



DR. A. KUNTZE
PRODUCT CATALOGUE 2011

pH/ ORP

valid from 01.01.2011
subject to alterations

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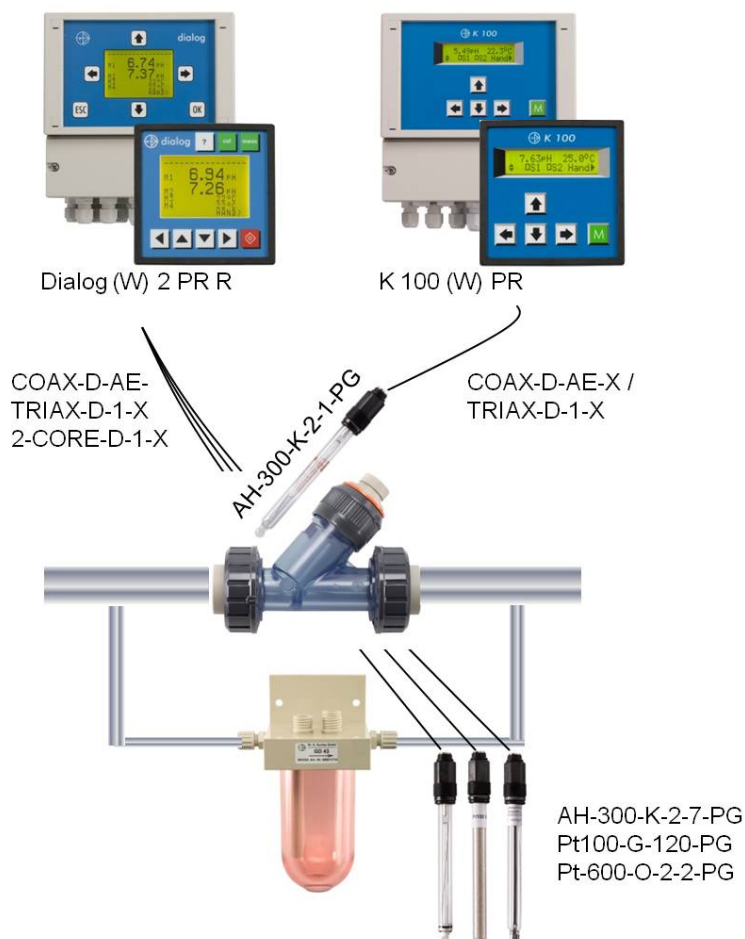


Measuring point diagram

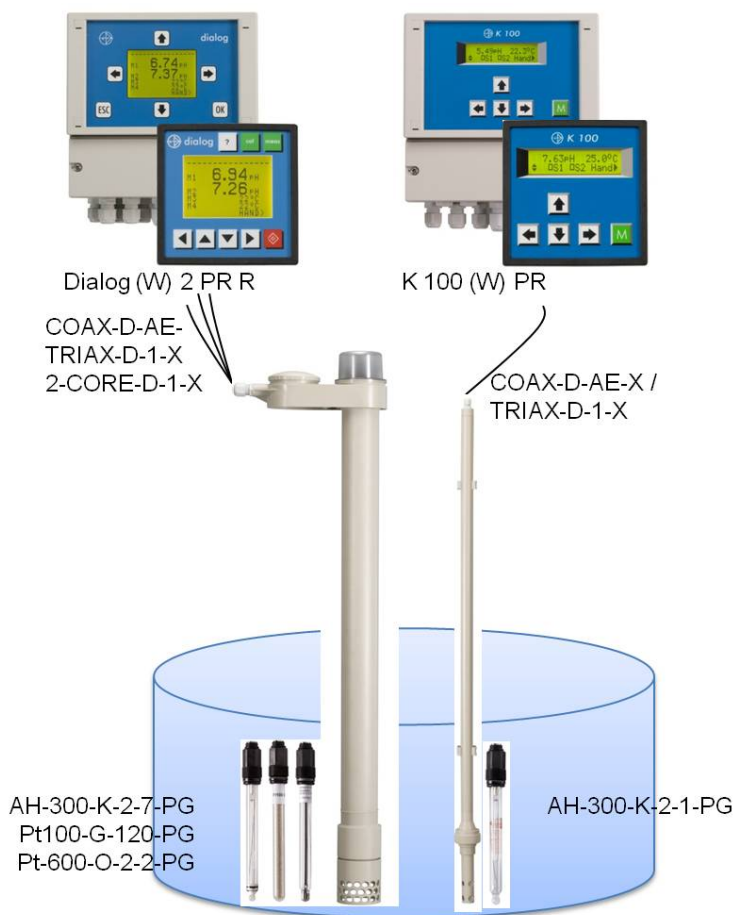
For a complete measuring point you need at least:

- + one measuring and control instrument
- + one sensor
- + one cable
- + one assembly

Measurement in pipes



measurement in tanks or basins





We will be delighted to help you! Give us a call: +49-2150-7066-11!

BalanceCon - Determination and control of calcit saturation by delta pH-value

- High operation safety by defined reaction time in the marble filter
- Low maintenance by automatic zero calibration
- Automatic zero point alignment of the pH sensors



applications

-  Drinking Water / Beverages
-  Cooling And Boiler Feed Water

description

The measurement is based on the pH-difference method described in DIN 38404-10 : 1995-04 Calcit saturation of water Automatic zero-point calibration of the pH-difference measurement Reaction time in the marble filter controlled by stepmotor-driven peristaltic pumps Two separate controllers both of which can be assigned to the pH value of the incoming water or after the marble filter or to the pH difference

particular characteristics

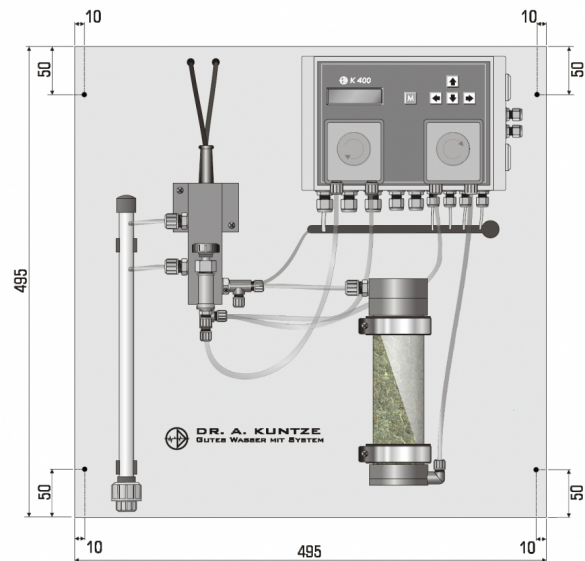
- 2 limit values with delay, assigned to alarm relay for pH value or difference
- 2 separate PI controllers for pH value or difference
- Automatic zero calibration of the pH difference in adjustable time interval
- Semi-automatic two-point-calibration
- Manual or automatic temperature compensation by integrated Pt100
- Background illuminated two-line LC-Display for pH value and pH difference or pH value before and after marble filter or pH value and temperature
- Serial interface RS 485 - optional
- 4x scaleable, galvanically isolated 0/4 .. 20 mA outputs
- Display of relay status



technical data

measuring parameter	
pH-value	0.00 .. 14.00 pH measuring value 1: before the filter 0.00 .. 14.00 pH measuring value 2: after the filter -14.00 .. +14.00 pH difference (measuring value 1 - measuring value 2)
input characteristics	
accuracy	+/- 0.02 pH
temperature measuring range	-30 .. +140°C display range
conditions	max. pressure 1 bar flow min 15 l/h ambient temperature 0 .. 50 °C min. conductivity >150 µS/cm
output characteristics	
output signal	4x 0 .. 20 mA (scaleable, galvanically isolated)
load	max. 500 Ohm
registration range	free adjustable within the measuring ranges
serial interface	RS 485 - optional baud rate 9600 data format 8 bit
power supply	
line voltage	broad range power supply 85 .. 265 V AC or DC
power consumption	36 VA
ambient conditions	
ambient temperature	operation 0 .. +50 °C, storage -20 .. + 65°C exception sensors: 0 .. 30°C
relative humidity	max. 90% at 40°C non-condensed
protection class	wall mounted housing IP 65 IP 54 (with two pumps)
controller	
control response	On/off controller (adjustable hysteresis) P/I/PID-controller (pulse-pause, pulse-frequency or continuous controller output)
relays	2 x potential-free NO-contact, max. 250 V, 6 A, 550 VA for activation dosing pumps / Servo-motor 1 x potential-free CO-contact, max. 250 V, 6A, 550 VA for alarm
onset delay	0 .. 2000 sec
digital input	1) External controller stop 2) Surveillance of the measurements 3) Ext. Initiation of the automatic zero-point calibration
certificates and approvals	
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.
mechanical construction	
material	board: PVC, assembly: PVC, cocks: PP instrument: ABS, sensors: Glas
dimensions	550 x 545 x 150 mm
water coupling	pipe connection DN 4/6, pre-pressure 0.5 .. 1 bar outlet pipe connection DN 10, free outlet

dimensional drawing



order information

name	description	article number
BalanceCon	Measuring system to measure and control calcite solubility	77612729K
BalanceCon Refill-Set	Refill set for the filter	57000000K

order information accessories

name	description	article number
AH-300-K-2-1	all-purpose pH sensor, S7 plug	24131100K
AH-300-K-2-1-PG	all-purpose pH sensor, S8 screw plug (PG13.5)	24131110K
Modul RS 485 K400	daughterboard "serial interface - RS 485" for measuring and control instruments K 400	5000010K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K







pH/ORP Measuring and control instruments

dialog (W) 2 PR R

- Easy and safe operation by plain text menu guidance
- Log book function
- Graphical trend display of the last 3 h



applications

-  Cooling And Boiler Feed Water
-  Waste Water Treatment
-  Drinking Water / Beverages
-  Process Water

description

The dialog (W) 2 PR R is a sophisticated instrument for the precise measurement and control of the pH value and/or ORP. It is available in a panel mounted housing (dialog 2 PR R) or in a wall mounted housing (dialog W 2 PR R).

particular characteristics

- Variable assignment of relay and current outputs
- 2 limit values with delay
- Dosage check
- Semi-automatic two point-calibration for pH
- Slope and zero point monitoring for pH
- Automatic or manual temperature compensation for pH
- Serial interface RS 485
- 2 or 3 scaleable, galvanically isolated 0/4 .. 20 mA outputs
- 2 separate PID-controllers
- Real time clock
- Background illuminated two-line graphical display
- Password function



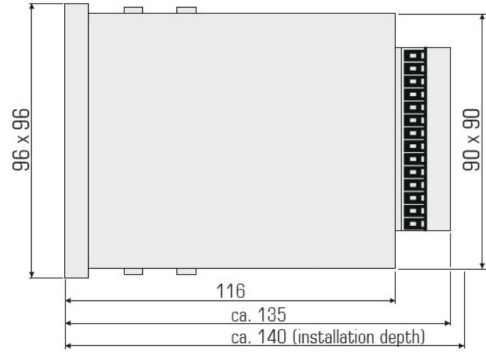
pH/ORP Measuring and control instruments

technical data

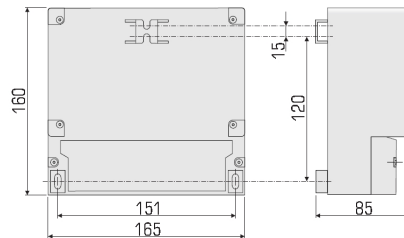
measuring parameter	
ORP	-1500 .. +1500 mV
pH-value	0 .. 14.00 pH
input characteristics	
accuracy	+/- 0.01 pH, +/- 1 mV
temperature measuring range	-30 .. +140°C
temperature coefficient	non-linear
output characteristics	
output signal	3x (wall mounted housing), 2x (panel mounted housing) 0/4 .. 20 mA (scaleable, galvanically isolated)
load	max. 500 Ohm
registration range	Free scaleable within the measuring range
voltage output	2x +/- 6 VDC for impedance converter
serial interface	RS 485
	Baud rate 9600
	data format 8 bit
power supply	
line voltage	117 / 230 VAC, +6 / -10 %, 40 .. 60 Hz optional: 24 VDC (only "W" instruments)
power consumption	10 VA
ambient conditions	
ambient temperature	operation 0 .. +50°C, storage -20 .. +65°C
relative humidity	max. 90% rH at 40°C (non-condensing)
protection class	panel mounted housing IP 54 (front), IP 30 (housing) wall mounted housing IP 65
controller	
control response	On/off controller (adjustable hysteresis) P/PI/PID-controller (pulse-pause, pulse-frequency or continuous controller output)
relays	3 relays, each with potential-free CO contact, max. 250 V, 6 A, 550 VA
onset delay	0 .. 200 sec till controller active
digital input	Controller stop via external contact
certificates and approvals	
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.
mechanical construction - panel mounted housing	
material	Noryl
dimensions	90x90x116 mm
installation dimensions	92x92x140 mm
weight	0.85 kg
connection	Push-screw terminals
mechanical construction - wall mounted housing	
material	ABS
dimensions	165x160x85 mm
weight	1.25 kg
connection	Spring-loaded terminals

dimensional drawing

panel mounted housing



wall mounted housing



order information

name	description	article number
dialog PR R	pH /ORP and T single measurement, panel mounted housing, 230 V	110020K
dialog W PR R	pH /ORP and T single measurement, wall mounted housing, 230 V	115020K
dialog 2 PR R	2 pH /ORP and T double measurement, panel mounted housing, 230 VAC	110040K
dialog W 2 PR R	2 pH /ORP and T double measurement, wall mounted housing, 230 VAC	115040K

order information accessories

name	description	article number
PKV-30-DPS	Converter for PROFIBUS-DP for max. 32 Kuntze instruments	66416000K
S-341 data logger	bus data logger based on RS 485 with Kuntze protocol	42001000K







Measuring and control instruments

K 100 (W) PR

- Easy and safe operation by plain text menu guidance
- Safety by password function



applications

-  Waste Water Treatment
-  Cooling And Boiler Feed Water
-  Process Water
-  Drinking Water / Beverages

description

The K 100 (W) PR is a sophisticated single-channel instrument for measuring and control the pH-value or the ORP. Additionally temperature measurement of the measuring media is possible. The instrument is available in a panel mounted housing (K100 PR) and in a wall mounted housing (K 100 W PR).

particular characteristics

- 2 limit values with delay, assigned to alarm relay
- 2 separate PI-controller
- Dosage check
- Semi-automatic two point-calibration for pH
- Slope and zero point monitoring for pH
- Automatic or manual pH-value compensation for pH
- Background illuminated two-line LC-Display for measured value and temperature
- Serial interface RS 485 optional
- Scaleable, galvanically isolated 0/4 .. 20 mA output
- Display of relay and error messages

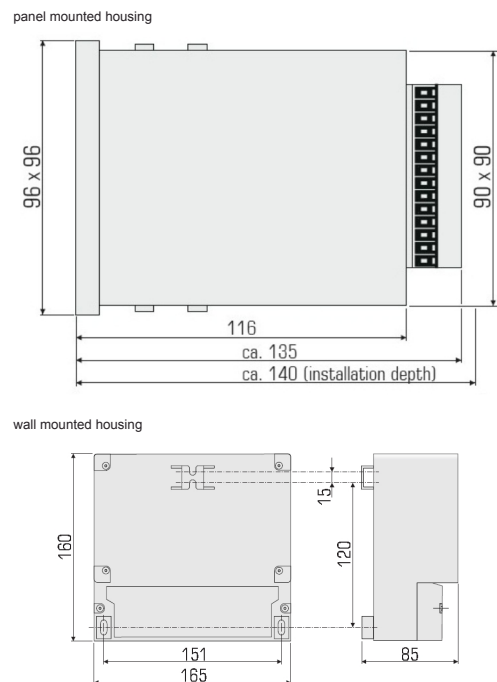


Measuring and control instruments

technical data

measuring parameter	
pH-value	-2.00 .. 16.00 pH
ORP	-1500 .. +1500 mV
input characteristics	
accuracy	+/- 0,01 pH, +/- 1 mV
temperature measuring range	-30 .. +140 °C
output characteristics	
output signal	0/4 .. 20 mA (scaleable, galvanically isolated)
load	max. 500 Ohm
registration range	free scaleable within the measuring range
voltage output	+/- 6 VDC for impedance converter
serial interface	RS 485 (optional)
	Baud rate 9600
	data format 8 bit
power supply	
line voltage	24 / 117/ 230 VAC, +6/-10%, 40 .. 60 Hz
power consumption	10 VA
ambient conditions	
ambient temperature	Operation 0 .. +50 °C, storage -20 .. +65°C
relative humidity	max. 90% rH at 40°C (non-condensing)
protection class	panel mounted housing IP 54 (front), IP 30 (housing)
	wall mounted housing IP 65
controller	
control response	on/off controller (adjustable hysteresis) P/PI controller (pulse-pause, pulse-frequency or continuous output)
relays	2 relays, each with a potential-free NO contact, max. 250V, 6 A, 550 VA 1 alarmrelay with potential-free CO/NO contact, max. 250V, 6A, 550 VA
onset delay	0 .. 200 sec till controller active
digital input	Controller stop via external contact
certificates and approvals	
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.
mechanical construction - panel mounted housing	
material	Noryl
dimensions	90x90x116 mm
installation dimensions	92x92x140 mm
weight	0.75 kg
connection	push-screw terminals
mechanical construction - wall mounted housing	
material	ABS
dimensions	165x160x85 mm
weight	0.95 kg
connection	Spring-loaded terminals

dimensional drawing



order information

name	description	article number
K 100 PR	pH or ORP and T single measurement, panel mounted housing, 230 V	100000K
K 100 W PR	pH or ORP and T single measurement	105000K

order information accessories

name	description	article number
PKV-30-DPS	Converter for PROFIBUS-DP for max. 32 Kuntze instruments	66416000K
RS 485 Modul K 100 W	Serial interface module for series K 100	50105003K
S-341 data logger	bus data logger based on RS 485 with Kuntze protocol	42001000K



selection criteria pH sensors

A variety of electrodes make a pH measurement possible in almost any kind of hydrous medium such as drinking water, industrial waste water, process water and even in coating applications.

					
	All-purpose	Pure water	Waste water	fluoride resistant	process water
application	drinking water industry water disinfection	pure water boiler feed water turbine water	industry waste water cooling water galvanic waste water	fluoride containing media laquer suspensions	process water industrial waste water
sensors	AH-300-K-2-1(-PG) AH-305-K-2-1-PG AH-320-K-2-1-PG	AH-300-K-1-2x3 AH-300-K-1-3 AH-320-K-1-6	AH-300-K-2-7(-PG) AH-305-K-2-7-PG AH-300-K-5-8(-PG)	S-300-K-1-1 S-300-K-2-1(-PG) S-300-K-2-7(-PG) S-300-K-1-5	AH-310-K-3-2 AH-310-K-4-3
measuring range	pH 0..14	pH 0..14	pH 0..14	pH 1..11	pH 0..14
temperature	-5 .. +70°C	-5 .. +100°C	-5 .. +70°C	0 .. +60 °C	-5 ..+70°C -5 .. +100°C
Max. pressure	2 bar	pressure less	8 bar 16 bar	pressure less	pressure less
Min. conductivity	> 150 µS/cm	<50µS/cm <20µS/cm	> 150 µS/cm	>50µS/cm >150µS/cm	>50µS/cm >150µS/cm
junction	ceramic	3x 2mm ceramic platinum glass sleeve	PTFE hole	ceramic PTFE ceramic ca.15 mm projecting	ceramic

Our electrodes are also available on request with other internal buffers and with other shaft lengths. Our assortment as sensor manufacturer includes a variety of special types, which are not listed here. Do you have a special application or you need a special solution?

We will be delighted to help you! Give us a call: +49 2150-7066-11



All-purpose sensors

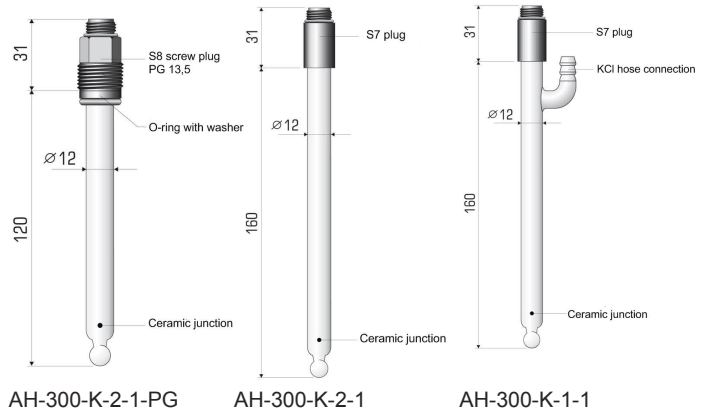


AH-300-K-2-1-PG

AH-300-K-1-1

AH-305-K-2-1-PG

AH-320-K-2-1



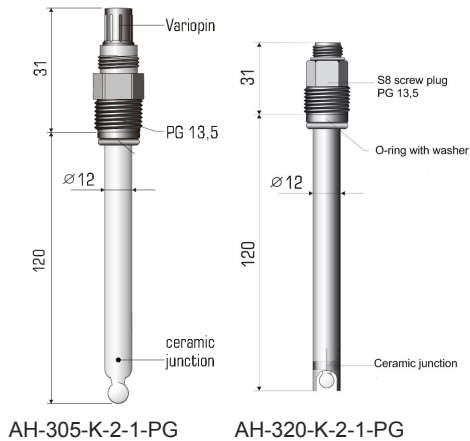
AH-300-K-2-1-PG

AH-300-K-2-1

AH-300-K-1-1

technical data

nomenclature	AH-300-K-2-1, AH-300-K-2-1-PG	AH-300-K-1-1	AH-305-K-2-1-PG	AH-320-K-2-1-PG
measuring parameter				
pH-value	0 .. 14 pH	0 .. 14 pH	0 .. 14 pH	0 .. 14 pH
Temperature			-30.00 .. +140.00 °C	
ambient conditions				
max. pressure	2 bar (at 20 °C) sensors with S7 plug pressure less	<1 bar pressureless	2 bar (at 20 °C) sensors with S7 plug pressure less	2 bar (at 20 °C)
min. conductivity	>150 µS/cm	>50 µS/cm	>150 µS/cm	>150 µS/cm
temperature	-5 .. +70 °C	-5 .. +100 °C	-5 .. +70 °C	0 .. +70 °C
mechanical construction				
junction	ceramic - 1mm	Ceramic	ceramic	Ceramic
shaft material	Glass	glass	Glass	Resin
electrode material	AH glass ball	AH glass ball	AH glass ball	AH glass ball
reference system	Ag/AgCl/Tepox gel	Ag/AgCl/3M KCl	Ag/AgCl/Tepox gel	Ag/AgCl/Tepox gel
internal buffer	pH 7	pH 7	pH 7	pH 7
mechanical connection	S7 plug S8 screw plug (PG 13,5)	S7 plug	VP4 Variopin	S7 plug S8 screw plug
electrical connection	2-pole screw connection	2-pole screw connection	4-pole screw connection	2-pole screw connection
temperature sensor			Pt100	



AH-305-K-2-1-PG

AH-320-K-2-1-PG

description

The All-purpose sensors are applicable in many application ranging from drinking water to industrial water.



All-purpose sensors

order information

name	description	article number
AH-300-K-2-1	all-purpose pH sensor, S7 plug	24131100K
AH-300-K-2-1-PG	all-purpose pH sensor, S8 screw plug (PG13.5)	24131110K
AH-300-K-1-1	pH sensor: KCl liquid filled, 1 mm ceramic junction, S7 plug	24132040K
AH-305-K-2-1-PG	pH sensor: Tepox gel, ceramic junction, Pt 100, VP4 Variopin	24132111K
AH-320-K-2-1-PG	pH sensor with resin shaft: Tepox gel, ceramic junction, S8 screw plug	24132650K

order information accessories

name	description	article number
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K
KCL reservoir	vessel set	36510063K
KCL 3 mol	KCl solution, 3 mol/l, 1000 ml	95212033K



Pure water sensors



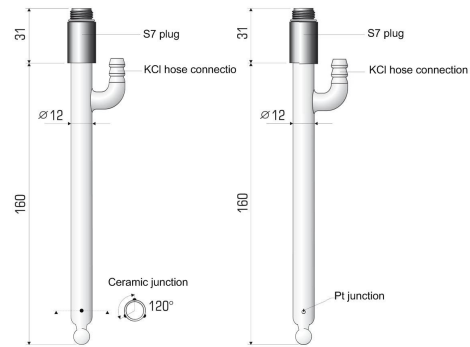
AH-300-K-1-2x3



AH-300-K-1-3



AH-300-K-1-6



AH-300-K-1-2x3

AH-300-K-1-3

description

pH sensors for very low conductivities as deionized water, boiler water and turbine steam.

technical data

nomenclature	AH-300-K-1-2-2x3	AH-300-K-1-3	AH-300-K-1-6, AH-300-K-S-6
measuring parameter			
pH-value	0 .. 14 pH	0 .. 14 pH	0 .. 14 pH
ambient conditions			
max. pressure	<1 bar pressureless	<1 bar pressureless	<1 bar pressureless
min. conductivity	>50 µS/cm	<50 µS/cm	>20 µS/cm
temperature	-5 .. +100 °C	-5 .. +100 °C	-5 .. +100 °C
mechanical construction			
junction	3 x ceramic	platinum	glass sleeve
shaft material	glass	glass	glass
electrode material	AH glass ball	AH glass ball	AH glass ball
reference system	Ag/AgCl/3M KCl	Ag/AgCl/3M KCl	Ag/AgCl/3M KCl (AH-300-K-1-6) Ag/AgCl/1M KCl (AH-300-K-S-6)
internal buffer	pH 7	pH 7	pH 7
mechanical connection	S7 plug	S7 plug	S7 plug
electrical connection	2-pole screw connection	2-pole screw connection	2-pole screw connection

order information

name	description	article number
AH-300-K-1-2-2x3	pH sensor with 3x ceramic junction	24132070K
AH-300-K-1-3	pH sensor with platinum junction, S7 plug	24132050K
AH-300-K-1-6	pH sensor with glass sleeve, S7 plug, 3M KCl	24132010K
AH-300-K-S-6	pH sensor with glass sleeve, S7 plug, 1M KCl	24132020K

order information accessories

name	description	article number
KCl reservoir	vessel set	36510063K
KCl 3 mol	KCl solution, 3 mol/l, 1000 ml	95212033K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 - cal	1000 ml buffer solution pH 9,22	95212004K



Waste water sensors



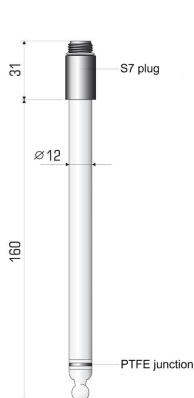
AH-300-K-2-7-PG



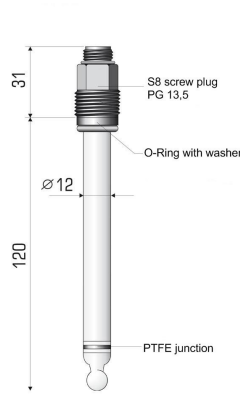
AH-305-K-2-7-PG



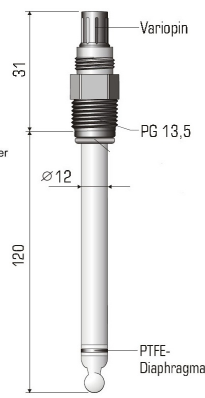
AH-300-K-5-8-PG



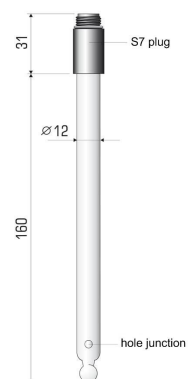
AH-300-K-2-7



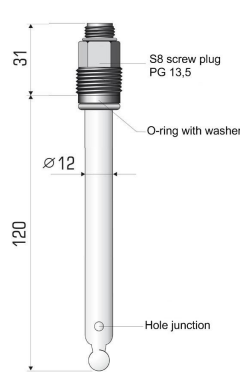
AH-300-K-2-7-PG



AH-305-K-2-7(-PG)



AH-300-K-5-8



AH-300-K-5-8-PG

technical data

nomenclature	AH-300-K-2-7, AH-300-K-2-7-PG	AH-305-K-2-7-PG	AH-300-K-5-8, AH-300-K-5-8-PG
measuring parameter			
pH-value	0 .. 14 pH	0 .. 14 pH	0 .. 14 pH
Temperature		-5.00 .. +70.00 °C	
ambient conditions			
max. pressure	10 bar (at 20°C)	10 bar (at 20°C)	8 bar (at 20°C)
min. conductivity	>150 µS/cm	>150 µS/cm	>150 µS/cm
temperature	-5 .. +70 °C	-5 .. +70 °C	-5 .. +70 °C
mechanical construction			
junction	PTFE	PTFE	hole
shaft material	glass	glass	glass
electrode material	AH glass ball	AH glass ball	AH glass ball
reference system	Ag/AgCl/Tepox gel	Ag/AgCl/Tepox gel	Ag/AgCl/solid electrolyte
internal buffer	pH 7	pH 7	pH 7
mechanical connection	S7 plug S8 screw plug (PG 13,5)	VP4 Variopin	S7 plug S8 screw plug (PG 13,5)
electrical connection	2-pole screw connection	4-pole screw connection	2-pole screw connection

description

Sensors for soiled media like industrial waste water, process water and cooling water.



Waste water sensors

order information

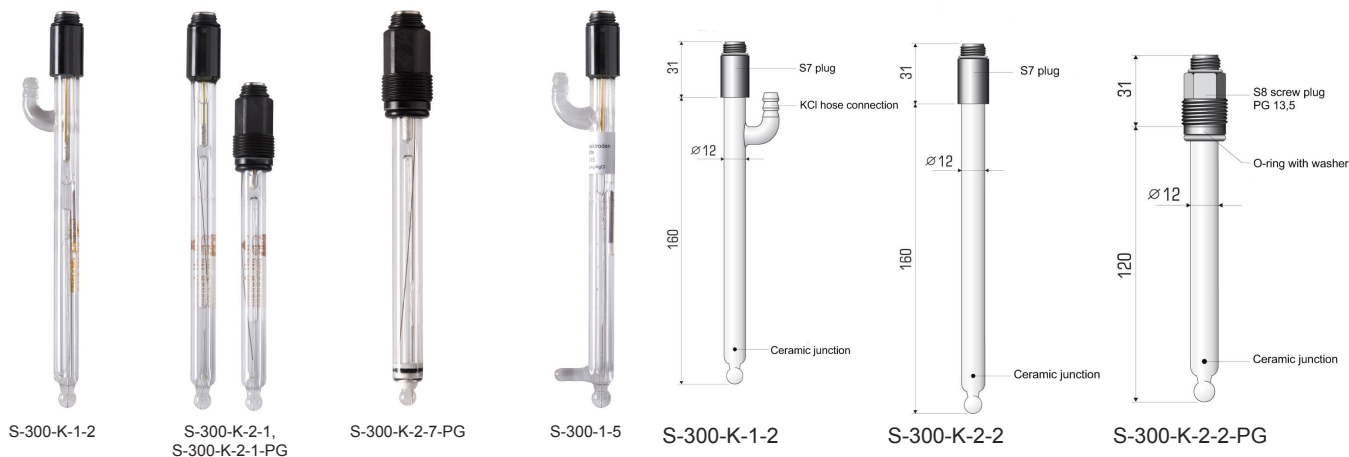
name	description	article number
AH-300-K-2-7	pH sensor: Tepox gel, PTFE junction, S7 plug	24132115K
AH-300-K-2-7-PG	pH sensor: Tepox gel, PTFE junction, S8 screw plug	24132120K
AH-305-K-2-7-PG	pH sensor: Tepox gel, PTFE junction, Pt 100, VP4 Variopin	24132121K
AH-300-K-5-8	pH sensor: solid electrolyte, hole, S7 plug	24132800K
AH-300-K-5-8-PG	pH sensor: solid electrolyte, hole, S8 screw plug (13.5)	24132810K

order information accessories

name	description	article number
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K



Fluoride resistant sensors



technical data

nomenclature	S-300-K-1-2	S-300-K-2-1, S-300-K-2-1-PG	S-300-K-2-7-PG	S-300-K-1-5
measuring parameter				
pH-value	1 .. 11 pH	1 .. 11 pH	1 .. 11 pH	1 .. 11 pH
ambient conditions				
max. pressure	<1 bar pressureless	2 bar (at 20°C) sensors with S7 plug pressureless	10 bar (at 20°C)	<1 bar pressureless
min. conductivity	>50 µS/cm	>150 µS/cm	>150 µS/cm	>50 µS/cm
temperature	0 .. +60 °C	0 .. +60 °C	0 .. +60 °C	0 .. +60 °C
mechanical construction				
junction	Ceramic	Ceramic	PTFE	Ceramic 15 mm projecting
shaft material	glass	glass	glass	glass
electrode material	S glass ball	S glass ball	S glass ball	S glass ball
reference system	Ag/AgCl/3M KCl	Ag/AgCl/Tevox-gel	Ag/AgCl/Tevox-Gel	Ag/AgCl/3M KCl
internal buffer	pH 7	pH 7	pH 7	pH 7
mechanical connection	S7 plug	S7 plug S8 screw plug	S8 screw plug	S7 plug
electrical connection	2-pole screw connection	2-pole screw connection	2-pole screw connection	2-pole screw connection

description

Sensors for fluoride containing media



Fluoride resistant sensors

order information

name	description	article number
S-300-K-1-2	fluoride resistant pH sensor: KCl liquid filled, ceramic junction, S7 plug	24132300K
S-300-K-2-1	fluoride resistant pH sensor: Tepox gel, ceramic junction, S7 plug	24132400K
S-300-K-2-1-PG	fluoride resistant pH sensor: Tepox gel, ceramic junction, S8 plug	24132410K
S-300-K-2-7-PG	fluoride resistant pH sensor: Tepox gel, PTFE junction, S8 screw plug	24132420K
S-300-K-1-5	pH sensor: KCl liquid filled, ceramic junction (15 mm projecting), S7 plug	24132320K

order information accessories

name	description	article number
IWA 11.4	impedance converter	47890101K
KCL reservoir	vessel set	36510063K
KCL 3 mol	KCl solution, 3 mol/l, 1000 ml	95212033K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K
Service set GE	PG 13,5 screw connection for 12 mm glass sensors	46510006K

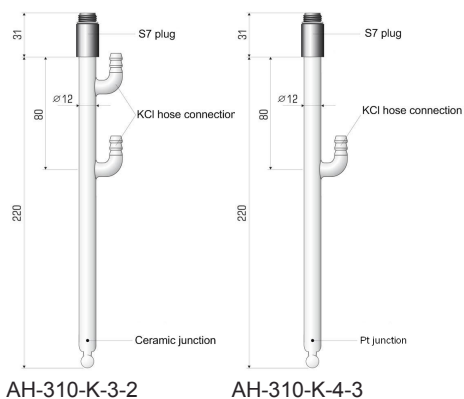


Process water sensors



AH-310-K-3-2

AH-310-K-4-3



AH-310-K-3-2

AH-310-K-4-3

technical data

nomenclature	AH-310-K-3-2	AH-310-K-4-3
measuring parameter		
pH-value	0 .. 14 pH	0 .. 14 pH
ambient conditions		
max. pressure	<1 bar pressureless	<1 bar pressureless
min. conductivity	>50 µS/cm	>50 µS/cm
temperature	-5 .. +100 °C	-5 .. +70 °C
mechanical construction		
junction	ceramic	ceramic
electrode material	AH glass ball	AH glass ball
reference system	Ag/AgCl/3M KCl	Ag/AgCl/Tepox gel
internal buffer	pH 7	pH 7
mechanical connection	S7 plug	S7 plug
electrical connection	2-pole screw connection	2-pole screw connection
electrolyte	KCl liquid inside KCl liquid outside Tepox gel inside KCl liquid outside	

description

Double chamber sensors for process water.



Process water sensors

order information

name	description	article number
AH-310-K-3-2	double chamber pH sensor: KCl liquid inside and outside, ceramic junction, S7 plug	24132510K
AH-310-K-4-3	Double chamber pH sensor: Tepox gel inside KCL liquid outside, platinum junction, S7 plug	24132501K

order information accessories

name	description	article number
KCL reservoir	vessel set	36510063K
KCL 3 mol	KCl solution, 3 mol/l, 1000 ml	95212033K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K

Our sensors are also available with other junctions, internal buffer, shaft length and various filling of the outer chamber (Chloride free). We will be delighted to help you! Give us a call: +49-2150-7066-11



pH/ORP

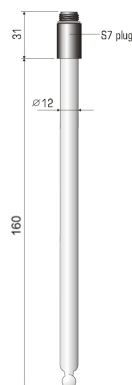
pH measuring electrodes

AH-200-K

- High life expectancy



AH-200-K



AH-200-K

applications



Waste Water Treatment



Ultra Pure Water



Cooling And Boiler Feed Water

description

The pH electrode AH-200-K is a single measuring electrode. To measure pH, it has to be used in combination with a separate reference electrode. Combination electrodes with integrated reference are easier to calibrate and to install, but in very aggressive solutions that shorten the life time of either the reference or the measuring electrode, it might still be advantageous to use separate measuring and reference electrodes.

technical data

measuring parameter	
pH-value	0.00 .. 14.00 pH
ambient conditions	
temperature	-5 .. + 100 °C
mechanical construction	
shaft material	glass
electrode material	AH-glass, ball
internal buffer	pH 7
mechanical connection	S7 plug
electrical connection	2-pole screw connection

order information

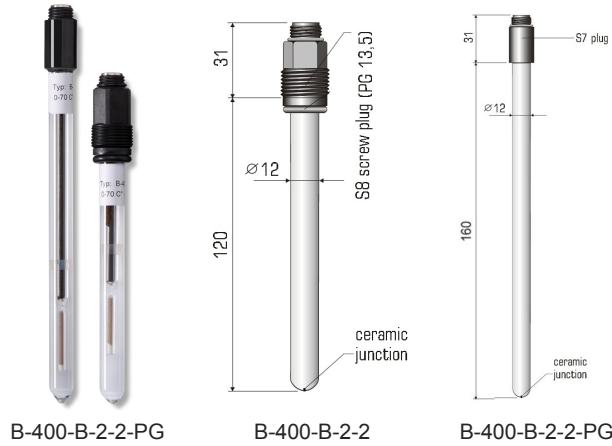
name	description	article number
AH-200-K	pH measuring electrode	24131000K

order information accessories




name	description	article number
B-400-B-1-2	reference electrode, shaft length 160 mm, S7 plug	24133000K
B-400-B-2-2	reference electrode, shaft length 160 mm, S7 plug	24133100K
B-400-B-2-2-PG	reference electrode, shaft length 120 mm, S8 screw plug	24133110K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K



B-400-B-2-2(-PG)



applications

-  Waste Water Treatment
-  Cooling And Boiler Feed Water
-  Process Water

description

The Kuntze B-400-B-2-2(-PG) is a gel-filled reference electrode. It is used as reference point for other electrodes with relative potentials such as pH or ORP measuring electrodes.

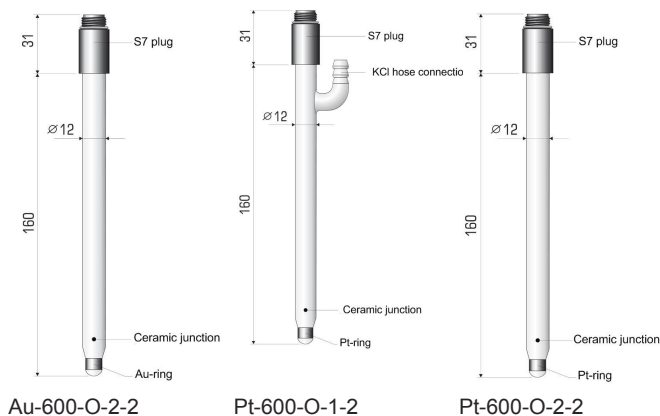
technical data

ambient conditions	
max. pressure	0 .. 2 bar (at 20°C)
mechanical construction	
junction	2 mm ceramic
shaft material	glass
reference system	Ag/AgCl/ Tepox gel
mechanical connection	S7 plug (B-400-B-2-2) S8 screw plug - PG 13,5 (B-400-B-2-2-PG)
electrical connection	2-pole screw connection

order information

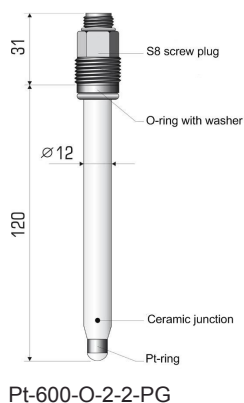
name	description	article number
B-400-B-2-2	reference electrode, shaft length 160 mm, S7 plug	24133100K
B-400-B-2-2-PG	reference electrode, shaft length 120 mm, S8 screw plug	24133110K

ORP sensors



technical data

nomenclature	Au-600-O-2-2, Au-600-O-2-2-PG	Pt-600-O-1-2	Pt-600-O-2-2, Pt-600-O-2-2-PG
measuring parameter			
ORP	-1500 .. +1500 mV	-1500 .. +1500 mV	-1500 .. +1500 mV
ambient conditions			
max. pressure	2 bar at 20°C	<1 bar pressureless	2 bar at 20°C
min. conductivity	>150 µS/cm	>50 µS/cm	>150 µS/cm
temperature	-5 .. +70 °C	-5 .. +100 °C	-5 .. +70 °C
mechanical construction			
junction	Ceramic	Ceramic	Ceramic
shaft material	Glass	Glass	Glass
electrode material	Gold	Platinum	Platinum
reference system	Ag/AgCl/Tepox gel	Ag/AgCl/3M KCl	Ag/AgCl/Tepox gel
mechanical connection	S7 plug S8 screw plug (PG 13,5)	S7 plug	S7 plug S8 screw plug (PG 13,5)
electrical connection	2-pole screw connection	2-pole screw connection	2-pole screw connection



description

The ORP sensors allow measurements in almost every kind of hydrous medium. They are used in ozonization, deicing, detoxification, nitrate elimination, and disinfection.



ORP sensors

order information

name	description	article number
Au-600-O-2-2	gold sensor, Tepox gel, S7 plug	24135110K
Au-600-O-2-2-PG	gold sensor, Tepox gel, S8 screw plug	24135120K
Pt-600-O-1-2	platinum sensor,KCl-liquid, S7 plug	24135200K
Pt-600-O-2-2	platinum sensor,Tepox gel, S7 plug	24135210K
Pt-600-O-2-2-PG	platinum sensor,Tepox gel, S8 screw plug (PG 13,5)	24135220K

order information accessories

name	description	article number
mV - test	1000 ml ORP solution, 468 mV	95212008K



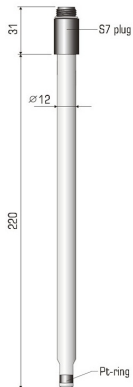
pH/ORP

ORP measuring electrodes

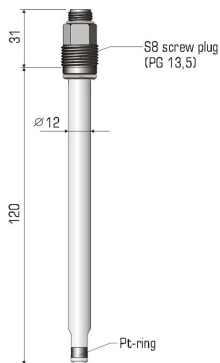
Pt-500-O(-PG)



Pt-500-O-PG



Pt-500-O



Pt-500-O-PG

applications



Waste Water Treatment



Cooling And Boiler Feed Water



Process Water

description

The Kuntze Pt-500-O(-PG) is a single measuring electrode and can be used for ORP measurement.

technical data

measuring parameter	
ORP	-1500 .. +1500 mV
ambient conditions	
max. pressure	0 .. 6 bar at 20 °C
temperature	-5 .. +100 °C
mechanical construction	
shaft material	glass
electrode material	6 mm platinum ring (Pt-600-O) 3 mm platinum ring (Pt-600-O-PG)
mechanical connection	S7 plug (Pt-600-O) S8 screw plug - PG 13,5 (Pt-600-O-PG)
electrical connection	2-pole screw connection

order information

name	description	article number
Pt-500-O	platinum electrode,S7 plug, 160 mm	24134000K
Pt-500-O-PG	platinum electrode,S8 screw plug, 120 mm	24134010K

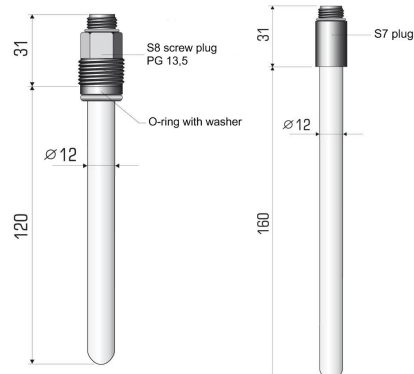


temperature sensors



Pt 100-G-120-PG

Pt 100-G-160



Pt 100-G-120-PG

Pt 100-G-160

technical data

nomenclature	Pt 100-G-120-PG	Pt 100-G-160
measuring parameter		
Temperature	-30 .. +140 °C	-30 .. +140 °C
ambient conditions		
max. pressure	4 bar at 20 °C	<1 bar pressure less
mechanical construction		
shaft material	Glass	Glass
reference system	Pt100	Pt100
mechanical connection	S8 screw plug (PG 13,5)	S7 plug
electrical connection	2-pole screw connection	2-pole screw connection

order information

name	description	article number
Pt 100-G-120-PG	temperature sensor, S8 screw plug (PG 13,5)	24137010K
Pt 100-G-160	temperature sensor, S7 plug	24137000K

order information accessories

name	description	article number
2CORE-D-1-3	connection cable for Pt 100 sensors, 3 m	44136071K
2CORE-D-1-5	connection cable for Pt 100 sensors, 5 m	44136066K
2CORE-D-1-10	connection cable for Pt 100 sensors, 10 m	44136081K

GD 1 V(G) (PP)

- Easy to dismantle
- Ideal for sensors with S8 screw plug (PG 13,5)
- Easy mounting by bonding or 1" female thread



GD 1 VG

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.

technical data

ambient conditions	
max. pressure	PVC: 16 bar (at 20°C) PP: 10 bar (at 20°C)
temperature	max 40 °C (PVC) max. 90 °C (PP)
mechanical construction	
material	PVC, PP
dimensions	see dimension drawing
installation	GD 1 V: adhesive coupling GD 1 VG (PP): pipe coupling DN 25 with 1" female thread

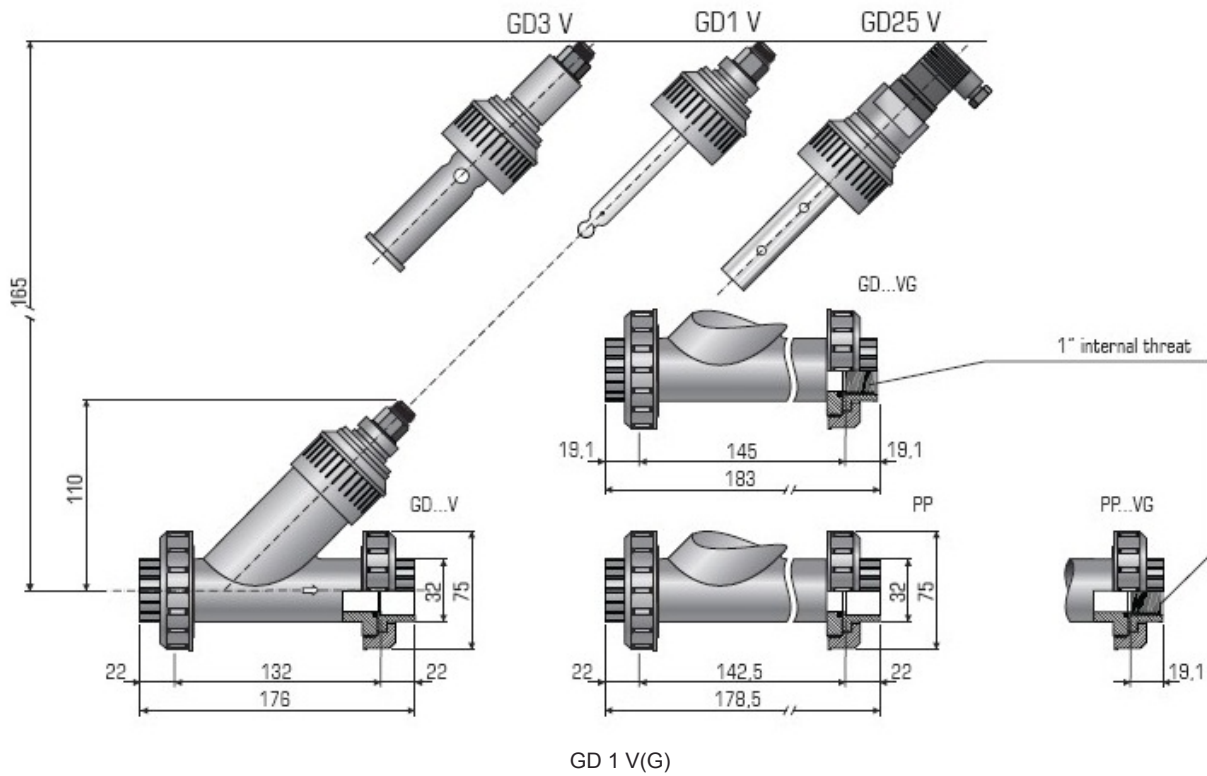
order information

name	description	article number
GD 1 V	adhesive coupling (DN 25), PVC	36604261K
GD 1 VG	pipe coupling (DN 25) with 1" internal thread, PVC	36604263K
GD 1 VG PP	pipe coupling (DN 25) with 1" internal thread, PP	36604265K



GD 1 V(G) (PP)

dimensional drawing



GD 43

- Easy to dismantle
- Ideal for sensors with S8 screw plug-in (PG 13,5)
- Transparent



GD 43

description

Flow assembly for installation of maximal 3 electrodes (e.g. pH and/ or ORP electrodes and temperature sensors) in pipes.

technical data

ambient conditions	
max. pressure	6 bar (at 20°C)
temperature	max. 60 °C
mechanical construction	
material	PP, Makrolon
dimensions	see dimension drawing
installation	Fittings 6/8 mm hoses or pipes

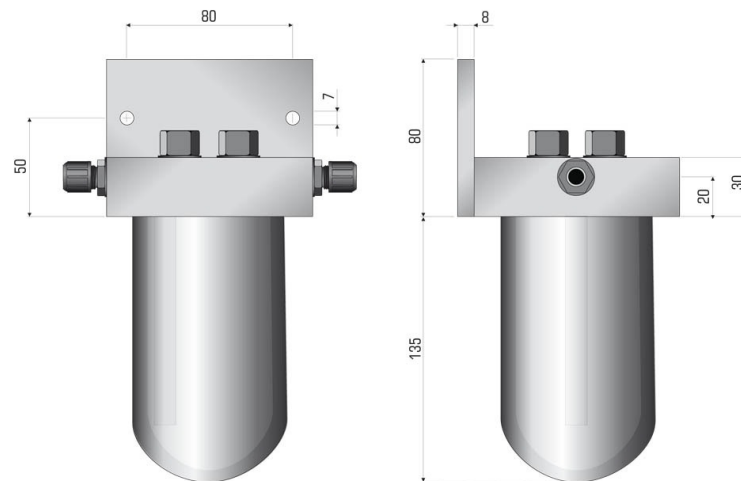
order information

name	description	article number
GD 43	for max. 3 sensors	36601171K



GD 43

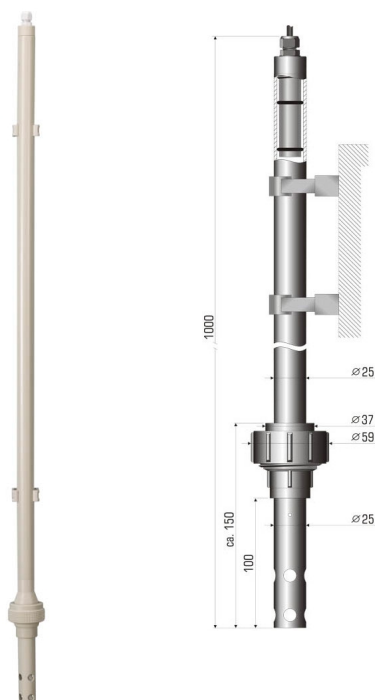
dimensional drawing



GD 43

GE 251 PP

- With protective cage to protect the sensor
- Fitting head with cable gland
- Easy access to sensor
- Fastening with pipe clamps



technical data

ambient conditions	
temperature	max. 90 °C
mechanical construction	
material	PP
dimensions	see dimensional drawing

description

Immersion assembly for installation of one pH or ORP sensor

order information

name	description	article number
GE 251 PP	immersion assembly for one pH or ORP sensor	36511020K

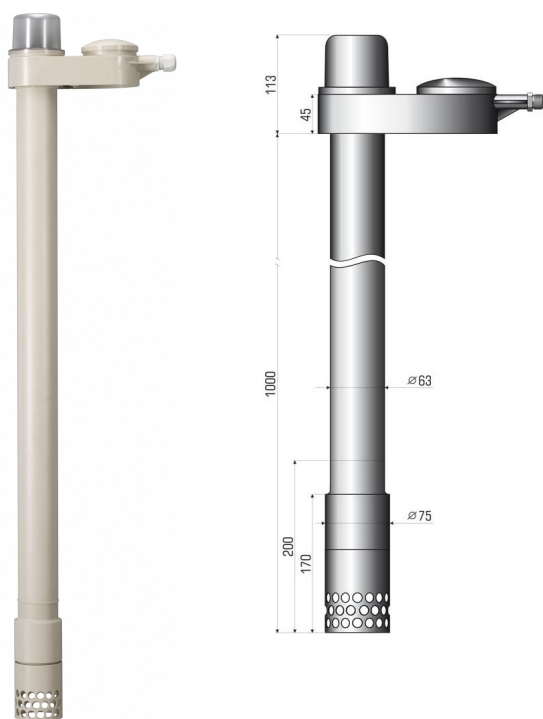
order information accessories

name	description	article number
NSH	moisture cap for immersion assemblies GE 23/3 and GE 251 PP	35330103K



GE 23/3 PP

- Protection of the sensors by protective cage
- Easy fastening by pipe clamps or angle bracket
- Installation set for KCI-vessel available



technical data

ambient conditions	
temperature	max. 90°C
mechanical construction	
material	PP
dimensions	see dimension drawing

description

Immersion assembly for max. 3 sensors (pH, ORP and/or temperature sensors) in tanks or basins.

order information

name	description	article number
GE 23/3 PP	for max. 3 sensors, PP	36510012K

order information accessories

name	description	article number
KCL reservoir	vessel set	36510063K
MW/MD GE 23/3 PP	angle bracket for the immersion assembly GE 23/3 PP	35330200K
NSH	moisture cap for immersion assemblies GE 23/3 and GE 251 PP	35330103K
Service set GE	PG 13,5 screw connection for 12 mm glass sensors	46510006K

pH/ORP Hand-Held Units

PH-T

- Testing of pH- and ORP sensors
- Testing of pH and ORP instruments and cables



PH-T Set

particular characteristics

- High-impedance test (>1000M Ω)
- Voltage measurement in mV
- Presetting of voltage in mV or pH
- Power supply or rechargeable

description

pH and mV simulator to check pH and ORP measuring instruments and electrodes. Complete set: simulator with cable and adapter in a portable case.

technical data

measuring parameter	
ORP	-1500 .. +1500 mV
input characteristics	
accuracy	+/- 1 mV
output characteristics	
voltage presetting	-1500 .. +1500 mV
ph-simulation	0 .. 14 pH
power supply	
line voltage	input voltage about 15-16 V, barrel connector AD 5 mm, ID 2mm
power supply	9 V battery or 9 V rechargeable battery
ladestrom	18 - 20 mA
ambient conditions	
ambient temperature	operation 0 .. +40 °C storage -20 .. +65 °C
relative humidity	max. 90% rF at 40°C (non-condensing)
protection class	IP 40
connections	
sensor	BNC plug
certificates and approvals	
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.

order information

name	description	article number
PH-T	complete set: simulator with caable and adapter incl portable case	45512800K



PM 6

- Automatic or manual temperature compensation
- Test of electrode quality
- Min/ max value memory, hold function



PM 6 Set

particular characteristics

- Automatic or manual temperature compensation
- Automatic power shut-off
- Double display for measured value and temperature
- Power supply by battery or rechargeable
- Easy and safe handling by 6 soft keys
- Low battery indication
- With fold away support

description

All-purpose portable measuring instrument for measurement of pH, ORP and temperature. Connection of pH and ORP combination electrodes with and without Pt 100 is possible. Handheld instrument, sensor and pH 4 and pH 7 buffer solution each 50 mL in a portable case are included in delivery.

technical data

measuring parameter	
pH-value	0 .. 14 pH
ORP	-1999 .. +1999 mV
Temperature	-100 .. +250 °C
power supply	
line voltage	above 10-12 V (power unit not included in delivery)
power supply	9V battery
power consumption	ca. 3 mA
ambient conditions	
ambient temperature	operation 0 .. 50°C storage -20 .. 70°C
relative humidity	max. 90% rH at 40°C (non-condensing)
protection class	IP 65
connections	
sensor	BNC plug (pH/ORP) female mini DIN plug (T)
certificates and approvals	
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.

order information

name	description	article number
PM 6	complete set measuring instrument with sensor (AH-320-K-2-1), cable and each 50 ml buffer solution pH 4 and pH 7 including portable case	65512510K

order information accessories

name	description	article number
AH-320-K-2-1-PG	pH sensor with resin shaft: Tepox gel, ceramic junction, S8 screw plug	24132650K
GTF 401	Temperature sensor for the PM 6	45512530K
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K



COAX-D-AE-X

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

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

technical data

measuring parameter	
pH-value	0 .. 14 pH
ambient conditions	
ambient temperature	-20 .. + 70°C
mechanical construction - panel mounted housing	
material	PVC

TRIAX-D-1-X

Dual screened cable for connecting pH sensors, available in 3 and 5 m.

- Low-noise
- Dual screened
- Electrode connector
- Integrated semiconductor layer for antistatic protection

technical data

measuring parameter	
pH-value	0 .. 14 pH
ambient conditions	
ambient temperature	-20 .. + 70°C
mechanical construction - panel mounted housing	
material	PVC

order information

name	description	article number
COAX-D-AE-3	connection cable for pH and ORP sensors, 3 m	44136007K
COAX-D-AE-5	connection cable for pH and ORP sensors, 5 m	44136009K
CoAX-D-AE-10	connection cable for pH and ORP sensors, 10 m	44136011K
TRIAX-D-1-3	double screened connection cable for pH sensors, 3 m	44136120K
TRIAX-D-1-5	double screened connection cable for pH sensors, 5 m	44136125K







IWA 11.4

- converts the high-impedance signal into a less sensitive low-impedance signal
- Connection between IWA and measuring instrument is possible with standard cable (up to 1000 m length)
- Screened PVC housing



IWA 11.4

applications

-  Waste Water Treatment
-  Process Water
-  Drinking Water / Beverages
-  Food Industry

description

Impedance converter - for longer distances between electrode and measuring instrument or under unfavourable installation conditions.

technical data

input characteristics	
input resistor	10 ¹² Ohm
output characteristics	
output resistor	1 kOhm
power supply	
voltage supply	+/- 5 .. 15 V
ambient conditions	
ambient temperature	max. 50°C

order information

name	description	article number
IWA 11.4	impedance converter	47890101K



pH buffer solutions

- For calibration of pH sensors



pH-buffer solution

description

The slope of pH sensors changes over the time (depending on the measuring media). We recommend a regular calibration with our buffer solutions. We offer 1000 ml packages of pH 2, pH 3,56, pH 4, pH 7, and pH 9,22, and 50 ml packages of pH 4, and pH 7.

order information

name	description	article number
pH 2 - cal	1000 ml buffer solution pH 2	95212000K
pH 3,56 - cal	1000 ml buffer solution pH 3,56	95212003K
pH 4 - cal	1000 ml buffer solution pH 4	95212007K
pH 4 - cal	50 ml buffer solution pH 4	95212010K
pH 7 - cal	1000 ml buffer solution pH 7	95212001K
pH 7 - cal	50 ml buffer solution pH 7	95212009K
pH 9,22 -cal	1000 ml buffer solution pH 9,22	95212004K



The Dr. A. Kuntze GmbH "Terms and Conditions" will be applicable.





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