pH / ORP

Product catalog 2018

NOTE

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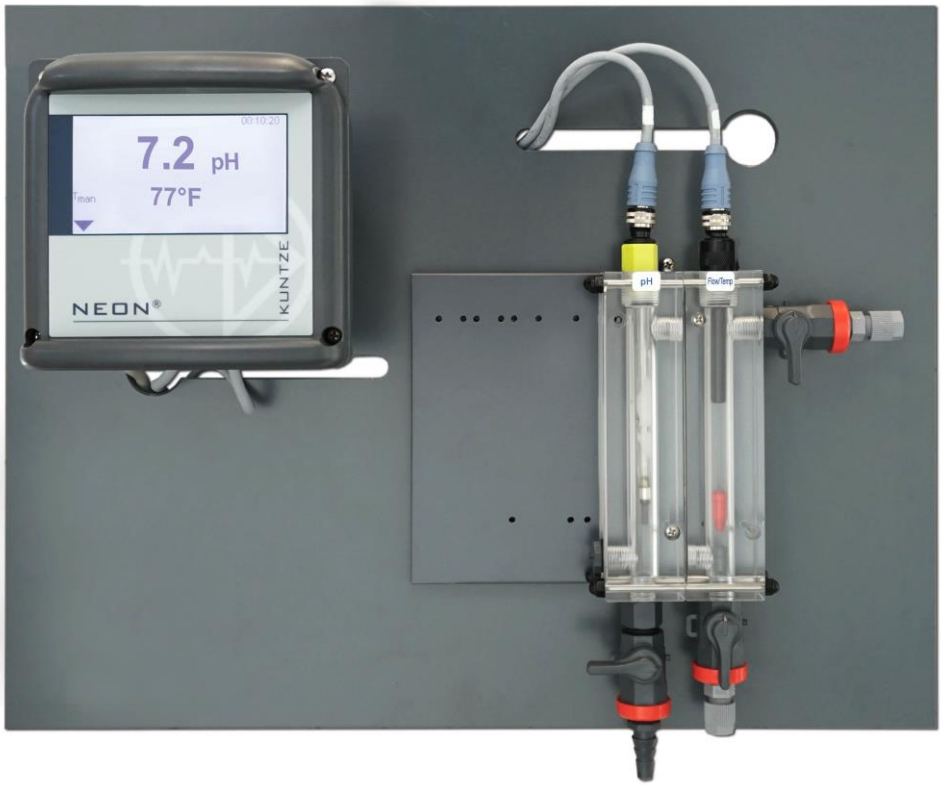
1 Contents

2 Systems

2.1 Krypton® pR Flow

2.1.1 Description



Single channel water monitoring system

Controlled and reliable measurements are driven by Kuntze Krypton® systems. The measuring system includes all customer needs for pH measurement: instrument, sensors, assembly and cables

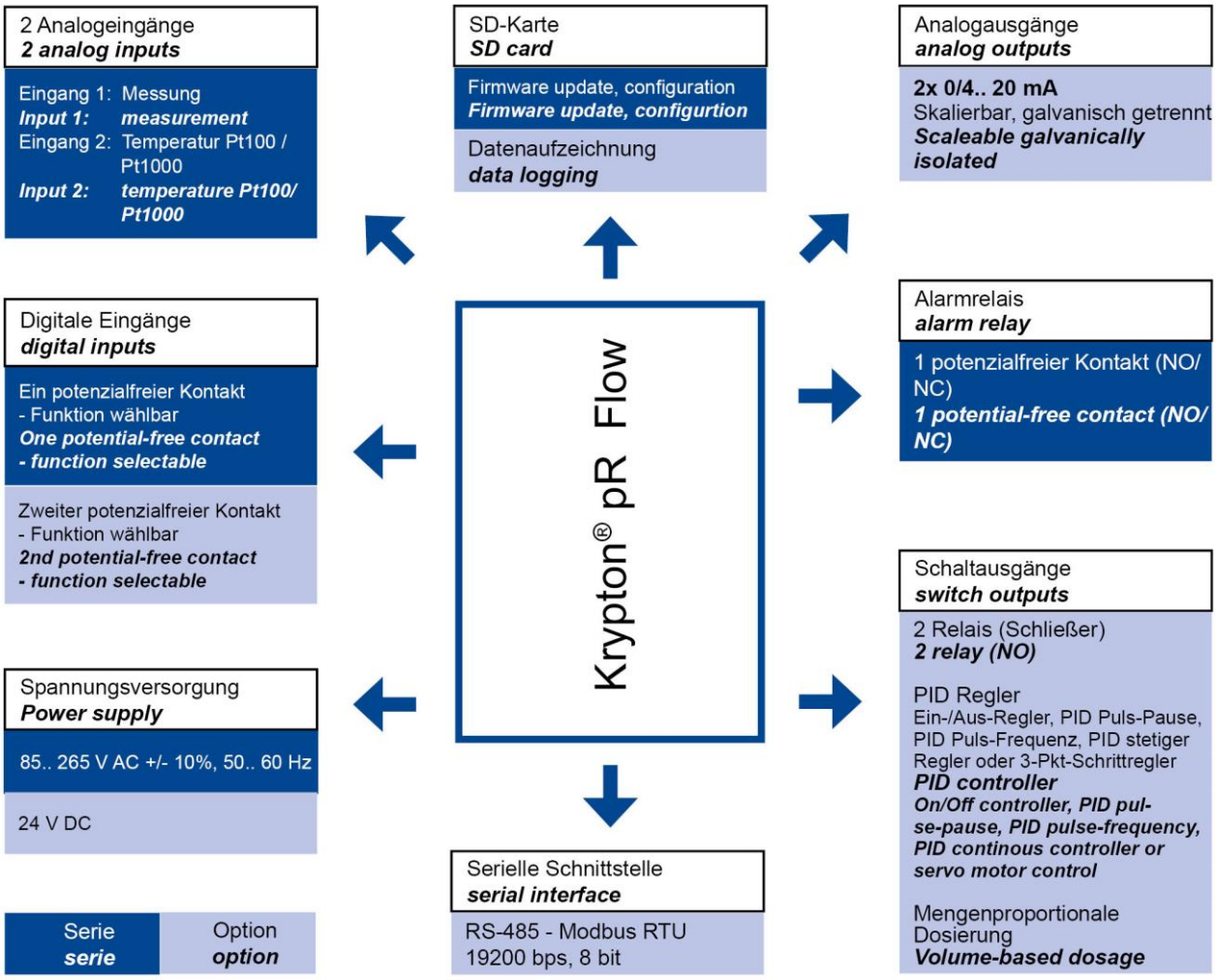
Krypton® pR Flow is used to measure pH, ORP and temperature. Measuring parameter and range can be chosen via the instruments menu. Kuntze Krypton® pR Flow is delivered fully assembled and ready to use

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.

2.1.2 Applications

Drinking water **Process water** **Waste water treatment**

2.1.3 Interface diagram



2.1.4 Technical data

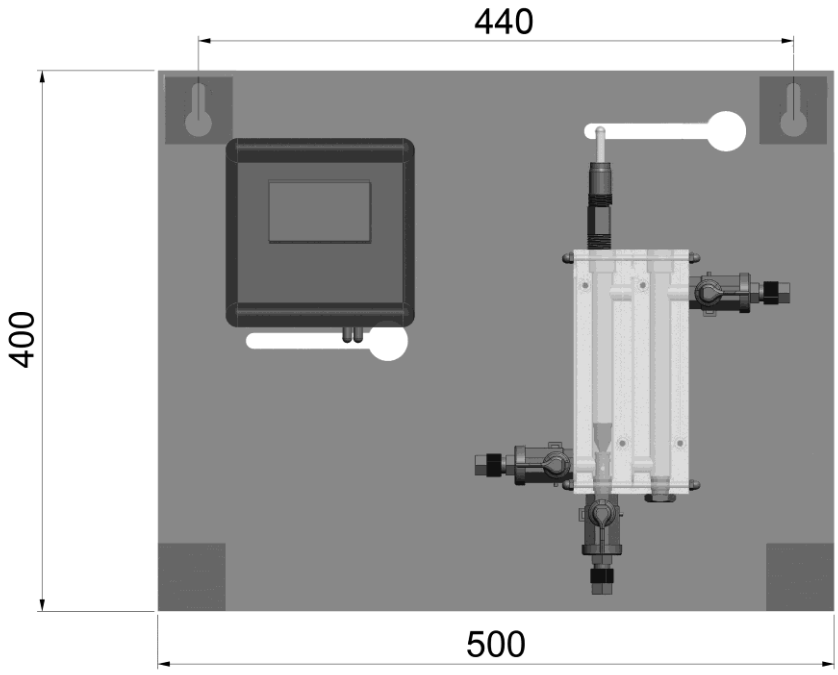
Measuring range

pH	pH -2,00.. +16,00
ORP	-1500.. + 1500 mV

Input characteristic	
Temperature measuring range	-30.. +140°C (22.. 284 °F)
Temperature compensation	Non linear (pH)
Digital input	1st as controller stop by external contact. Option: 2nd as controller stop or flow measurement for volume based dosing.
Measurement conditions	Pressure: max. 6 bar (at 20 °C / 68 °F) (or less depending on the sensor)
Output characteristics	
Alarm relay	1 potential-free N/O contact, max. 250 V, 6 A, 550 VA (invertable)
Output signal	Optionally: 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 even, 1 Stop Bit
Power supply	
Line voltage	85.. 265 V AC, +6/-10%, 40.. 60Hz; 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)
Humidity	max. 90% rH at 40°C (104 °F) (non-condensing)
Protection class	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. 250V, 6A, 550 VA
Start delay	0.. 200 sec until controller active
Controller stop	Digital input
Proportion to volum	
Control mode	Option: volumed based by flow measurement
Flow measurement	Impuls measurement NPN (by digital input 2) Engine speed 0.030.. 9.999 l/Imp
Relay 1	Potential-free N/O contact, max. 250V, 6 A, 550 VA (pulse-pause, pulse-frequency)
Relay 2	Activating circulation pump
Languages	

	German, English, Danish, Italian, French, Spanish, Dutch
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	Board: PVC; assembly: PVC; Instrument (housing): ABS; sensors: Glass, PVC / gold / platinum
Dimensions	500 x 400 mm
Connection	cable inlet: 1 x M25, 4 x M12, 2 x M16 plug-in terminal: rigid / flexible 0.14.. 1.5 m² relays / power supply: rigid / flexible 0.2 - 1 / 0.2 – 1.5 mm² distribution block 0.5 – 1.5 / 0.5 – 1.5 mm² water hose connection: DN 6/8

2.1.5 Mechanical drawing



2.1.6 Order information

Type	Art. number	Description
	70142011K	Krypton® pR Flow (assembly: Argon® Flow)
Power supply		
	type	85.. 265 V AC
	19514101K	24 V DC
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	Datenlogging

NOTE

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

3 Instruments

3.1 Neon® pR

3.1.1 Description

Single channel water monitoring instrument

Neon® is a leading edge measuring and control instrument. Its range of functions can be tailored according to customers‘ applications.

The entry level version contains inputs for measurements and temperature, one digital input and an alarm relay. Various add-ons are available to expand the functionality as well as wall mounted or panel mounted housing.

Neon‘s® 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.

3.1.2 Applications

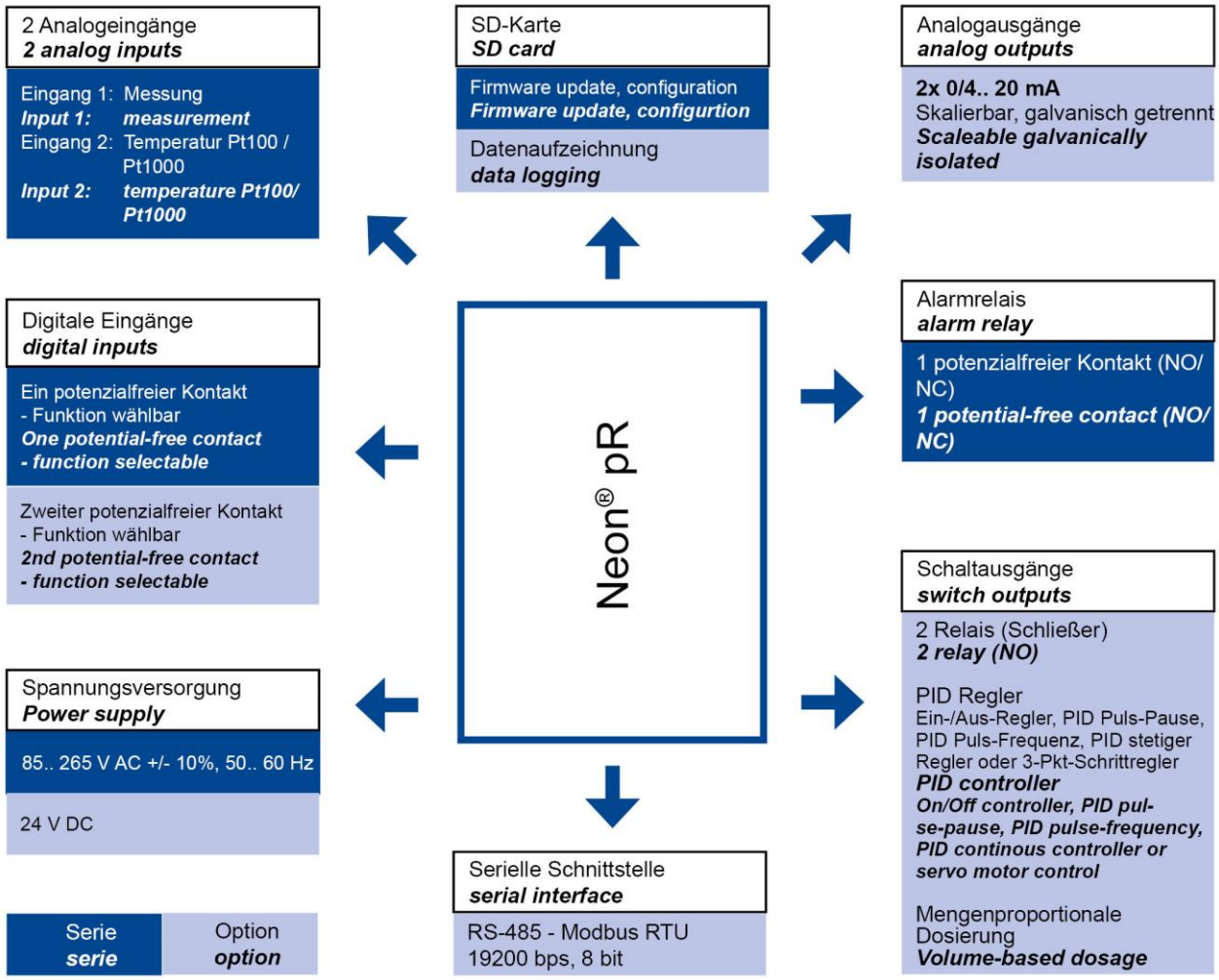
Drinking water

Process water

Waste water treatment

Disinfection

3.1.3 Interface diagram



3.1.4 Technical data

Measuring range

pH	pH -2,00.. +16,00
ORP	-1500.. + 1500 mV

Input characteristic

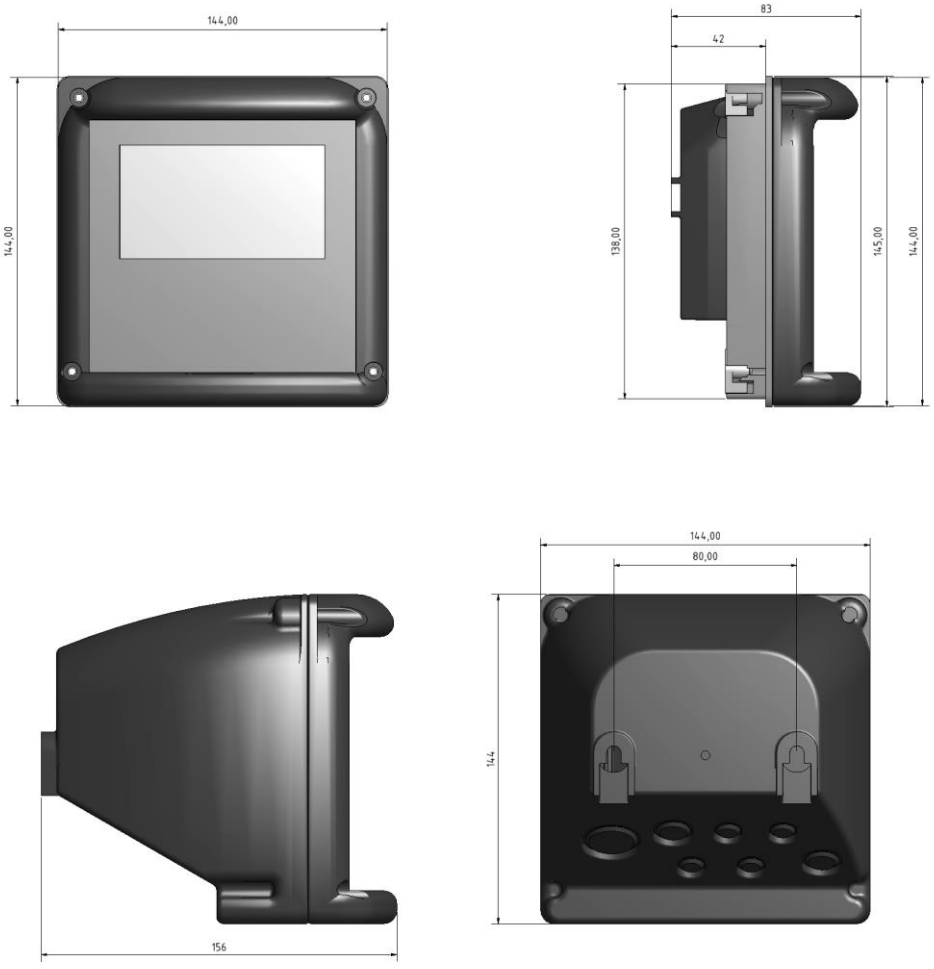
Temperature measuring range	-30.. +140°C (-22.. 284 °F)
Temperature compensation	Non linear (pH)
Digital input	1st as controller stop by external contact Option: 2nd as controller stop or flow measurement for volume based dosing.
Measurement conditions	pressure: depending on assembly

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 (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 even, 1 Stop Bit
Power supply	
Line voltage	85.. 265 V AC, +6/-10%, 40.. 60Hz; 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 bei 40°C (104 °F) (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) 3-point controller
Relay	2 relays, each with a potential-free N/O contact, max. 250V, 6A, 550 VA
Start delay	0.. 200 sec until controller active
Controller stop	Digital input
Proportion to volum	
Control mode	Option: volumed based by flow measurement
Flow measurement	Impuls measurement NPN (by digital input 2) Engine speed 0.030.. 9.999 l/Imp
Relay 1	Potential-free N/O contact, max. 250V, 6 A, 550 VA (pulse-pause, pulse-frequency)
Relay 2	Activating circulation pump
Languages	
	German, English, Danish, Italian, French, Spanish, Dutch
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	Instrument (housing): ABS
Dimensions	Panel mounted housing : 138 x 183 x 83 mm (max. wall thickness: 5 mm)

	wall mounted housing: 144 x 144 x 156 mm
Weight	0,55 kg (Panel mounted housing) 0,75 kg (wall mounted housing)
Anschluss	cable inlet: 1 x M25, 4 x M12, 2 x M16 plug-in terminal: rigid / flexible: 0.2.. 2.5 m² / 0.2.. 2.5 m² relays / power supply: rigid / flexible 0.2 - 1 / 0.2 – 1.5 mm²

3.1.5 Mechanical drawing



3.1.6 Order information

Type	Art. number.	Description
	142000K	Neon® pR (1 digital input and alarm relay)
Power supply		
	type	85.. 265 V AC
	19514101K	24 V DC
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	Datenlogging
Housing		
	19514000K	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 Sensors

4.1 Zirkon® pH Universal

4.1.1 Description

Art. S24131110K Art. S24132650K

Zirkon® pH Universal is a sensor for measuring pH.
Sensoren – Made in Germany.

Benefits

- Low maintenance due to gel filling
- High precision due to use of high alkaline high temperature glass

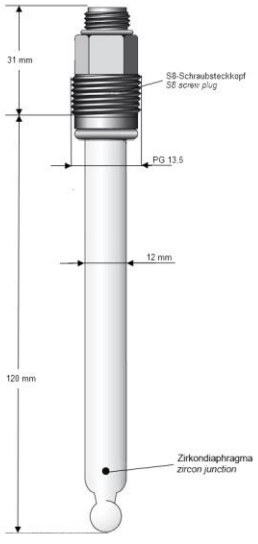
4.1.2 Applications

Drinking water **Disinfection** **Process Water**

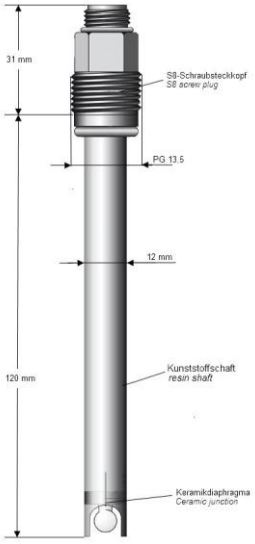
4.1.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Max. pressure	PG plug: < 2 bar at 20°C (68 °F) Resin shaft: < 1 bar at 20°C (68 °F) PG 13,5 loose: < 1 bar at 20°C (68 °F)
Min. conductivity	>150 µS/cm
Temperature	-5°.. +70°C (23°.. 158° F)
Mechanical construction	
Junction	Zircon
Shaft material	Glass, resin
Shaft length	120 mm, 160 mm, 225 mm
Electrode material	AH-glass ball
Reference system	Ag / AgCl / Tepox-Gel
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

4.1.4 Mechanical drawing



Art. S24131110K
Order code 201012100



Art. S24132650K
Order code 201012103

4.1.5 Order information

Group		
	201	Zirkon® pH Universal
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	1	Zircon
	9	Special construction
Elektrolyte		
	2	Tepox gel
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	none
	3	Resin shaft
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
201012100	pH sensor: 1 mm zircon junction, Tepox gel, S8 plug (swivel PG 13,5), 120 mm	S24131110K
201012320	pH sensor: 1 mm zircon junction, Tepox gel, S7 plug , 160 mm	S24131100K
201012103	pH sensor: zircon junction, Tepox gel, S8 plug (swivel PG 13,5), 120 mm resin shaft	S24132650K
201112600	pH sensor: Pt 100, zircon junction, Tepox gel, Variopin plug (swivel PG 13,5), 120 mm	S24132111K

4.2 Zirkon® pH Process

4.2.1 Description

Art. S24132810K Art. S24132121K Art. S24132140K Art. S24132150K

Zirkon® pH Process is a sensor for measuring pH in soiled media.
Sensors – Made in Germany.

Benefits

- Low maintenance by gel or solid filling
- Dirt resistant by premium-quality junctions

4.2.2 Applications

Waste water treatment

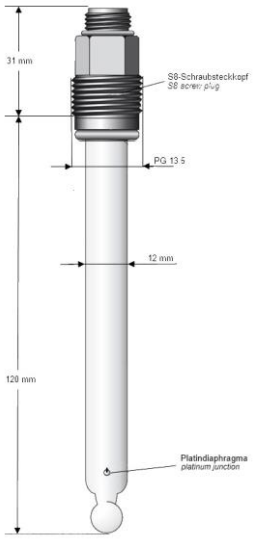
Process water

Cooling water

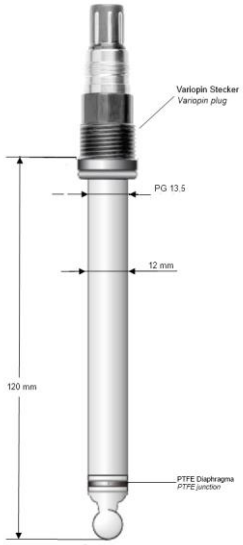
4.2.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Max. pressure	PG plug: < 10 bar at 20°C (< 145 psi at 68 °F) PG 13.5 loose: < 1 bar at 20 °C (< 14 psi at 68 °F) PTFE: < 10 bar at 20°C (< 145 psi at 68 °F) Hole: < 1 bar pressureless (< 14 psi) Platinum: < 2 bar at 20°C (< 29 psi at 68 °F)
Min. conductivity	>150 µS/cm
Temperature	-5°.. +70°C (23°.. 158° F)
Mechanical construction	
Junction	Platinum, PTFE, Hole
Shaft material	Glass
Shaft length	120 mm, 160 mm, 225 mm
Electrode material	AH-glass ball
Reference system	Ag / AgCl / Tepox gel, Ag / AgCl / solide electrolyte, Ag / AgCl / Tepox gel-3M KCl liquid
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

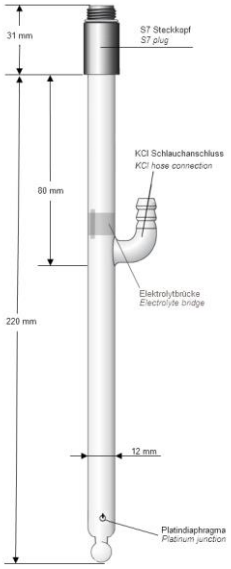
4.2.4 Mechanical drawing



Art. S24132150K
Order code 203032100



Art. S24132121K
Order code 203172600



Art. S24132501K
Order code 203038390

4.2.5 Order information

Group		
	203	Zirkon® pH Process
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	3	Platinum
	7	PTFE
	8	Hole
	9	Special construction
Elektrolyte		
	2	Tepox gel
	5	Solide elctrolyte
	6	Tepox gel – saturated KCl with salt reservoir
	8	Tepox gel – 3M KCl liquid

	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	2	S8 plug (PG 13,5) for aggressive media
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	3	240 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
203032100	pH sensor: platinum junction, Tepox gel, S8 plug (swivel PG 13.5), 120 mm	S24132150K
203032320	pH sensor: platinum junction, Tepox gel, S7 plug, 160 mm	S24132140K
203072100	pH sensor: PTFE junction, Tepox gel, S8 plug (swivel PG 13.5), 120 mm	S24132120K
203172600	pH sensor: Pt100, PTFE junction, Tepox gel, Variopin (swivel PG 13.5), 120 mm	S24132121K
203085100	pH sensor: hole junction, solid electrolyte, S8 plug (swivel plug), 120 mm	S24132810K

4.3 Zirkon® pH Process Refill

4.3.1 Description

Art. S24132040K

Art. S24132050K

Zirkon® pH Process Refill is a refillable sensor for measuring pH in process water. Sensors – Made in Germany.

Benefits

- Long life expectancy by refillable reference electrode
- High precision by use of high alkaline high temperature glass

4.3.2 Applications

Drinking water

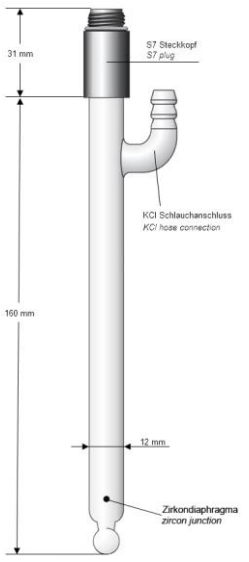
Process water

Waste water treatment

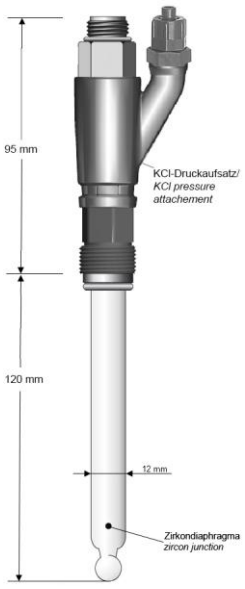
4.3.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Max. pressure	KCl pressure attachment: < 6 bar at 20 °C (< 87 psi at 68 °F)PG- PG 13.5 loose: < 1 bar at 20 °C (< 14 psi at 68 °F)
Min. conductivity	>150 µS/cm
Temperature	-5°.. +100°C (23°.. 212° F)
Mechanical construction	
Junction	Zircon, Platinum, PTFE
Shaft material	Glass
Shaft length	120 mm, 160 mm, 220 mm (double chamber), 225 mm
Electrode material	AH-glass ball
Reference system	Ag / AgCl / 3M KCl liquid, Ag / AgCl / 3M KCl liquid - 3M KCl liquid
Internal buffer	pH 7, pH 2
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

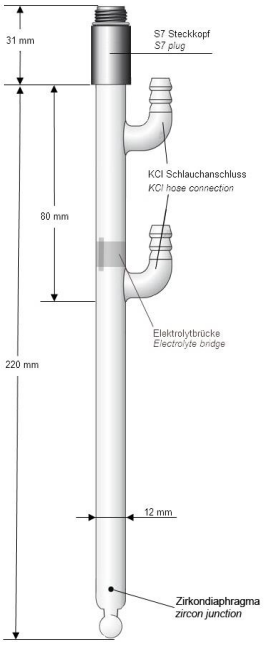
4.3.4 Mechanical drawing



Art. S24132040K
Order Code 0204011320



Art. S24132041K
Order code 204011104



Art. S24132510K
Order code 204017390

4.3.5 Order information

Group		
	204	Zirkon® pH Process Refill
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	1	Zircon
	3	Platinum
	7	PTFE
	9	Special construction
Elektrolyte		
	1	3M KCl liquid
	7	3M KCl liquid - 3M KCl liquid
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	Kein
	1	IP 2
	2	K_2SO_4 as bridge electrolyte
	4	KCl pressure attachement
	K	Cable length (Example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/Configuration	Description	Article number
204011320	pH-Sensor: pH sensor: zircon junction, 3 M KCl, S7 plug, 160 mm	S24132040K
204031320	pH sensor: platinum junction, 3 M KCl, S7 plug, 160 mm	S24132050K
204017390	pH double chamber sensor: zircon junction, electrode and reference system 3M KCl liquid , 220mm, ceramic junction, S7 plug, 220 mm	S24132510K

4.4 Zirkon® pH Fluoride

4.4.1 Description

Art. S24132400K

Sensors of the series Zirkon® pH Fluoride are developed for the application in fluoride containing media. The special glass is resistant up to 500 mg/l fluoride.
Sensors – Made in Germany.

Benefits

- Fluoride resistant
- Low maintenance by gel filling
- Long life expectancy by refillable reference electrode

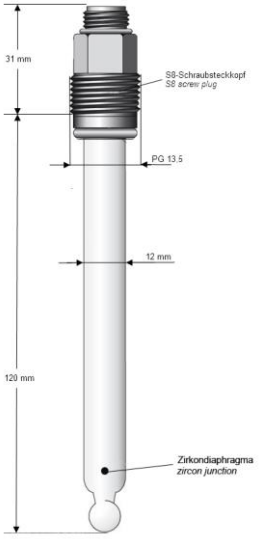
4.4.2 Applications

Fluoride Containing Media

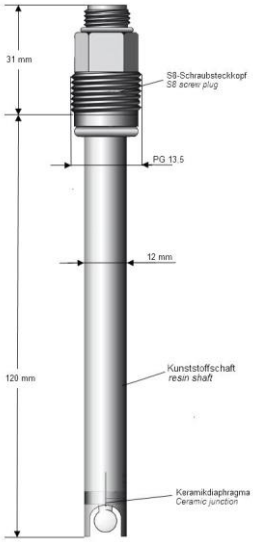
4.4.3 Technical data

Measuring parameter	
pH value	pH 0.. 11
Process conditions	
Max. pressure	PG plug: < 10 bar at 20°C (< 145 psi at 68 °F) PG 13.5 loose: < 1 bar at 20 °C (< 14 psi at 68 °F) KCl pressure attachement: < 6 bar at 20 °C (< 87 psi at 68 °F) PTFE: < 10 bar at 20°C (< 145 psi at 68 °F) Hole: < 1 bar pressureless (< 14 psi) Platinum: < 2 bar at 20°C (< 29 psi at 68 °F) Zircon: < 2 bar at 20°C (< 29 psi at 68 °F)
Min. conductivity	Tepox gel: >150 µS/cm 3M KCl: >50 µS/cm
Temperature	0°.. +60°C (32°.. 140 °F)
Mechanical construction	
Junction	Zircon, Platinum, PTFE, Hole
Shaft material	Glass
Shaft length	120 mm, 160 mm, 225 mm
Electrode material	S-glass-ball
Reference system	Ag / AgCl / 3M KCl, Ag / AgCl / Tepox gel, Ag / AgCl / solide electrolyte
Internal buffer	pH 7
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

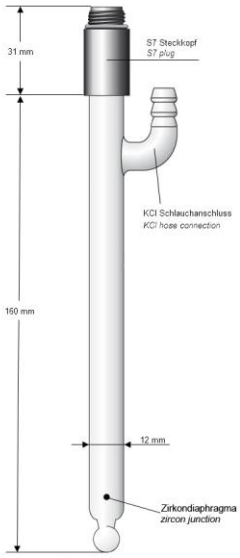
4.4.4 Mechanical drawing



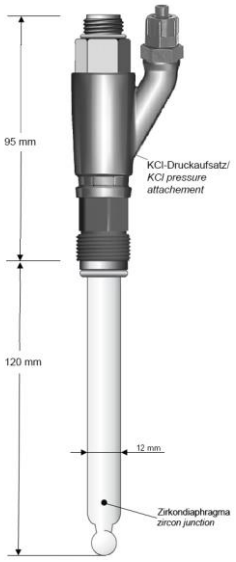
Art. S24132410K
Order code 20512100



Order code 20512103



Art. S24132300K
Order code 205011320



Order code 205011104

4.4.5 Order information

Group		
	205	Zirkon® pH Fluoride
Temperature probe		
	0	none
	1	Pt 100

	2	Pt 1000
	9	Special construction
Junction		
	1	Zircon
	3	Platinum
	7	PTFE
	8	Hole
	9	Special construction
Elektrolyte		
	1	3M KCl liquid
	2	Tepox gel
	3	Saturated KCl with salt reservoir
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	3	240 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	none
	1	IP 2
	4	KCl pressure attachement
	K	Cable length (Example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/Configuration	Description	Article number
205012100	pH sensor: ceramic junction, Tepox gel, S8 plug (swivel PG 13.5), 120 mm	S24132410K
205012320	pH sensor: ceramic junction, Tepox gel, S7 plug, 160 mm	S24132400K
205072100	pH sensor: ceramic junction, Tepox gel, S7 plug, 160 mm	S24132420K
205011320	pH sensor: ceramic junction, 3M KCl, S7 plug, 160 mm	S24132300K

4.5 Zirkon® pH Coating

4.5.1 Description

Order Code 206051320

Sensors of the Zirkon® pH Coating series are developed for the use in lacquer and coatings.

Sensors – Made in Germany.

Benefits

- Junction protectable
- Fluoride resistent
- According to DIN 55659 for pH measurement in electrophoretic dip painting

4.5.2 Applications

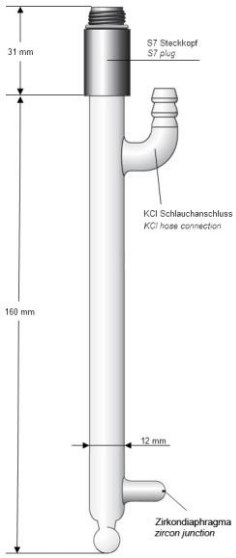
Laboratory

Fluoride Containing Media

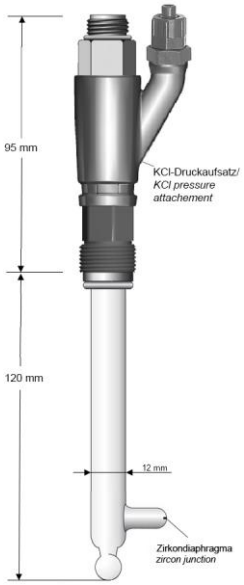
4.5.3 Technical data

Measuring parameter	
pH value	pH 1.. 11
Process conditions	
Max. pressure	PG 13.5 loose: < 1 bar at 20 °C (< 14 psi at 68 °F) KCl pressure attachement: < 6 bar bei 20 °C (< 87 psi at 68 °F) Hole: < 1 bar at 20°C (< 14 psi at 68° F)
Min. conductivity	Solide electrolyte: >150 µS/cm 3M KCl liquid: >50 µS/cm
Temperature	0°.. +60°C (32°.. 140° F)
Mechanical construction	
Junction	Ceramic 15 mm projecting, hole
Shaft material	Glass
Shaft length	120 mm, 160 mm, 240 mm
Electrode material	S-glass-ball
Reference system	Ag / AgCl / 3M KCl, Ag / AgCl / solide electrolyte
Internal buffer	pH 7
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

4.5.4 Mechanical drawing



Art. S24132320K
Order code 206051320



Order code 206051104

4.5.5 Order information

Group		
	206	Zirkon® pH Coating
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	5	Ceramic 15 mm projecting
	8	Hole
	9	Special construction
Elektrolyte		
	1	3M KCl liquid
	5	Solide electrolyte
	9	Special construction
Connection		
	0	none

	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	None
	4	KCl pressure attachement
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
206051320	pH sensor: ceramic junction (15 mm projecting), 3M KCl S7 plug,160 mm	S24132320K

4.6 Zirkon® pH Pure

4.6.1 Description

Art. S24132070K

Zirkon® pH Pure are highly sophisticated sensors with a high value for money ratio. They are used in ion poor media.

Sensors – Made in Germany.

Benefits

- Long life time by refillable reference electrode
- Measurement in media with very low conductivities by a higher flow rate

4.6.2 Applications

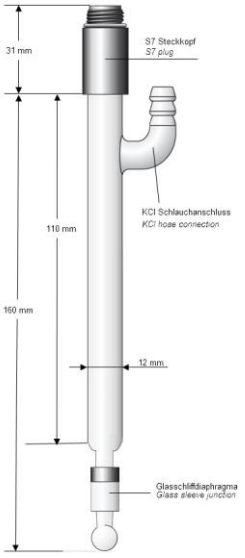
Cooling water

Ultra pure water

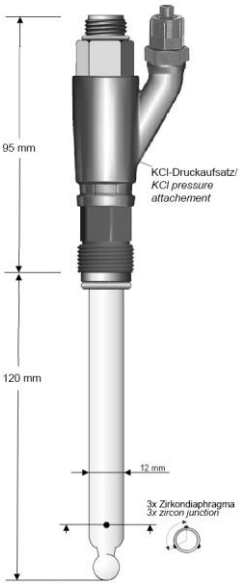
4.6.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Max. pressure	PG 13.5 loose: < 1 bar pressureless (< 14 psi) KCl pressure attachement: < 6 bar at 20 °C (< 87 psi at 68 °F) Glass sleeve: < 1 bar pressureless (< 14 psi)
Min. conductivity	3x Zircon: >50 µS/cm Glass sleeve: >20 µS/cm
Temperature	-5°.. +100°C (23°.. 212° F)
Mechanical construction	
Junction	3x Zircon, Glass sleeve
Shaft material	Glass
Shaft length	120 mm, 160 mm, 225 mm
Electrode material	AH-glass
Reference system	Ag / AgCl / 3M KCl liquid
Internal buffer	pH 7
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature connection	none, Pt 100 or Pt 1000

4.6.4 Mechanical drawing



Order code 202061320



Order code 202041104

4.6.5 Order information

Group		
	202	Zirkon® pH Pure
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	4	Zircon, 3 x 1 mm
	6	Glass sleeve (only KCl liquid)
	9	Special construction
Elektrolyte		
	1	3M KCl liquid
	9	Special construction
Connection		
	0	none
	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	6	VP Variopin plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	none
	5	KCl pressure attachement
	K	Cable length (Example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
202041320	pH sensor: 3 x zircon junction, 3M KCl, S7 plug, 160 mm	S24132070K
202061320	pH sensor: glass sleeve, 3M KCl, S7 plug, 160 mm	S24132010K

4.7 Zirkon® pH Pool

4.7.1 Description

Art. S24132700K

Zirkon® pH Pool are electrodes for pH measurement in swimming pool applications. The sensor is gel filled with a salt reservoir. It is not refillable requires little maintenance. The junction and the saltreservoir increase the expected life time.

Sensors – Made in Germany.

Benefits

- Low maintenance
- Higher life expectancy by KCl reservoir

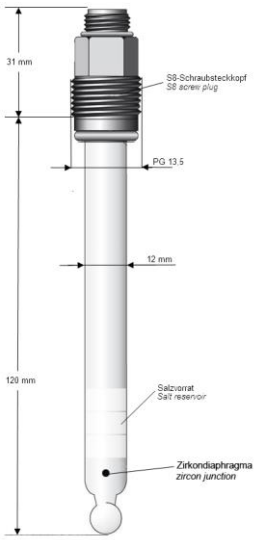
4.7.2 Applications

Pool & Spa

4.7.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Temperature	-5°.. +70°C (23°.. 158 °F)
Mechanical construction	
Junction	Zircon
Shaft material	Glass
Shaft length	120 mm
Electrode material	LT-Glass-ball
Reference system	Ag / AgCl / saturated KCl
Internal buffer	pH 7
Process connection	S8 plug (swivel PG 13.5), fixed cable
Electrical connection	2 pole connection
Temperature sensor	none

4.7.4 Mechanical drawing



Art. S24132700K
Order code 207013100

4.7.5 Order information

Group		
	207	Zirkon® pH Pool
Temperature probe		
	0	none
Junction		
	1	Zircon
	9	Special construction
Elektrolyte		
	3	Saturated KCl with salt reservoir
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	7	Fixed cable
		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm

	9	Special construction
Miscellaneous		
	0	none
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

NOTE

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

Type/configuration	Description	Article number
207013100	pH sensor: ceramic junction, saturated KCl, S8 plug (swivel PG 13,5)	S24132700K

4.8 Zirkon® pH Process HT

4.8.1 Description

Order code 208025100

Order code 208125600

Sensors of the series Zirkon® pH Process HT are specialists for professional fieliding in high temperature application. They are use in processes with higher permanent temperature and sterilisable application. Optional a temperature probe can be added.

Sensors – Made in Germany.

Benefits

- Temperature stable up to max. 135°C (275° F)
- Low maintenance

4.8.2 Applications

High temperature application

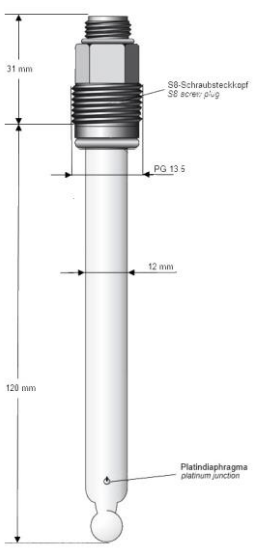
Sterilisable application

Process water

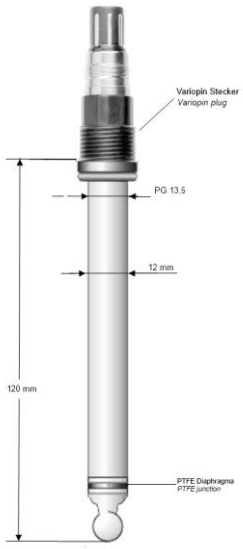
4.8.3 Technical data

Measuring parameter	
pH value	pH 0.. 14
Process conditions	
Max. pressure	PTFE: < 10 bar at 20°C (< 145 psi at 68 °F) Zircon: < 2 bar at 20°C (< 29 psi at 68 °F)
Temperature	-5°.. +135°C (23°.. 275° F)
Mechanical construction	
Junction	PTFE, Zircon
Shaft material	Glass
Shaft length	120 mm, 225 mm
Electrode material	AH-glass
Reference system	Ag / AgCl / solide electrolyte
Process connection	S8 plug (swivel PG 13.5), S7 plug, Variopin (swivel PG 13.5), fixed cable
Electrical connection	2 or 6 pole connection
Temperature sensor	none, Pt 100 oder Pt 1000

4.8.4 Mechanical drawing



Order code 208025100



Order code 208175600

4.8.5 Order information

Group		
	208	Zirkon® pH Process HT
Temperature probe		
	0	none
	1	Pt 100
	2	Pt 1000
	9	Special construction
Junction		
	0	non
	1	Zircon
	7	PTFE
	9	Special construction
Elektrolyte		
	5	Solide electrolyte
Connection		
	1	S8 plug (swivel PG 13,5)
	6	VP Variopin plug
	7	Fixed cable

		Low-noise coax cable, price per 1 m
		Low-noise triax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	None
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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

Type/configuration	Description	Article number
208075100	pH-Sensor: PTFE-Diaphragma, Festelektrolyt, S8 Stecker (PG 13,5), 120 mm	S24132122K

4.9 Zirkon® Redox Universal

4.9.1 Description

Art. S24135120K
Order code 211512100

Art. S24135110K
Order code 211512320

The Zirkon® Redox allow ORP measurements in almost every kind of medium. They require little maintenance by the gel filling and the electrode assembly or the big electrode surface.

Sensors – Made in Germany.

Vorteile

- Low maintenance by gel filling

4.9.2 Applications

Disinfection

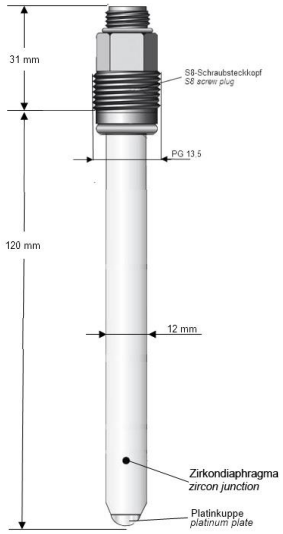
Drinking water

Process water

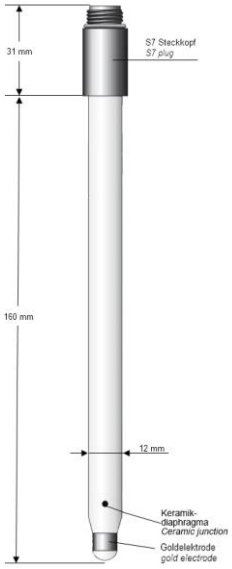
4.9.3 Technical data

Measuring parameter	
ORP	-1500..+1500 mV
Process conditions	
Max. conductivity	PG plug: < 2 bar at 20°C (68 °F) PG 13.5 loose: < 1 bar at 20°C (68 °F) pressure less
Temperature	-5°.. +70°C (23°.. 158° F)
Mechanical construction	
Junction	Zircon
Shaft material	Glass
Shaft length	120 mm, 160 mm
Electrode material	gold plate, platinum ring, platinum plate, gold ring
Reference system	Ag / AgCl / Tepox gel
Process connection	S8 plug (swivel PG 13.5), S7 plug, fixed cable
Electrical connection	2 pole connection

4.9.4 Mechanical drawing



Art. S24135210K
Order code 211312100



Art. S24135110K
Order code 211512320

4.9.5 Order information

Group		
	211	Zirkon® Redox Universal
Electrode material		
	1	Gold plate
	2	Platinum ring
	3	Platin plate
	5	Gold ring
	9	Special construction
Junction		
	1	Zircon
	9	Special construction
Elektrolyte		
	2	Tepox gel
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug

	7	Fixed cable
		Low-noise coax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	none
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
211512320	Redox sensor: gold ring Tepox gel, zircon junction, S7 plug, 160 mm	S24135110K
211512100	Redox sensor: gold ring Tepox gel, zircon junction, S8 plug (swivel PG 13.5), 120 mm	S24135120K
211312320	Redox sensor: platinum cap, Tepox gel, zircon junction, S7 plug, 160 mm	S24135210K
211312100	Redox sensor: platinum cap, Tepox gel, zircon junction, S8 plug (swivel PG 13.5),120 mm	S24135220K

4.10 Zirkon® Redox Pool

4.10.1 Description

Order code 217313100 Order code 217300100

Zirkon® Redox Pool are sensors for ORP measurement in swimming pool applications.

Sensors – Made in Germany.

Benefits

- Low maintenance
- Higher life expectancy by KCl reservoir

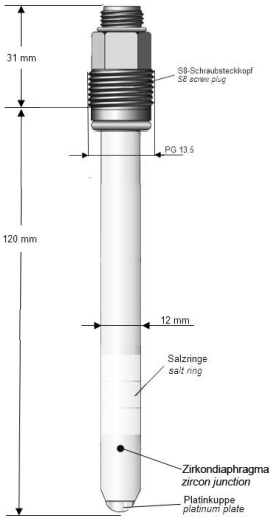
4.10.2 Applications

Pool & Spa

4.10.3 Technical data

Measuring parameter	
ORP	-1500..+1500 mV
Process conditions	
Max. conductivity	PG plug: < 2 bar at 20°C (68 °F) PG 13.5 loose: < 1 bar at 20°C (68 °F) pressure less
Temperature	-5°.. +70°C (23°.. 158° F)
Mechanical construction	
Junction	None, zircon
Shaft material	Glass
Shaft length	120 mm
Electrode material	platinum plate
Reference system	None, Ag / AgCl / KCl saturated
Process connection	S8 plug (swivel PG 13.5), fixed cable
Electrical connection	2 pole connection

4.10.4 Mechanical drawing



Order code 217313100

4.10.5 Order information

Group		
	217	Zirkon® Redox Pool
Electrode material		
	2	Platinum ring
	3	Platinum plate
	9	Special construction
Junction		
	0	None
	1	Zircon
	9	Special construction
Elektrolyte		
	0	None
	3	Saturated KCl
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug
	7	Fixed cable
		Low-noise coax cable, price per 1 m
	9	Special construction
Length		
	0	120 mm
	2	160 mm
	9	Special construction
Miscellaneous		
	0	None
	K	Cable length (example: 1 m = K01, 10 m = K10)
	9	Special construction

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.

Type/configuration	Description	Article number
217313100	Redox sensor: platinum plate, zircon junction, KCl	S24135285K

Type/configuration	Description	Article number
	saturated, S8 plug (swivel PG 13,5), 120 mm	
217300100	Redox sensor: platinum plate, S8 plug (swivel PG 13.5), 120 mm	S24134010K

4.11 Zirkon® REF Process Refill

4.11.1 Description

Art. S24133000K
Orderode 224B211320

Zirkon® REF Refill are refillable reference electrodes. They are used as a reference point for other electrodes with relative potentials e.g. in pH or ORP measurements.
Sensors – Made in Germany.

Benefits

- Long life time by refill
- Sensor protection via electrolyte bridge

4.11.2 Applications

Process water

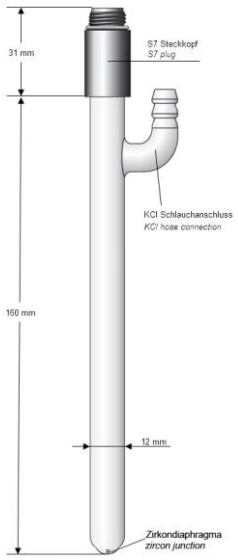
Waste water treatment

Ultra pure water

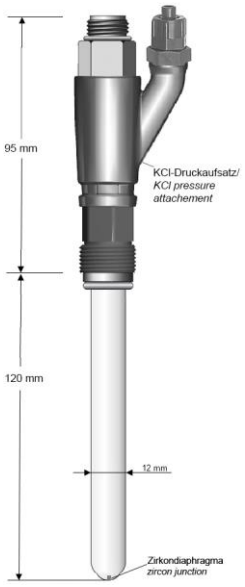
4.11.3 Technical data

Measuring parameter	
Max. pressure	PG 13.5 loose: < 1 bar at 20 °C (< 14 psi at 68 °F) pressure attachement: < 6 bar at 20 °C (< 87 psi at 68 °F)
Min. conductivity	Platinum: < 50 µS/cm Zircon: < 50 µS/cm
Temperature	-5°.. +100°C (23°.. 121 ° F)
Mechanical construction	
Junction	Zircon, platinum
Shaft material	Glass
Shaft length	160 mm, 180 mm
Electrode material	AH-glass ball
Reference system	None, 3M KCl liquid
Process connection	None, S8 plug (swivel PG 13.5), S7 plug
Electrical connection	2 pole connection

4.11.4 Mechanical drawing



Art. S24124133000K
Order code 224B11320



Order code 224B11104

4.11.5 Order information

Group		
	224	Zirkon® REF Process Refill
Type		
	B	Reference
	E	Elektrolyte bridge
Junction		
	1	Zircon
	3	Platinum
	9	Special construction
Elektrolyte		
	0	None
	1	3M KCl liquid
	2	Tepox gel
	9	Special construction
Connection		
	1	S8 plug (swivel PG 13,5)
	3	S7 plug

	9	Special construction
Length		
	0	120 mm
	2	160 mm
	4	225 mm
	9	Special construction
Miscellaneous		
	0	None
	1	Junction twice
	4	KCl pressure attachement
	9	Special construction

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.

Type/Configuration	Description	Article number
224E20000	electrolyte bridge: zircon junction, 160 mm	S24133800K
224E30001	electrolyte bridge: 2 x platinum junction, 160 mm	S24133830K
224B11320	reference electrode: zircon junction, 3M KCl liquid, S7 plug, 160 mm	S24133000K

5 Accessories

5.1 Hand-held unit Radon DIS-pH

5.1.1 Description

Precise Water Analysis in compact design

The Radon Photometer is used for measurement of Free Chlorine, Chlorine Dioxide, Ozone, Hydrogen Peroxide and pH. The Radon DIS-pH provides precise and reproducible measurement results. High operating convenience, ergonomic design, compact dimensions, simple and safe handling make this unit essential for water analysis.

The compatible accessories for determination of Free Chlorine, Chlorine Dioxide, Ozone, Hydrogen Peroxide and pH are included in the case.

The calibration and software-based adjustment options mean that the Radon DIS - pH is also suitable for use as a testing instrument.

5.1.2 Technical data

Measuring range	
Free Chlorine	0.01.. 6.00 mg/l
Chlorine Dioxide	0.01.. 6.00 mg/l
Ozone	0.01.. 4.00 mg/l
Hydrogen Peroxide	1.. 50 mg/l
pH value	6.5.. 8.4 pH
Input characteristics	
Accuracy	3% FS (at 20.. 25 °C / 68.. 77 °F)
Output characteristics	
Storage	Internal ring memory for 16 data sets
Power supply	

	4 batteries (AAA/LR 03), Operating time 17 hr or 5000 measurements
Auto - OFF	Automatic switch off; 10 minutes after last keypress
Process conditions	
Temperature	5.. 40°C / 41.. 104 °F
Rel. Humidity	30.. 90 % (nicht kondensierend)
Delivery	Device in plastic case, 4 batteries (AAA), 3 round vials (glass) with cap, 1 stirring rod & 1 brush, warranty statement, manual
Certificates and approval	
CE	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	
Dimensions	155 x 75 x 35 mm
Weight	Approx. 260 g (incl. batteries)

5.1.3 Order information

Article number	Type	Description
190201K	Radon DIS-pH	Photometer Chlorine, Chlorine Dioxide, Ozone, Hydrogen peroxide and pH value

5.2 Assembly GD 1 V (G) (PP)

5.2.1 Description

Flow assembly for installation of one pH or ORP sensor in pipes with adhesive coupling or pipe coupling DN 25 with
1" female thread. Available in PVC and PP.

5.2.2 Technical data

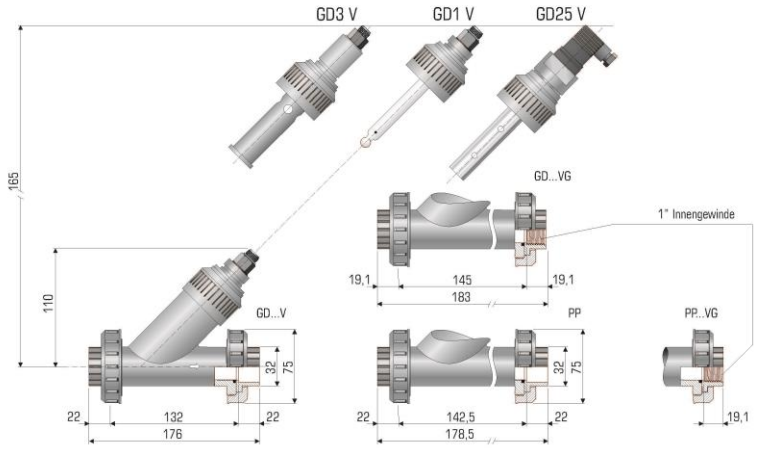
Process conditions

Max. pressure	PVC: 16 bar (at 20°C), PP: 10 bar (at 20°C)
Temperature	PVC: max. 40°C, PP: max. 90°C

Mechanical construction

Material	PVC, PP
Installation	GD 1 V: adhesive coupling GD 1 VG (PP): pipe coupling DN 25 with 1" female thread

5.2.3 Mechanical drawing



5.2.4 Order information

Article number	type/configuration	Description
36604261K	GD 1 V	adhesive coupling (DN 25), PVC
36604263K	GD 1 VG	pipe coupling (DN 25) with 1" internal thread, PVC
36604265K	GD 1 VG PP	pipe coupling (DN 25) with 1" internal thread, PP

5.3 Cable COAX-D-AE-X

5.3.1 Description

Single screened cable for connecting pH- and ORP sensors, available in 3 m, 5 m and 10 m.

Benefits

- Low-noise
- Singled screened
- Electrode connector
- Wire end ferrules
- Integrated semiconductor layer for antistatic protection

5.3.2 Technical data

Measuring parameter

pH value	0.. 14 pH

Process conditions

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

Mechanical construction

Material	PVC

5.3.3 Order information

Article number	Type / configuration	Description
44136007K	COAX-D-AE-3	Connection cable for pH and ORP sensors, length 3 m
44136009K	COAX-D-AE-5	Connection cable for pH and ORP sensors, length 5 m
44136011K	COAX-D-AE-10	Connection cable for pH and ORP sensors, length 10 m

6 Cloud Connect®

Control your water quality at any time, from any place, on any device. The solution is Kuntze's Cloud Connect®.

Values

- Optimized asset utilization
- Increased productivity
- Reduced maintenance costs
- Simple usability and precise control

Data collection

Cloud Connect® captures all relevant aspects of Kuntze systems

- Measurements and system status
- Events
- Alarms
- Remote control of system settings

Data utilization

- View dashboards from the office, at home or on the road
- Centralized data consumption
- Discover measurement insights
- Make data driven decisions
- High availability and scalability

Article number	Description
600000K	Cloud Connect® Service / 12 months
695000K	Cloud Connect® gateway

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