16 stainless steel 1.4401, 500 µm filter
- 5 x No. 14/15 O-ring FKM 26 x 2



Argon® spare parts package 3

consisting of

- 1 x No. 05: O-ring FKM 12 x 2
- 1 x No. 10: O-ring FKM 73 x 2
- 2 x No. 14: O-ring FKM 26 x 2
- 1 x No. 18: O-ring FKM 5 x 1,8
- 1 x No. 21: O-ring FKM 19 x 2,65
- 1 x No. 22: O-ring FKM 7,6 x 2,4
- 1 x No. 24; O-ring FKM 108 x 3
- 3 x No. A3: O-ring FKM 10 x 3
- 3 x No. A5: O-ring FKM 6 x 3

Regular care and maintenance will guarantee trouble-free operation and a long service life of the instruments.

Argon® spare parts package 4

consisting of

- 1 x No. 13: Screw socket
- 2 x No. 14: O-ring 26 x 2
- 1 x No. 18: O-ring 5 x 1,8
- 1 x No. 17: Flter support
- 1 x No. 19: Ball

Argon® spare parts package 5

consisting of

- 1 x Nr. 20: Inset
- 1 x Nr. 21: O-ring 19 x 2,65 FKM
- 1 x Nr. 22.1: O-ring 7,6 x 2,4 FKM
- 1 x Nr. 23: Float

6.9.2 Order information

Artikel Nr. / ***Article No.***	**Beschreibung /** ***Description***
39500006K	Argon® spare parts package 1
39500007K	Argon® spare parts package 2
39500008K	Argon® spare parts package 3
39500011K	Argon® spare parts package 4
39500013K	Argon® spare parts package 5

6.10 Test Pflug DIS

6.10.1 Description

Test plug DIS

With the test plug you can check the function and connection of our disinfection measurement (Krypton® DIS and Krypton® Multi).

6.10.2 Order information

Artikel Nr. / *Article No.*	**Beschreibung /** *Description*
19500002K	Test Plug DIS

7. Index

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