

Krypton® DES

Measuring board for Free Chlorine, Chlorine Dioxide, Ozone and Hydrogen Peroxide

- Precise disinfectants measurement by a constant flow
- Low maintenance by automatic sensor cleaning ASR®
- Pressure resistant up to 6 bar (at 20°C)



Krypton® Des

Applications



Drinking Water / Beverages



Disinfection



Process Water

Description

The measuring system Krypton® DES includes all you need for disinfection measurement: instrument, sensor, 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 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. For measuring free Chlorine, Chlorine dioxide and Ozone the double gold sensor Zirkon® DES 231612500 is used, for Hydrogen peroxide the double platinum sensor Zirkon® DES 231714500 und for measuring in brine graphite-platinum sensor Zirkon® DES 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, key pad operation, 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), automatic sensor cleaning ASR®, Modbus interface and Datalogger. You can add the automatic sensor cleaning ASR® to your system by the addon function. The complete system is pressure resistant up to 6 bar (at 20°C) and brine resistant.



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Particular characteristics

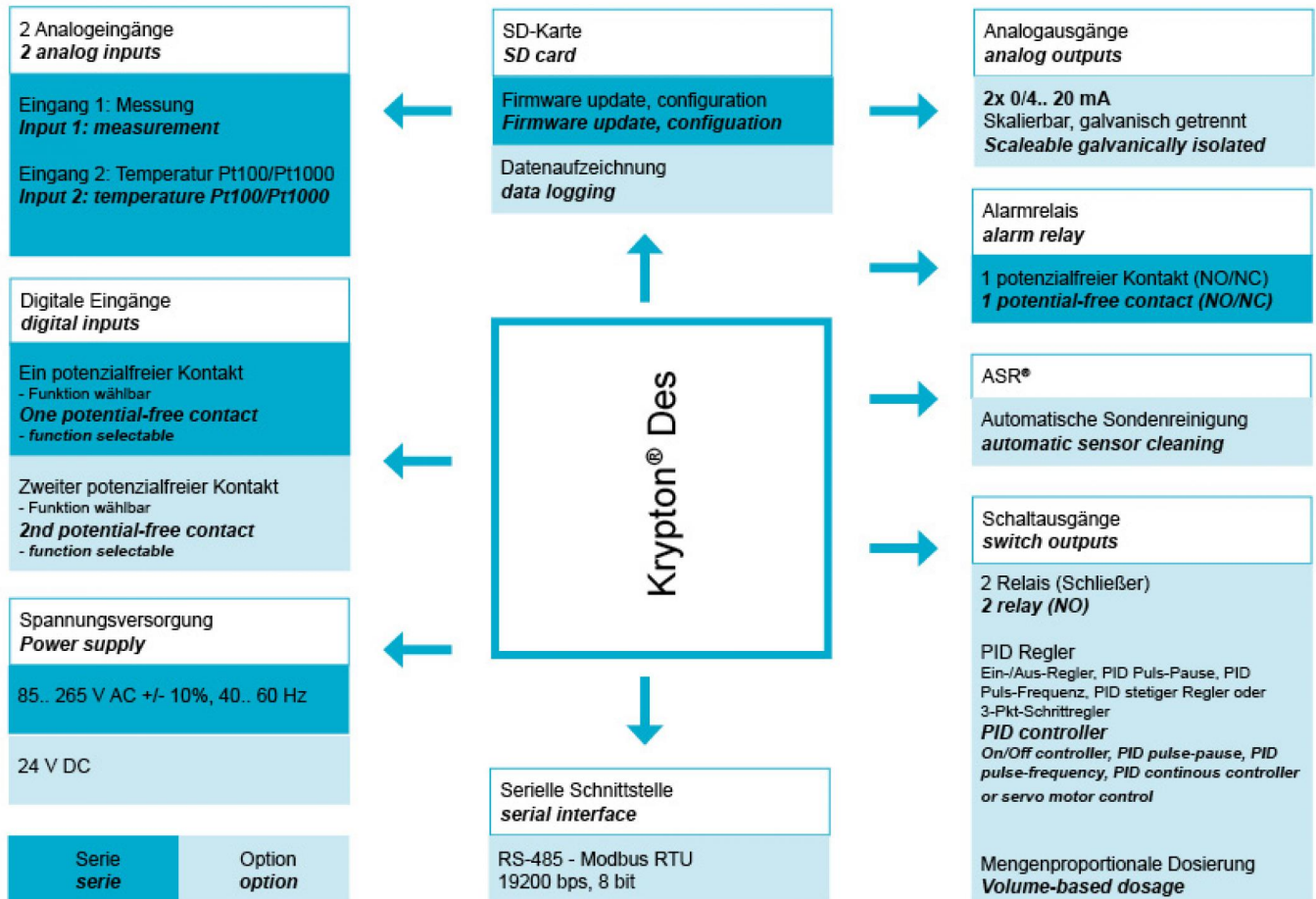
- 85 .. 265 V AC power supply
- 90x50 mm display - optional Touch
- Real time clock
- Pressure proofed up to 6 bar (at 20°C)
- 2 limit values with delay, assigned to the alarm relay
- Alerts selectable for alarm relay
- Dosage check
- Flow control
- Safety by autolock function
- Eventlog and event help
- Test menu for wiring check
- SD card function: firmware update, configuration and diagnosis
- Power saving adjustable
- 2 user levels by password function
- Graphical menu
- Functional upgrade by activation code or with modules
- Option: 24 V DC
- Option: RS 485 Modbus RTU
- Option: ASR® - automatic sensor cleaning
- Option: 2 mA outputs 0/4 to 20 mA adjustable with fault current
- Option: 2 PID controller with 2 control relays
- Option: volume-based dosage with 2 control relays
- Option: 2nd digital input
- Option: data log function



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Interface diagram



Technical data

Measuring parameter

Free Chlorine	0.. 1000 µg/l 0.. 5.00/10.00 mg/l 0.. 20.00 mg/l
Chlorine Dioxide	0.. 1000 µg/l 0.. 5.00/10.00 mg/l 0.. 20.00 mg/l
Ozone	0.. 1000 µg/l 0.. 5.00/10.00 mg/l
Hydrogen Peroxide	0.. 30.00 mg/l



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Input characteristics

Accuracy	+/- 2 % of measuring range limit	
Temperature measuring range	-30.0.. +140.0°C	
Temperature coefficient	0.. 8%/K	
Digital input	1 as controller stop by external contact, option: 2nd as controller stop or flow measurement for volume based dosing.	
Ambient conditions	pH-range	pH 6..9 (Free Chlorine: pH 6..8)
	Flow	35.. 400 l/h
	Min. conductivity	> 150 µS/cm, with ASR > 200µS/cm
	Temperature	0.. 50°C

Output characteristics

Alarm relay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA (invertable)	
Output signal	optional: 2 x 0/4 .. 20 mA (scaleable, galvanically isolated)	
	Load	500 Ohm
	Registration range	scaleable within the measuring range
Storage media	Accessory: SD card up to 2 GB - Industry standard	
Serial interface	option: RS 485 Modbus RTU	
	Baud rate	192000 bps
	Data format	8 bit

Power supply

Line voltage	85.. 250 V AC, +6/-10%, 40.. 60Hz; option: 24 V DC
Power consumption	10 VA

Ambient conditions

Temperature	Storage	-20.. +65°C, exception sensor 0.. +30°C
	Operation	0.. +50°C
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 mode	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. 250V, 6 A, 550 VA
Start delay	0.. 200 sec until controller active
Controller stop	Digital input



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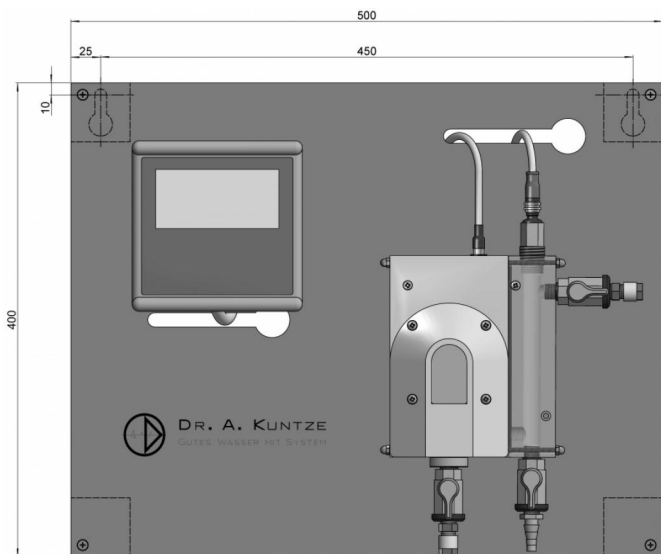
Proportion to volume

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

Design configuration

Material	Board: PVC, assembly: PMMA, cocks: PP, PVC, instrument: ABS, sensors: glass
Dimensions	400 x 500 mm
Connection	inlet/outlet: 1/4" (with stop cock) tube connection DN 6/8

Mechanical drawing



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Order information

Grundtyp <i>type</i>		
	70 140 200	Krypton® Tasten (1 digitaler Eingang und Alarmrelais) Krypton® Keys (1 digital input and alarm relay)
	70 142 200	Krypton® Touch (1 digitaler Eingang und Alarmrelais) Krypton® Touch (1 digital input and alarm relay)
Spannungsversorgung / <i>power supply</i>		
	0	85 ..230 VAC
	6	24 VDC
Schnittstellen / <i>interfaces</i>		
	0	keine none
	2	Modbus RTU
Regelung / <i>controller</i>		
	0	keine none
	1	PID mit 2 Regelrelais PID with 2 control relays
	2	Mengenproportionale Dosierung mit 2 Regelrelais volume based dosing with 2 relays
Eingänge <i>inputs</i>		
	0	Erster digitaler Eingang (Basis) / first digital input (basic)
	1	Zweiter digitaler Eingang / second digital input
Ausgänge / <i>outputs</i>		
	0	keine none
	1	Erster mA Ausgang first mA output
	2	Zweiter mA Ausgang second mA output
Sonderfunktionen <i>special function</i>		
	0	keine none
	2	Datenaufzeichnung datalogging
Reinigung <i>cleaning</i>		
	0	keine none
	2	DES Reinigung DES cleaning
Gehäuse <i>housing</i>		
	S	Schalttafeleinbau (Front IP 54) panel mounted (front IP 54)
	W	Wandaufbau wall mounted (IP 65)
Sprache <i>language</i>		
	DE	Deutsch german
	EN	Englisch english

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.



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Storage version

Article number	type/configuration	Description
70140000K	Krypton® DES Tasten	Configure your Neon suitable to your application
70142000K	Krypton® DES Touch	Configure your Neon suitable to your application



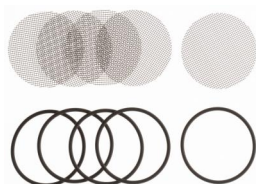
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Accessories accessories



Argon® spare parts package 1 1x membrane 1x spring pressure side 1x spring chamber side 1x valve pin



Argon® spare parts package 2 5x stainless steel 1.4401 500 µm filter 5x o-ring FKM 26x1,5



Argon® spare parts package 3 1x o-ring FKM 12x2 1x o-ring FKM 73x2 1x o-ring FKM 26x2 1x o-ring FKM 26x1,5 1x o-ring FKM 5x1,8 1x o-ring FKM 19x2,5 1x o-ring FKM 7,6x2,4 1x o-ring FKM 108x3 3x o-ring FKM 11x3 3x o-ring FKM 6x3



Test Plug DES

With the test plug you can check the function and connection of our disinfection measurement - not for Total Chlorine measurement (not TCl).

hand-held units



Radon Des- pH

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 H₂O₂-addon and for the pH measurement the reagent phenolred.

