

# Control and Measuring Instruments





## Kontrol **500-502** Single and twin-parameter control instruments

The Kontrol 500-series are advanced controllers designed for high-end applications. The units feature independent proportional PID-enabled control outputs, RS 485 serial port with MODBUS protocol, USB port on request, probe quality checking, a variety of outputs and full data logging capability. The user has full programming authority.

Kontrol 500-502

### Parameters

- pH / ORP
- Conductivity
- Dissolved Oxygen
- Chlorine
- Chlorine Dioxide
- Hydrogen Peroxide
- Ozone
- Peracetic Acid
- Turbidity
- Suspended solids

### Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Sludge
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Fish Farming
- Sea water
- Dairy

### Features

#### Graphic display and Keypad

128 by 64 pixel resolution monochrome display with graphic icons to show digital output status, Data logging, washing cycle, alarms. Simultaneous flashing values for the measurement (numeric + bargraph) and temperature readings. Analogue scrolling output values. Five control keys for instrument calibration and configuration.

#### Enclosure Box and Power Supply

Wall mounting ABS plastic material IP65 (144x144)  
 Panel mounting IP54 (96x96)  
 Universal Power Supply  
 100÷240 Vac 50/60 Hz

#### Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

### Data logging

Internal Flash Memory with records interval from 1 to 99 min. (near to 16000 records)

Visualization key for stored data in tabular and graphic form.

Type: Circular (F.I.F.O.) or Filling.

### RS485 Serial port

To set-up and to acquire/capture real time data or to download stored data on PC or laptop (Communication **Software Master Controller NET** required).

MODBUS RTU communication protocol

### USB port

To download recorded data on removable memory Usb Pen Drive (upon request).

### Measure Input

High measuring resolution with probe quality control.

Modular measuring system

Chlorine measure for sea water application.

### Digital Input

Dedicated to disable all controller output functions.

### Current outputs

#### 4÷20mA Galvanic isolation

Two independent programmable Output Measures with PID routine regulation.

### Relay Outputs

Four independent relays, two set points, one alarm remote output, on backwashing probe output.

On/OFF, Timed routine function setting.

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 1500 mV
Conductivity	0 ÷ 20 /200 /2.000 /20.000 /200.000 µS
Inductive Conductivity	0 ÷ 10.000 /10.000 /100.000 /999.999 µS
Dissolved Oxygen	0 ÷ 20,0 ppm or mg/l - 0 ÷ 200% SAT
Chlorine and Chlo. Dioxide	0 ÷ 0,50/1,00 /2,00 /5,00 /10,0 /20,0 /200,0 ppm
Hydrogen Peroxide	0 ÷ 500 /1000 /2000 /10.000 /100.000 ppm
Ozone (O3)	0 ÷ 0,5 /2,00 /5,00 /10,00 ppm
Peracetic Acid	0 ÷ 500 /2000 /10.000 /20.000 ppm
Turbidity	0,00 ÷ 1,00 /10,0 /100 NTU/FTU
Suspended Solids Turbidity	0,0 ÷ 4,00 /40,0 /400 /4.000 NTU/FTU - 0 ÷ 30 gr/l
Temperature	with PT100/PT1000 0 ÷ 100°C (32 ÷ 212 °F)

## Product line Kontrol 500 Single parameter

Code	Model	Description
<b>K500PR</b>	Kontrol PR 500	for pH or ORP values
<b>K500CD</b>	Kontrol CD 500	for Conductivity values
<b>K500ID</b>	Kontrol ID 500	for Inductive Conductivity values
<b>K500OX</b>	Kontrol OX 500	for Dissolved Oxygen values
<b>K500CL</b>	Kontrol CL 500	for Chlorine values
<b>K500T1</b>	Kontrol TB 500	for Turbidity values
<b>K500T2</b>	Kontrol TS 500	for Suspended Solid Turbidity values

The unit's Software enables the following measures:  
H<sub>2</sub>O<sub>2</sub> - O<sub>3</sub> - ClO<sub>2</sub> - C<sub>2</sub>H<sub>4</sub>O<sub>3</sub>

## Product line Kontrol 502 Double parameters

<b>K502PR</b>	Kontrol PR-PR 502	for pH/ORP - pH/ORP values
<b>K502PD</b>	Kontrol PR-CD 502	for pH/ORP - Conductivity values
<b>K502PO</b>	Kontrol PR-OX 502	for pH/ORP - Dissolved Oxyge values
<b>K502PC</b>	Kontrol PR-CL 502	for pH/ORP - Chlorine values
<b>K502CC</b>	Kontrol CD-CL 502	for Conductivity - Chlorine values
<b>K502TO</b>	Kontrol TB-OX 502	for Turbidity - Dissolved Oxygen values
<b>K502TX</b>	Kontrol TS-OX 502	for Suspended Solids Turbidity - Dissolved Oxygen values
<b>K502PI</b>	Kontrol PR-ID 502	for pH/ORP - Inductive Conductivity values



## Kontrol 200

### Single-parameter control instrument

The Kontrol 200-series are advanced controllers designed for simpler high-end applications. The units feature an independent proportional control output, probe quality checking and a variety of outputs. The user has full programming authority.

### Parameters

- pH / ORP
- Conductivity
- Dissolved Oxygen
- Chlorine
- Chlorine Dioxide
- Hydrogen Peroxide
- Ozone
- Peracetic Acid
- Turbidity

### Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Sludge
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Fish Farming
- Sea water
- Dairy

### Features

#### Graphic display and Keypad

128 by 64 pixel resolution monochrome display with graphic icons to show digital output status, washing cycle, alarms.

Simultaneous flashing values for the measurement (numeric + bargraph) and temperature readings.

Four control keys for instrument calibration and configuration.

#### Enclosure Box and Power Supply

Wall mounting ABS plastic material IP65 (144x144)

Panel mounting IP54 (96x96)

Universal Power Supply  
100>240 Vac 50/60 Hz

### Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

### Measure Input

High measuring resolution with probe quality control.

A modular measuring system

Chlorine measure in sea water application.

### Digital Input

Dedicated to disable all controller output functions

### Current outputs

#### 4÷20mA Galvanic isolation

One independent programmable Output Measures.

### Relay Outputs

Four independent relays, two set points, one alarm remote output, on backwashing probe output.

On/OFF, Timed routine function setting.

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 1500 mV
Conductivity	0 ÷ 20 /200 /2.000 /20.000 /200.000 µS
Inductive Conductivity	0 ÷ 10.000 /10.000 /100.000 /999.999 µS
Dissolved Oxygen	0 ÷ 20,0 ppm or mg/l - 0 ÷ 200% SAT (*)
Chlorine and Chlo. Dioxide	0 ÷ 0,50/1,00 /2,00 /5,00 /10,0 /20,0 /200,0 ppm
Hydrogen Peroxide	0 ÷ 500 /1000 /2000 /10.000 /100.000 ppm
Ozone (O3)	0 ÷ 0,5 /2,00 /5,00 /10,00 ppm
Peracetic Acid	0 ÷ 500 /2000 /10.000 /20.000 ppm
Turbidity	0,00 ÷ 40 NTU/FTU (**)
Temperature	with PT100/PT1000 0 ÷ 100°C (32 ÷ 212 °F)

(\*): Dissolved Oxygen probe Oxysens® only

(\*\*): Turbidimetric probe 462/SWP only

## Product line Kontrol 200 Single parameter

Code	Model	Description
<b>K200PR</b>	Kontrol PR 200	for pH or ORP values
<b>K200CD</b>	Kontrol CD 200	for Conductivity values
<b>K200ID</b>	Kontrol ID 200	for Inductive Conductivity values
<b>K200OX</b>	Kontrol OX 200	for Dissolved Oxygen values
<b>K200CL</b>	Kontrol CL 200	for Chlorine values
<b>K200TB</b>	Kontrol TB 200	for Turbidity values

By software it is available the following measures:  
H<sub>2</sub>O<sub>2</sub> - O<sub>3</sub> - ClO<sub>2</sub> - C<sub>2</sub>H<sub>4</sub>O<sub>3</sub>



# Kontrol 800

## Multi-parameter control instrument

The Kontrol 800 is a dedicated multi-parameter controller for complex applications that require a number of chemical parameters to be checked at the same time. The unit features independent proportional control output measures, two programmable frequency outputs, RS 485 serial port with MODBUS protocol, three relays outputs, probe quality checking and Data logging capability.

## Parameters

- pH / ORP
- Conductivity
- Chlorine
- Chlorine Dioxide

## Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Sludge
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Fish Farming
- Sea water
- Dairy

## Features

### Graphic display and Keypad

Simultaneous value of the measure, Temperature and Relay status.

4-line, 20-character Alphanumeric Display.

Seven control keys for instrument calibration and configuration.

### Enclosure Box and Power Supply

Wall mounting ABS plastic material IP65.

Universal Power Supply  
100÷240 Vac 50/60 Hz

### Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

### Data logging

Internal Flash memory to load record measures values.

Type: Circular (F.I.F.O.) or Filling.

### RS485 Serial port

For set-up and real-time data acquisition from remote or for stored data download on PC or laptop (Communication software **Sekonet** required).

MODBUS RTU communication protocol.

### Measure Input

High measuring resolution with probe quality control.

Modular measuring system.

Chlorine measure in sea water application.

### Digital Input

Double channel, Voltage Input and Reed level input to disable all function controller output.

### Current outputs

#### 4÷20mA Galvanic isolation

Two (2) programmable Output Measure.

### Frequency Outputs

1÷120 Pulse/Minutes open collector Isolation channel.

Two (2) programmable Output Measure.

### Relay Outputs

Three (3) independent relays,  
Three (3) set point measure with power contact.

One Alarm remote dry contact

One Set point Measure dry contact.

On/OFF, Timed, Proportional routine function setting.

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 2000 mV
Conductivity	1 ÷ 200/10 ÷ 2000/100 ÷ 20.000 µS
Chlorine (Amperometric Cell)	0 ÷ 5,00 ppm (*)
Chlorine and Chlo. Dioxide (Potentiostatic Cell)	0 ÷ 0,50 / 1,00 / 2,00 / 5,00 / 10,0 / 20,0 / 200,0 ppm
Temperature	with PT100/PT1000 0 ÷ 100°C (32 ÷ 212 °F)

(\*): Amperometric Chlorine CU+PT sensors

## Product line Kontrol 800 Single parameter

Code	Model	Description
<b>K800L01</b>	Kontrol CL 800	for Amperometric Chlorine values
<b>K800L06</b>	Kontrol CL <sub>p</sub> 800	for Free and Total Potentiostatic Chlorine values

## Product line Kontrol 800 Double parameters

<b>K800L02</b>	Kontrol PR 800	for pH/ORP - pH/ORP values
<b>K800L03</b>	Kontrol PC 800	for pH/Amperometric Chlorine values
<b>K800L04</b>	Kontrol PRC 800	for pH/ORP - Amperometric Chlorine values
<b>K800L05</b>	Kontrol PR+EC 800	for pH/ORP - Conductivity values
<b>K800L07</b>	Kontrol PC <sub>p</sub> 800	for pH + Potentiostatic Chlorine values
<b>K800L08</b>	Kontrol PRC <sub>p</sub> 800	for pH /ORP + Potentiostatic Chlorine values
<b>K800L09</b>	Kontrol PRC <sub>p</sub> +C <sub>A</sub> 800	for pH/ORP + Pot. and Amperometric Chlorine values



Photometer System



Photometer Light

# Photometer **System** Multi parameter photometer instrument

The Seko Photometer System is a DPD reference point for Chlorine control. The combination of water sampling and reagents ensure maximum measurement precision. The unit itself is a compact miniature analysis laboratory dedicated to Chlorine measurement.

Photometer **System**

## Parameters

- pH / ORP
- Free and Total Chlorine
- Combined Chlorine by software

## Applications

- Waste Water
- Drinking Water
- Boiler
- Legionella disinfection
- Crate Wash
- Dioxide Station
- Irrigation
- Swimming Pool
- Sea water

## Features

The unit has the following innovative features:

- New hydraulic device with water drain dedicated to chemical reagents used for chlorine measure. Therefore it allows to reduce the water amount used for chlorine measure. The water dedicated to pH and Redox probes it may be to restored in the compensating basin, while only the water with chemical DPD reagent will be discharged in special tank to observes the local law.
- Fast installation thanks to quick coupling for Inlet and Outlet water.
- Optical unit assure a High accuracy Chlorine measure with a 520 nm sensor and LED light device.

Moreover:

- The Peristaltic pump with 4 mechanical support assure chemical reagent saving.
- Reagent level controlled by level probes.
- The chemical powder to dilute before the use is a good solution safety to keep it ready in every place.

### Graphic display and Keypad

LCD STN 240x128 backlighted (Photometer System)  
 LCD STN 128x64 backlighted (Photometer Light)

Visualisation of: measurements (simultaneous up to 4 values + trend line), digital outputs condition, storage condition, malfunctions.

Using keypad with 4 embossed keys.



### Internal data logger

4 Mbit flash memory equal to 16000 records

Recording interval  
00:00 to 99:99 min

Type: circular / fill

Display: table / graph  
(1 for each parameter).

### Analogue outputs

1 for each measured parameter  
(excluding comb. chlorine)

Type: 0.00 / 4.00 to 20.00 mA  
Galvanically isolated

Programming limit:  
lower / upper / reverse

Maximum load: 500 Ohms - Alarm  
output NAMUR compliant 2.4 mA (with  
4÷20 mA range)

PID control function can be activated  
on the pH output

### Set point relay outputs

Two (2) for Primary measure + for pH  
measurement (only mod. 4001-3)

Programming for Hysteresis, working  
time and Daily hourly activation not  
subject to the measured value:

- ON - OFF

- 00.00 to 05:00 ppm Cl 2

- 00:00 to 14.00 pH

Working time: 000 to 999 sec.

Relays 5A resistive  
load up to 230 Vac

### Alarm Relay Output

Two (2) for Primary measure  
+ Two (2) for pH measurement  
(only mod. 4001-3)

Programming for Hysteresis, working  
time and Daily hourly activation not  
subject to the measured value:

- ON - OFF

- 00.00 to 05:00 ppm Cl 2

- 00:00 to 14.00 pH

Working time: 000 to 999 sec.

Relays 3A resistive load up to 230Vac

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 1500 mV
Chlorine (Photometric chamber)	0 ÷ 5,00 ppm (*)
Temperature	with PT100/PT1000 0 ÷ 100°C (32 ÷ 212 °F)

(\*): DPD Method

## Product line Photometer Light Multi parameters

Code	Model	Description
<b>SPL3CL</b>	Photometer	Free Chlorine, pH and Redox

## Product line Photometer System Single parameter

Code	Model	Description
<b>SPT2CL</b>	Photometer	Free Chlorine
<b>SPT2CT</b>	Photometer	Total Chlorine

## Product line Photometer System Multi parameters

<b>SPT3CL(*)</b>	Photometer	Free Chlorine and pH
<b>SPT4CL</b>	Photometer	Free Chlorine, pH and Redox
<b>SPT5CL</b>	Photometer	Free, Total and Combined Chlorine, pH, Redox

(\*): Sea water application on demand code **SPT3CLMW0001**



## Kontrol 40-42

## Single and multiple-parameter control instruments

The Kontrol 40 and 42 are single and multiple-parameter controllers respectively. These very user-friendly systems combine advanced performance and simple design. Single-parameter units are available in four different casings, ensuring perfect fit at the right price.

Kontrol 40-42

### Parameters

- pH / ORP
- Conductivity
- Chlorine
- Chlorine Dioxide
- Flow Rate

### Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Sea water

### Features

#### Graphic display and Keypad

Simultaneous value of the measure, Temperature and Relay status. 2-line, 16 character Alphanumeric Display. Four control keys for instrument calibration and configuration.

#### Enclosure Box and Power Supply

Four (4) mechanical box: Wall mounting PP (IP65)

Panel mounting:  
96x96 IP65 Front panel  
48x96 IP40  
Din-Rail (6 modules) IP40

Universal Power Supply  
100÷240 Vac 50/60 Hz and 24Vac/dc

### Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

### Measure Input

High measuring resolution with probe quality control.

Modular measuring system

Chlorine measure in sea water application

### Digital Input

Voltage Input to disable all function controller output.

### Current outputs

#### 4÷20mA Galvanic isolation

One(1) programmable measurement output.

### Relay Outputs

Two (2) independent function, two Set point Measure, dry contact.

Software-set alarm functions.

Routine function settings : ON/OFF, Timed or proportional

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 1500 mV
Conductivity	1 ÷ 200/10 ÷ 2000/100 ÷ 20000/200 ÷ 50000 µS
Chlorine (Amperometric Cell)	0 ÷ 5,00 ppm
Chlorine and Chlo. Dioxide (Potentiostatic Cell)	0 ÷ 0,50 / 1,00 / 2,00 / 5,00 / 10,0 / 20,0 / 200,0 ppm
Temperature	with PT100 0 ÷ 100°C (32 ÷ 212 °F)
Flow Rate	99 999,99 Liters/second (*)

(\*) Setting by software following unit measures: l/s, l/h, m<sup>3</sup>/h, GPM.

## Product line Kontrol 40 Single parameter

Code	Model	Description
<b>SPR040</b>	Kontrol 40	for pH/ORP values
<b>SCD040</b>	Kontrol 40	for Conductivity value
<b>SCL040</b>	Kontrol 40	for Potentiostatic Chlorine value
<b>SFX040</b>	Kontrol 40	for Flow Rate value

## Product line Kontrol 42 Double parameters

<b>K042PR</b>	Kontrol 42	for pH/ORP and pH/ORP values
<b>K042PD</b>	Kontrol 42	for pH/ORP and Conductivity values
<b>K042PC</b>	Kontrol 42	for pH/ORP and Chlorine values
<b>K042CF</b>	Kontrol 42	for Chlorine and Flow Rate values
<b>K042PF</b>	Kontrol 42	for pH/ORP and Flow Rate values
<b>K042DF</b>	Kontrol 42	for Conductivity and Flow Rate values



## Kontrol 20-22

## Single or multi-parameter control instruments

The Kontrol 20 and 22 are simplified, bare-bones single and multiple-parameter controllers respectively. These trustworthy systems combine reliable high-end performance and simple design. Single-parameter units are available in four different casings, ensuring perfect fit at the right price.

### Parameters

- pH / ORP
- Conductivity

### Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Reverse Osmosis
- Galvanic Process
- Irrigation
- Swimming Pool

### Features

#### Graphic display and Keypad

2-line, 16 character Alphanumeric Display.

Four control keys for instrument calibration and configuration.

#### Enclosure Box and Power Supply

Four (4) mechanical box:

Wall mounting PP (IP65)

Panel mounting:

96x96 IP65 Front panel

48x96 IP40

Din-Rail (6 modules) IP40

Universal Power Supply

100÷240 Vac 50/60 Hz

Kontrol 20-22

### Measure Input

High measuring resolution with probe quality control.

### Digital Input

Voltage Input to disable all function controller output.

### Current outputs 4÷20mA

One (1) programmable measure output.

### Relay Outputs

Two (2) independent functions, Set Point Measure, dry contact.

Software to set alarm functions.

ON/OFF routine function settings.

## Measure range

Code	Description
pH	0 ÷ 14,00 pH
ORP	± 1500 mV
Conductivity	1 ÷ 200/10 ÷ 2000/100 ÷ 20000 µS
Temperature	with PT100 0 ÷ 100°C (32 ÷ 212 °F)

## Product line Kontrol 20 Single parameter

Code	Model	Description
<b>SPR020</b>	Kontrol 20	for pH/Redox values
<b>SCD020</b>	Kontrol 20	for Conductivity value

## Product line Kontrol 22 Double parameters

<b>K022PR</b>	Kontrol 22	for pH and Redox values
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# pH/Redox Probes



## SPH-1 / SRH-1

### Field Application:

- General laboratory
- Drinking Water
- Swimming pools
- Water monitoring and control plan



### Features:

- Low maintenance sealed unit
- Gel filled reference cell
- BNC connection with Boot plastic Cover
- Cable length 6 or 1,5 meter
- Pellon Diaphragm high accuracy



## SPH-2

### Field Application:

- Waste water
- Drinking Water
- Cooling Towers
- Irrigation

### Features:

- Low maintenance sealed unit
- Gel filled reference cell
- S7 connection
- Pellon Diaphragm high accuracy



## SPH-3 WW SRH-3 PT

### Field Application:

- Waste water
- Drinking Water
- Cooling Towers
- Legionella disinfection
- Galvanic Process

### Features:

- Low maintenance sealed unit
- Gel filled reference cell
- S8 connection with PG 13,5 mm
- Glass Body
- Diaphragm open hole



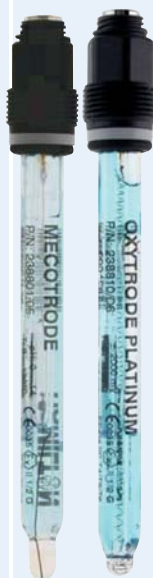
## SPH-4 HP

### Field Application:

- Waste water
- Drinking Water
- Reverse Osmosis
- Cleaning in place (CIP)
- Galvanic Process

### Features:

- Low maintenance sealed unit
- Gel filled reference cell
- S8 connection with PG 13,5 mm
- Glass Body for High Temperature Environmental
- Diaphragm 2 Sigle pore



## SPH-4 HT SRH-4 HT-PT

### Field Application:

- Ammonia application
- Chromium plating
- Reverse Osmosis
- Bisulphite application
- Galvanic Process

### Features:

- Low maintenance sealed unit
- Gel filled reference cell
- S8 connection with PG 13,5 mm
- Glass Body for High Pressure Environmental
- Three ceramic diaphragm type



## SPH-4 LC

### Field Application:

- Highly acidic solutions
- Chromium plating
- Reverse Osmosis
- Bisulphite application
- Galvanic Process

### Features:

- Low maintenance sealed unit
- Gel filled reference cell by External Refill
- S7 connection with PG 13,5 mm plastic nut
- Glass Body for low pressure Environmental
- Highly acidic solutions
- One Sleeve diaphragm type

# Measure range

Measurement range	Min. conductivity	Temperature range	Pressure range	Body material	Membrane material	Reference electrolyte	Diaphragm type	Electrical connection	Mechanical mounting
<b>SPH-1 1.5M</b>		Code <b>9900105001</b>						<b>pH Probes</b>	
2÷12	50 µS/cm	0÷60°C	0÷4 bar	Epoxy	Glass	GEL	1 Ceramic	1,5m cable + BNC	Standard Ø 12
<b>SPH-1 6M</b>		Code <b>9900105002</b>						<b>pH Probes</b>	
2÷12	50 µS/cm	0÷60°C	0÷6 bar	Epoxy	Glass	GEL	1 Standard	6m cable + BNC	Standard Ø 12
<b>SPH-2</b>		Code <b>9900105003</b>						<b>pH Probes</b>	
2÷12	50 µS/cm	0÷60°C	0÷6 bar	Epoxy	Glass	GEL	1 Standard	S7	PG 13.5
<b>SPH-3 WW</b>		Code <b>9900105005</b>						<b>pH Probes</b>	
2÷12	5 µS/cm	0÷80°C	0÷6 bar	Glass	Glass	GEL	1 Open hole	S8	PG 13.5
<b>SPH-4 HP</b>		Code <b>9900105006</b>						<b>pH Probes</b>	
0÷14	5 µS/cm	0÷130°C	0÷6 bar	Glass	Glass	GEL	2 Single Pore	S8	PG 13.5
<b>SPH-4 HT</b>		Code <b>9900105007</b>						<b>pH Probes</b>	
0÷14	5 µS/cm	0÷130°C at 6 bar	0÷16 bar at 25°C	Glass	Glass	GEL	3 Ceramic	S8	PG 13.5
<b>SPH-4 LC</b>		Code <b>9900105008</b>						<b>pH Probes</b>	
0÷14	0.2 µS/cm	-10÷40°C	0,5 bar	Glass	Glass	GEL	1 Sleeve	S7	PG 13.5
<b>SRH-1 -1.5M</b>		Code <b>9900105031</b>						<b>Redox Probes</b>	
±1000 mV	-	0÷60°C	0÷4 bar	Epoxy	Platinum wire	GEL	1 Ceramic	1,5m cable + BNC	Standard Ø 12
<b>SRH-1 -6M</b>		Code <b>9900105032</b>						<b>Redox Probes</b>	
±1000 mV	-	0÷60°C	0÷6 bar	Epoxy	Platinum wire	GEL	1 Standard	6m cable + BNC	Standard Ø 12
<b>SRH-3 PT</b>		Code <b>9900105033</b>						<b>Redox Probes</b>	
±2000 mV	-	0÷80°C	0÷6 bar	Glass	Platinum wire	GEL	1 Open hole	S8	PG 13.5
<b>SRH-4 HT - PT</b>		Code <b>9900105034</b>						<b>Redox Probes</b>	
±2000 mV	-	0÷130°C at 6 bar	0÷16 bar at 25°C	Glass	Platinum wire	GEL	3 Ceramic	S8	PG 13.5
<b>SRH-1 6M - AU</b>		Code <b>9900105083</b>						<b>Redox Probes</b>	
±2000 mV	-	0÷60°C	0÷6 bar	Epoxy	Gold	GEL	1 standard	6m cable + BNC	Standard Ø 12

pH/Redox Probes

\* **S7 connection:** it is a electrical connection only

\*\* **S8 connection:** S7 on the top electrical probe connection and PG 13.5 mm mechanical connection

# Conductivity Probes

The **seko** range of conductivity probes is specially designed for use in industrial environments in conjunction with **seko** measurement instruments. The various available models make it possible to cover an extremely wide measurement range. There are versions with temperature sensors and special versions with graphite or platinum probes, PTFE cell bodies and IP67 connectors.

Measurement of conductivity is performed by suspending the two metallic electrodes of the probe in the solution to be measured. The passage of the current between the two electrodes indicates the electrical resistance of the liquid, and therefore its conductivity.

The measurement is influenced by the temperature. In saline solutions, measurement variations of 2% / °C can occur. This variation can even reach 7% / °C. Therefore, conductivity probes without temperature sensors should only be used if the solution being tested is maintained at a temperature between 15°C and 25 °C, restricting the potential for error to 10%.

Note All the models are guaranteed for a maximum pressure of 6 bars.



## C-K1 PT

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Reverse Osmosis
- CIP
- Irrigation
- Fish Farming
- Dairy

### Features:

- Costant Cell: 1 cm<sup>-1</sup> or K=1
- Body material: Glass (130°C)
- Electrodes material: Platinum
- Mechanical Connection: Ø12 mm

**Without** temperature sensor



## CT-K5

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

### Features:

- Costant Cell: 0,1 cm<sup>-1</sup> or K=10
- Body material: PP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ¾ Gas M PP

**With** temperature sensor (PT100)



## C-K10/5 /1

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Irrigation

### Features:

- Costant Cell:
  - 0,1 cm<sup>-1</sup> or K=10
  - 0,2 cm<sup>-1</sup> or K=5
  - 1,0 cm<sup>-1</sup> or K=1
- Body material: PVC (60°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ½ Gas M Pvc

**Without** temperature sensor



## CT-K10

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

### Features:

- Costant Cell: 0,1 cm<sup>-1</sup> or K=10
- Body material: PP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ¾ Gas M PP

**With** temperature sensor (PT100)



## CT-K1

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

### Features:

- Costant Cell: 0,1 cm<sup>-1</sup> or K=10
- Body material: PP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ¾ Gas M PP

**With** temperature sensor (PT100)



# Measure range

Measurement range	Constant [C-K]	Temperature range	Pressure range	Body material	Mounting Process	Cable
<b>C-K10</b>	Code <b>9900101012</b>			<b>Without temperature Sensor</b>		
0,01÷500µS	C=0,1 cm-1 K=10cm	60°C	6(*)	PP-AISI 316	1/2" G.M.	5 m
<b>C-K5</b>	Code <b>9900101011</b>			<b>Without temperature Sensor</b>		
0,1÷1000µS	C=0,2 cm-1 K=5cm	60°C	6(*)	PP-AISI 316	1/2" G.M.	5 m
<b>C-K1</b>	Code <b>9900101010</b>			<b>Without temperature Sensor</b>		
1÷5000µS	C=1 cm-1 K=1cm	60°C	6(*)	PP-AISI 316	1/2" G.M.	5 m
<b>C-K1-PT</b>	Code <b>9900101013</b>			<b>Without temperature Sensor</b>		
1÷20000µS	C=1 cm-1 K=1cm	120°C	6(*)	Glass - Platinum	Ø 12 mm	6 m
<b>CT-K10</b>	Code <b>9900101103</b>			<b>(PT100) With temperature Sensor</b>		
0,01÷500µS	C=0,1 cm-1 K=10cm	80°C	6(*)	PP-AISI 316	3/4" G.M.	Plug (**)
<b>CT-K5</b>	Code <b>9900101102</b>			<b>(PT100) With temperature Sensor</b>		
0,5÷2000µS	C=0,2 cm-1 K=5cm	80°C	6(*)	PP-AISI 316	3/4" G.M.	Plug (**)
<b>CT-K1</b>	Code <b>9900101101</b>			<b>(PT100) With temperature Sensor</b>		
5÷5000µS	C=1 cm-1 K=1cm	80°C	6(*)	PP-AISI 316	3/4" G.M.	Plug (**)

## Conductivity Probes

(\*) The maximum pressure of 6 bars is guaranteed at 25 °C. As the temperature increases, the pressure decreases linearly and at 50° or 80 °C, the maximum pressure is 1 bar.

(\*\*) To be used in conjunction with CC series cables.

# Conductivity Probes



## CT-K1 G

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- CIP
- Irrigation
- Fish Farming

### Features:

- Costant Cell: 1 cm<sup>-1</sup> or K=1
- Body material: PVC (60°C)
- Electrodes material: Graphite
- Mechanical Connection: Ø12 mm

With temperature sensor (PT100)



## CT-K1-SS

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

### Features:

- Costant Cell: 1 cm<sup>-1</sup> or K=1
- Body material: PVDF (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ¾ Gas M PP

With temperature sensor (PT100)



## CT-K1-GR

### Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

### Features:

- Costant Cell: 1 cm<sup>-1</sup> or K=1
- Body materia:l PVC (60°C)
- Electrodes material: Graphite
- Mechanical Connection: ½ Gas M PVC

With temperature sensor (PT100)

## Measure range

Measurement range	Constant [C-K]	Temperature range	Pressure range	Body material	Mounting Process	Cable
<b>CT-K1-G</b>	Code <b>9900101124</b>					
5÷20000µS	C=1 cm-1 K=1cm	60°C	6(*)	PVC Graphite	PG 13,5 mm	7 m
					<b>(PT100) With temperature Sensor</b>	
<b>CT-K1-SS</b>	Code <b>9900316009</b> (5m) <b>9900316010</b> (10m)					
1÷20000µS	C=1 cm-1 K=1cm	100°C	6(*)	PTFE	1" G.M.	5 m or 10 m
					<b>(PT100) With temperature Sensor</b>	
<b>CT-K1-GR</b>	Code <b>9900316028</b> (5m) <b>9900316029</b> (10m)					
1÷20000µS	C=1 cm-1 K=1cm	50°C	6(*)	PVC	1/2" G.M.	5 m or 10 m
					<b>(PT100) With temperature Sensor</b>	

(\*) The maximum pressure of 6 bars is guaranteed at 25 °C.  
As the temperature increases, the pressure decreases linearly and at 50° or 80 °C, the maximum pressure is 1 bar.

Conductivity Probes

# Inductive Probes

The S411/IND series of inductive sensors has been engineered and developed to produce an electrode that is very powerful but at the same time competitive. The result has been obtained by moulding the sensor made using polypropylene reinforced with fibreglass.

This sensor offers all the advantages of the inductive cond. measurement method, including the absence of passivation of the conventional conductivity electrodes. All the sensors in the S411/IND range are temperature-compensated, and are also designed for inline, submersion or tank installation.



**S411/IND**



**S411/IND/E**



**S411/IND/T IN**



**S411/IND/T**

## Measure range

## Inductive Probes

Inductive Probes	SENSOR S411/IND
Temperature	-5 to 60 °C (without freezing)
Contact materials	Glass-reinforced polypropylene
Temp. compensation	PT1000 wires
Cable	Standard 5 metre
Connection	½" BSP male
Protection rating	IP67
Materials	PVC with Viton gaskets
Operating temperature	-5 to 60 °C (without freezing)
Submersion length	600 or 1200 mm
Assembly	Standard bracket or optional flange
Operating pressure	From vacuum to 6.5 bar (100 psi)
Conductivity Range	1000 µS to 1 Simens
Resolution	100 µS to 1000 µS
Code <b>6100011441</b>	

## Inductive Probes



# Measure range

## Dissolved Oxygen Probes

Dissolved Oxygen Probes	OXYSENS*	S423/C OPT (35mm)
<b>Measuring method</b>	Measurement of the electrical current affected by the partial pressure of oxygen	Optical measure by luminescence
<b>Measurement range</b>	40ppb÷40ppm	0,00 to 20,00 mg/L / 0,00 to 20,00 ppm / 0-200% [Resolution 0,01]
<b>Accuracy</b>	< 0.5% [relative to current in air]	± 0,1mg/L / ±0,1 ppm / ±1%
<b>Response time</b>	98% Max. 60 s at 25 °C	90% of the value in less than 60 seconds
<b>Required flow</b>	≥ 0.03 m/s	No necessary move
<b>Temperature sensor</b>	NTC 22 kOhm	CTN
<b>Storage temperature</b>	-10÷60°C	-10÷60°C
<b>Temperature range</b>	0÷60°C	0÷50°C
<b>Pressure range</b>	0÷4 Bar	0÷5 Bar
<b>Body material</b>	Stainless steel 1.4435, silicone, EPDM	Stainless Steel INOX 316L
<b>Membrane material</b>	OPTIFLOW	No membrane
<b>Reference electrolyte</b>	Silver platinum combination	No electrolyte
<b>Electrical connection</b>	5 m cable	10 m cable
<b>Mechanical mounting</b>	PG 13.5	35mm
<b>Measuring method</b>	Measurement of the electrical current affected by the partial pressure of oxygen	Optical measure by luminescence
<b>Signal interface</b>	-	Modbus RS-485 (standard) and SDI-12 (option)
<b>Polarization voltage</b>	-670 ± 50 mV	5 to 12 volts
<b>Application fields</b>	Water applications: Waste water treatment, swimming pools, fish farms; composting facilities	Urban wastewater treatment, industrial effluent treatment, surface water monitoring, drinking water
	Code <b>9900316005</b>	Code <b>9900105091</b> 35mm

## Measure range Flow Sensor

Flow Sensor	SFW	SFWE																
<b>Working range</b>	0.15 to 8m/s [0.5 to 25ft/s]	0.15 to 8m/s [0.5 to 25ft/s]																
<b>Minimum reynolds</b>	4500	-																
<b>Linearity</b>	±0.75% of full scale	±1% of reading +1.0 cm/s																
<b>Repeatability</b>	±0.5% of full scale	±0.5% of reading																
<b>Maximum process Pressure/Temperature</b>	<table border="1"> <thead> <tr> <th>PVC-Cbody:</th> <th>PVDFbody:</th> <th>Brass&amp;SSbody:</th> </tr> </thead> <tbody> <tr> <td>10 bar - 25°C</td> <td>10 bar - 25°C</td> <td>25 bar - 120°C</td> </tr> <tr> <td>1.5 bar - 80°C</td> <td>1.5 bar - 100°C</td> <td>25 bar - 100°C</td> </tr> </tbody> </table>	PVC-Cbody:	PVDFbody:	Brass&SSbody:	10 bar - 25°C	10 bar - 25°C	25 bar - 120°C	1.5 bar - 80°C	1.5 bar - 100°C	25 bar - 100°C	16 bar - 25°C 8.6 bar - 70°C							
PVC-Cbody:	PVDFbody:	Brass&SSbody:																
10 bar - 25°C	10 bar - 25°C	25 bar - 120°C																
1.5 bar - 80°C	1.5 bar - 100°C	25 bar - 100°C																
<b>Materials</b>	<table border="1"> <thead> <tr> <th>Sensor body:</th> <th>O-rings:</th> <th>Rotor:</th> <th>Shaft:</th> <th>Bearings:</th> </tr> </thead> <tbody> <tr> <td>CPVC or PVDF or 316L SS</td> <td>EPDM or FPM</td> <td>ECTFE (Halar)</td> <td>Ceramic (Al<sub>2</sub>O<sub>3</sub>)</td> <td>Ceramic (Al<sub>2</sub>O<sub>3</sub>)</td> </tr> </tbody> </table>	Sensor body:	O-rings:	Rotor:	Shaft:	Bearings:	CPVC or PVDF or 316L SS	EPDM or FPM	ECTFE (Halar)	Ceramic (Al <sub>2</sub> O <sub>3</sub> )	Ceramic (Al <sub>2</sub> O <sub>3</sub> )	<table border="1"> <thead> <tr> <th>Sensorbody:</th> <th>O-rings:</th> <th>Electrodes:</th> </tr> </thead> <tbody> <tr> <td>316L SS PVDF</td> <td>EPDM or FPM</td> <td>316L SS</td> </tr> </tbody> </table>	Sensorbody:	O-rings:	Electrodes:	316L SS PVDF	EPDM or FPM	316L SS
Sensor body:	O-rings:	Rotor:	Shaft:	Bearings:														
CPVC or PVDF or 316L SS	EPDM or FPM	ECTFE (Halar)	Ceramic (Al <sub>2</sub> O <sub>3</sub> )	Ceramic (Al <sub>2</sub> O <sub>3</sub> )														
Sensorbody:	O-rings:	Electrodes:																
316L SS PVDF	EPDM or FPM	316L SS																
<b>Outputs</b>	Square wave, frequency: 45 Hz per m/s [13.7 Hz per ft/s] nominal 4÷20 mA with K330 output kit mounted	4÷20 mA - Isolated Square wave, frequency: 0-500Hz Open collector: flow direction																
<b>Power supply</b>	5 to 24 VDC ± 10% regulated	12 to 24 VDC ± 10% regulated (reverse polarity and short circuit protected)																
<b>Application fields</b>	Water and industrial waste water treatment, water distribution, processing and manufacturing industry, textile finishing, chemical production, cooling and Heating systems, swimming pools and Spas.	Water and waste water treatment, raw water intake, industrial water distribution, textile industry, swimming pools, Spas and aquariums, HVAC, processing and manufacturing industry.																
	Code <b>990031701X</b> PVC SFW1 / SFW2 Code <b>990031704X</b> Stainless Steel SFW1 / SFW2	Code <b>9900317040</b> Mag SFW1 Code <b>9900317041</b> Mag SFW2																

# Potentiostatic Probes

## CLPROBES

This range consists of potentiostatic amperometric probes to measure free or total chlorine for applications such as: water treatment, swimming pools, industrial applications and more.

The wide range of probes allows a better choice depending on the parameter to be tested, thus obtaining a more accurate measurement.

- The two-wire interface allows quick and easy installation.
- Calibration of the probe is guided by the **Kontrol CL500** instrument .



High pressure Probe sensors

Potentiostatic Probes

## Measure range

Models	F-CL 1	F-CL 2	F-CL 3	F-CL 4	F-CL 5	F-CL 6	F-CL 7	F-CL 8	F-CL 9	F-CL 10	F-CL 11
Measure range	0÷10 ppm			0÷200 ppm	0÷2 ppm	0÷1 ppm	0÷5 ppm	0÷1 ppm	0÷5 ppm	0÷0,5 ppm	0÷5 ppm
pH range	4÷8 pH	4÷12 pH	4÷11 pH	4÷8 pH		5÷9 pH				4÷8 pH	4÷8 pH
Response time	1 minutes - 90% of measure (100% of measure after 15 minutes)										
Flow rate	30 L/h					80 L/h				30 L/h	
Temperature	45 °C					50 °C		70 °C		45 °C	
Pressure	1 bar	0,5 bar				5 bar (*)		8 bar (*)		0,5 bar	1 bar
Sensor material	Silver chlorine with gold					Gold				Silver chlorine with gold	
Membrane	M20	M48	M48 G	M20	M20	-				M20	M20
Electrolyte	ECL1	ECC1	ECS1 Gel	ECL1	ECL1	EAS1 Gel				ECL1	ECL1
Electrical connection	Wire connection with screw										
Mechanical mounting	Ø 24mm										
Application fields	Inorganic Free Chlorine	Organic Free Chlorine	Inorganic Free Chlorine								
Code	9900101140	9900101141	9900101142	9900101146	9900101148	9900101149	9900101150	9900101152	9900101153	9900101159	9900101173

(\*) with Snap-Ring

F-CL 2 • F-CL 3 • T-CL 1 can be used in sea water application with special electrolytes

# and **Modular probe** holder

CL Probes Holder

















## PSS-PLEXI

### Features

- In/Out: 8x12 mm (tube)
- Material Plexiglas without color
- Hydraulic - **By Pass**
- Pressure **5 bar**
- Temperature **60°C**

- Code **9900103047** PSS-PLEXI [FLUX/PH]
- Code **9900103048** PSS-PLEXI [FLUX/PH/RX]
- Code **9900103049** PSS-PLEXI [FLUX/CL-A]
- Code **9900103050** PSS-PLEXI [FLUX/PH/CL-A]
- Code **9900103051** PSS-PLEXI [FLUX/PH/RX/CL-A]
- Code **9900103052** PSS-PLEXI [FLUX/PH/CL-P]
- Code **9900103053** PSS-PLEXI [FLUX/CL-P]
- Code **9900103054** PSS-PLEXI [FLUX/PH/RX/CL-P]
- Code **9900103055** PSS-PLEXI [FLUX/PH/RX/CL-A/CL-P]
- Code **9900103056** PSS-PLEXI [FLUX/CL-P/CL-P]

F-CL12	F-CL13	T-CL 1	T-CL 2	D-CL	D-CL 2	D-CL 3	PAA 1	H <sub>2</sub> O <sub>2</sub> 1	H <sub>2</sub> O <sub>2</sub> 2	O <sub>3</sub> 1	O <sub>3</sub> 2	BR 1
0÷2 ppm		0÷10 ppm	0÷5 ppm	0÷10 ppm	0÷1 ppm		0÷2000 ppm	0÷200 ppm	0÷500 ppm	0÷2 ppm	0÷5 ppm	0.05÷10 ppm
4÷12 pH	4÷11 pH	4÷14 pH		1÷14 pH	5÷9 pH		2÷11 pH		1÷14 pH		6.5÷9.5 pH	
1 minutes - 90% of measure (100% of measure after 15 minutes)												
30 L/h				80 L/h			30 L/h					
45 °C				50 °C		70 °C	45 °C					
0,5 bar				1 bar	5 bar (*)	8 bar (*)	1 bar	1 bar		1 bar		0,5 bar
Silver chlorine with gold					Gold			Silver chlorine with gold				
 M48	 M48 G	 M48	 M48	 M20	-			 M7N	 M20	 M20	 M48	
 ECC1	 ECS1 Gel	 ECP1 Gel	 ECP1 Gel	 EDC41	EAS1 Gel			EPS7/W		EOZ1		EBR1 Gel
Wire connection with screw												
Ø 24mm												
Organic Free Chlorine	Inorganic Free Chlorine	Total Chlorine		Chlorine Dioxide			Peracetic Acid	Hydrogen Peroxide		Ozone		Bromine
Code <b>9900101174</b>	Code <b>9900101177</b>	Code <b>9900101143</b>	Code <b>9900101172</b>	Code <b>9900101144</b>	Code <b>9900101151</b>	Code <b>9900101154</b>	Code <b>9900101157</b>	Code <b>9900101158</b>	Code <b>9900101156</b>	Code <b>9900101175</b>	Code <b>9900101176</b>	Code <b>9900101179</b>

## Potentiostatic Chlorine Probes

# Turbidimetric Probes

## and **Suspended Solid** probes

The principle of measurement is the deviation of light produced by suspended particles in the liquid. Thanks to the dual sensor is possible to make measurements of turbidity at low and very low concentrations with high accuracy and repeatability.

Avoiding contact with the measuring liquid, the optical LED technology make the system stable over time and minimize the need for re-calibration. The cell is installed directly in line, the maximum allowable pressure is 4 or 6 bar, pipe or bypass. The flow velocity does not affect the measurement.

## Features and Benefits

Reliable concentration measurement using optical measuring process

Infrared light pulsing beams scattering method

Black rigid PVC sensor body

No mechanically moving parts

Measured value pre-processing in sensor resulting in low signal transmission sensitivity



Turbidimetric probes

### S462/PVC/SWP

Field Application:

- Waste water
- Drinking Water
- Swimming pool
- Sewage Treatment

#### Features:

- Black Plastic Body
- Turbidity Measure with Led light with

#### Resistors sensor

Threaded Connection 2 1/2" F GAS  
Two cables included



Turbidimetric probes

### S462/SS

Field Application:

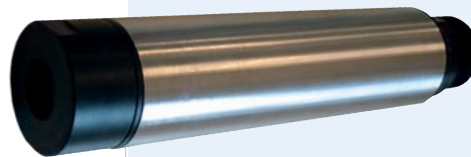
- Sewage Treatment
- Drinking Water
- Waste water
- Cleaning in place

#### Features:

- SS AISI 316 material
- Solid Measure with Led light with Resistors sensor
- Threaded Connection 2 1/2" M GAS
- Two cables included

#### Resistors sensor

Threaded Connection 1" GAS  
Cables included



Turbidimetric probes

### S461/T

Field Application:

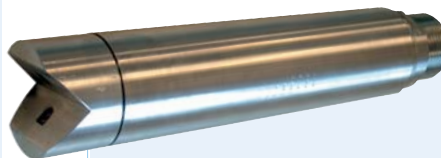
- Sewage Treatment
- Sludge application
- Waste water
- Fish farming

#### Features:

- SS AISI 316 material
- Turbidity Measure with Led light with Resistors sensor
- Threaded Connection 1" GAS
- Cables included

#### Resistors sensor

Threaded Connection 1" GAS  
Cables included



Suspended Solids probes

### S461/S

Field Application:

- Sewage Treatment
- Sludge application
- Waste water

#### Features:

- SS AISI 316 material
- Solid Measure with Led light with Resistors sensor
- Threaded Connection 1" GAS
- Cables included

#### Resistors sensor

Threaded Connection 1" GAS  
Cables included



## Measure range

Measurement range	Measurement method	Temperature range	Pressure range	Body material	Power supply	Electrical connection	Threaded connection	Applications field
<b>S462/PVC</b> Code <b>9900316021</b>				<b>Turbidimetric Probes</b>				
0,00÷100 NTU/FTU	Scattering at 180° Light absorption	0÷45 °C	0÷6 bar	PVC black Transparent PVC door	12÷24 Vdc	2 cables 5m	2½" F	- Water treatment plants , downstream of filtration and decantation. Process section; - Aging facilities of wastewater reuse for agricultural or industrial purposes; - Food industry particularly in the production of beverages, wine, beer etc.; - Pool water.
<b>S462/SS</b> Code <b>9900316006</b>				<b>Turbidimetric Probes</b>				
0,00÷100 NTU/FTU	Scattering at 180° Light absorption	0÷90 °C	0÷6 bar	Stainless Steel INOX 316 Tempered glass window	12÷24 Vdc	5m cable	2½" M	- Food industry particularly in the production of beverages, wine, beer etc.; - Pool water.
<b>S461/T</b> Code <b>9900316022</b>				<b>Turbidimetric Probes</b>				
0,00÷/4 /40 /400 /4000	Scattering at 90° Light absorption	0÷60 °C	0÷4 bar	Stainless Steel INOX 316 Special Optical Glass or Viton	12÷24 Vdc	10m cable	1" GAS	Wastewater, primary water, industrial water, recirculating water.
<b>S462/SWP</b> Code <b>9900316024</b>				<b>Turbidimetric Probes</b>				
0,00÷40 NTU/FTU	Scattering at 180° Light absorption	0÷45 °C	0÷6 bar	PVC black Transparent PVC door	12÷24 Vdc	2 cables 5m	2½" F	Pool water

## Turbidimetric Probes

## Measure range

Measurement range	Measurement range	Temperature range	Pressure range	Body material	Power supply	Electrical connection	Threaded connection	Applications field
<b>S461/S</b> Code <b>9900316025</b>				<b>Suspended Solid Probes</b>				
20 gr/l	Scattering at 90° Light absorption	0÷60 °C	0÷4 bar	Stainless Steel INOX 316 Special Optical Glass or Viton	12÷24 Vdc	10m cable	1" GAS	Wastewater, primary water, industrial water, recirculating water.

## Suspended Solid Probes

# Suspended Solid Probes

## Suspended Solid Probe

The 7520 SAV and 7540 SRH sensors are used for optical solids content measurement in turbid water for up to 150g solid matter/l.

### Applications

- Solids content measurement of suspended matter in sewage treatment plants: Primary sludge, digested sludge, thickened sludge, Inflow to centrifuge / press.
- Industrial quality control.

### Features and Benefits

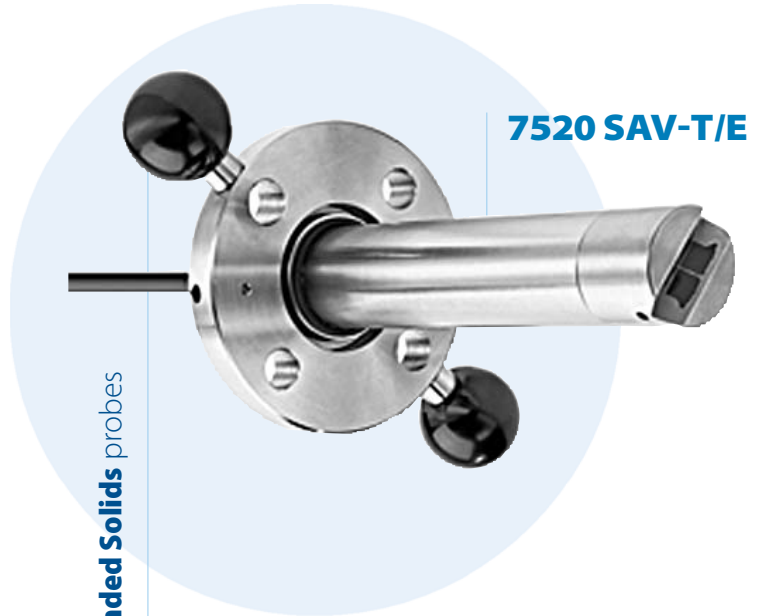
Reliable concentration measurement using optical measuring process.

Infrared light pulsing beams scattering method.

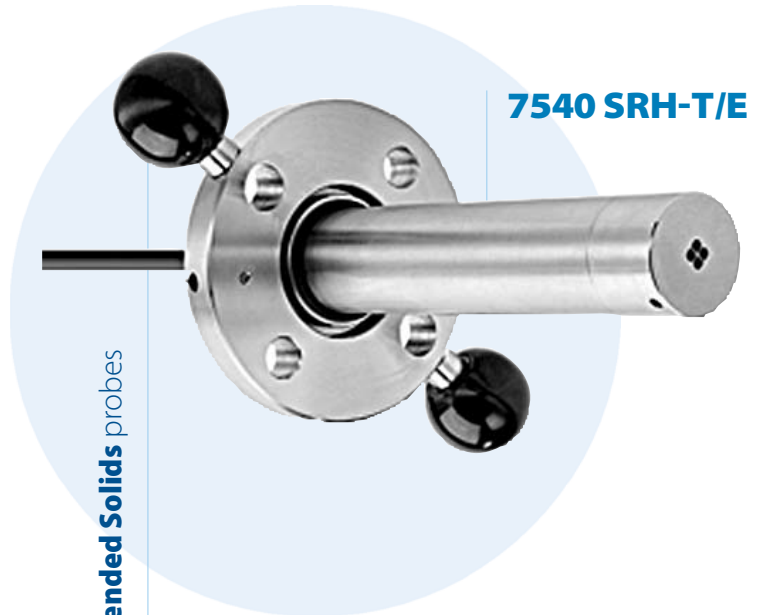
Black rigid PVC sensor body.

No mechanically moving parts.

Measured value pre-processing in sensor resulting in low signal transmission sensitivity.



Suspended Solids probes



Suspended Solids probes

# Measure range

Suspended Solid Probes		7520 SAV-T/E	7540 SRH-T/E
<b>Mechanical data</b>	Dimension (LxØ) <b>Immersion type</b>	139 x 38 Ø mm	134 x 38 Ø mm
	Dimension (LxØ) <b>Installation type</b>	220 x 38 Ø mm	220 x 38 Ø mm
	Weight <b>Immersion type</b>	Approx. 1Kg	Approx. 1Kg
	Weight <b>Installation type</b>	Approx. 3Kg	Approx. 3Kg
<b>Materials</b>	<b>Sensor Body</b>	Stainless steel SS 316 Ti	Stainless steel SS 316 Ti
	<b>Sight glass</b>	Epoxy resin	Epoxy resin
	<b>O-rings</b>	Viton®	Viton®
<b>Measurement range</b>	<b>Measuring principle</b>	Light absorption method	Backscatter light method
	<b>Optical components</b>	Light source 2 LEDs detectors 2 photodiodes	Light source 2 LEDs detectors 2 photodiodes
	<b>Measuring light</b>	Infrared light at 880 nm absorption maximum	Infrared light at 880 nm absorption maximum
	<b>Measuring range</b>	0÷50g solid matter/l, dependent on sludge type	10÷150g solid matter/l, dependent on sludge type
	<b>Accuracy</b>	< 1% of measuring range end value	< 1% of measuring range end value
	<b>Reference</b>	Using four-beam pulsed light method	Using four-beam pulsed light method
	<b>Cable lengths</b>	T version 13m E version 1m + 10m extension cable	T version 13m E version 1m + 10m extension cable
	<b>Calibration</b>	With silica standard	With silica standard
<b>Operating conditions</b>	<b>Op. temperature</b>	0÷150°C	0÷150°C
	<b>Op. pressure</b>	max 6 bar	max 6 bar
	<b>Protection</b>	IP 68	IP 68
		<b>On demand</b>	<b>On demand</b>

## Suspended Solid Probes

# Cables, buffer solutions and probe accessories

## Immersion probe holders

# Probe Accessories

Sensors for measuring pH, Redox and Conductivity must be installed in the system using special probe holders that ensure the correct mechanical protection and degree of impermeability. The pH and Redox measurement probes can be submerged in tanks, inserted in pipes or placed in sample draw down containers (Catch Pots).

The immersion models with adjustable flange can be used in conjunction with a counter-flange which allows quick and easy installation and removal. The P-IG range with a floating platform adapts to the varying liquid level of deep water tanks. The polypropylene versions PIR-2-PP-xxx can house two sensors, e.g. pH and Redox. It is not recommended to use PH and/or Redox sensor in the same probe holder as a conductivity cell.



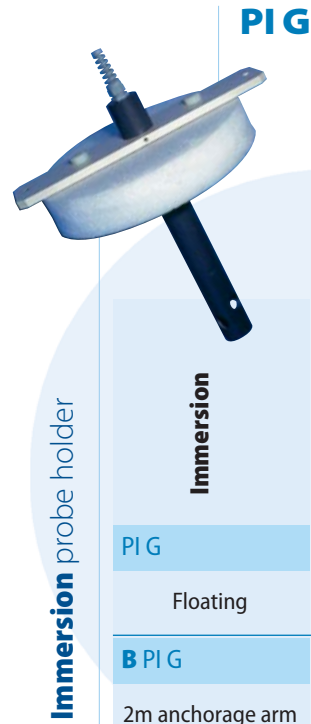
Immersion	No. of probes	Max Temperature	Material
<b>PI PVC 400</b>	Code <b>9900100111</b>		
400 mm	1	40°C	PVC
<b>PI PVC 800</b>	Code <b>9900100112</b>		
800 mm	1	40°C	PVC
<b>PI PVC 1000</b>	Code <b>9900100115</b>		
1000 mm	1	40°C	PVC
<b>PI PVC 1500</b>	Code <b>9900100113</b>		
1500 mm	1	40°C	PVC
<b>PI PVC 2000</b>	Code <b>9900100116</b>		
2000 mm	1	40°C	PVC



Immersion	No. of probes	Max Temperature	Material
<b>PIR PVC 200</b>	Code <b>9900100101</b>		
100÷250 mm	1	40°C	PVC
<b>PIR PVC 400</b>	Code <b>9900100102</b>		
100÷450 mm	1	40°C	PVC
<b>PIR PVC 800</b>	Code <b>9900100103</b>		
100÷850 mm	1	40°C	PVC
<b>PIR PVC 1000</b>	Code <b>9900100105</b>		
100÷1050 mm	1	40°C	PVC
<b>PIR PVC 1500</b>	Code <b>9900100106</b>		
100÷1550 mm	1	40°C	PVC



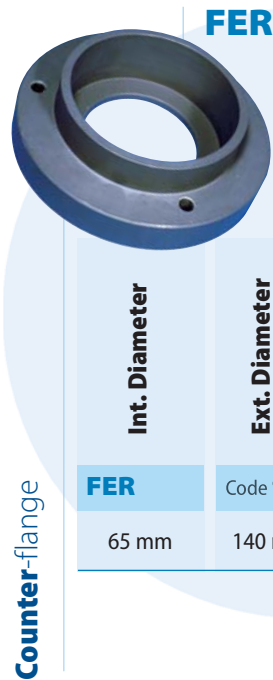
Immersion	No. of probes	Max Temperature	Material
<b>PIR 2 PP 400</b>	Code <b>9900100121</b>		
100÷450 mm	2	80°C	PP
<b>PIR 2 PP 800</b>	Code <b>9900100122</b>		
100÷850 mm	2	80°C	PP
<b>PIR 2 PP 1000</b>	Code <b>9900100124</b>		
100÷1050 mm	2	80°C	PP



Immersion	No. of probes	Max Temperature	Material
<b>PI G</b>	Code <b>9900100131</b>		
Floating	1	40°C	PVC
<b>B PI G</b>	Code <b>9900100132</b>		
2m anchorage arm	-	40°C	PVC



Immersion	No. of probes	Max Temperature	Material
<b>PICIR PP 400</b>	Code <b>9900100141</b>		
100÷450 mm	1	80°C	PP
<b>PICIR PP 800</b>	Code <b>9900100142</b>		
100÷850 mm	1	80°C	PP
<b>PICIR PP 1000</b>	Code <b>9900100144</b>		
100÷1050 mm	1	80°C	PP
<b>PICIR PP 1500</b>	Code <b>9900100145</b>		
100÷1550 mm	1	80°C	PP



for quick removal

Int. Diameter	Ext. Diameter	Max Temperature	Connection	Material
<b>FER</b>	Code <b>9900100133</b>			
65 mm	140 mm	40°C	4 holes Ø 6 mm	PP

### Probe holders with 3/4" probe attachment without protection

These can house conductivity probes with threaded 3/4" G. Attachment with output cable or IP67 connector.

# Cables, buffer solutions and probe accessories

## Accessories

### Probe Accessories



Back wash probe holder

PIA PVC

Immersion	No. of probes	Max Temperature	Max Pressure	1/h Min - Max
<b>PIA PVC 400</b>	Code <b>9900100151</b>			
400 mm	1	40°C	2÷6	100÷600
<b>PIA PVC 800</b>	Code <b>9900100152</b>			
800 mm	1	40°C	2÷6	100÷600

### Immersion probe holders with spray cleaning

These special probe holders can be connected with a cleaning liquid injection unit. Regular cleaning of the probe ensures linearity and stability of the measurement over time, preventing the need for time-consuming manual intervention.



By-Pass probe holder

PSS 7 Single



PSS 7A



PSS 7

Connection to the process	No. o probes	Max Temperature	Max Pressure
<b>PSS 7 Single</b>	Code <b>9900103021</b>		
By-pass	1	40°C	6 bar
<b>PSS 7</b>	Code <b>9900103008</b>		
By-pass	3	40°C	6 bar
<b>PSS 7A</b>	Code <b>9900103010</b>		
By-pass	3	40°C	6 bar

### Tap probe holders

Tap probe holders are used for in-line measurements where part of the sample is re-directed from the main pipe to the probe holder. The water can be drawn off into the sampling circuit at a pressure of 6 bars.

**PSS-EC**

Outflow probe holder



**Outflow probe holders for conductivity probes**

Bypass probe holder for conductivity probe model CTK1, 5 and 10

**Made of black PVC with 3/4" mechanical connection and 1" GAS IN/OUT hydraulics.**

OUTFLOW SECTION (PSS-COND-T)

Code **0000126035**

**PSS 3**



**SPP**



**SPP FIL**



Pressurized probe holder

Connection to the process	Mechanical Connection	Max Temperature	Max Pressure	Material
<b>PSS 3</b> 1/2" G.M.	Code <b>9900106670</b> PG 13,5 or Ø 12 mm	60°C	7 bar	PVC
<b>SPP</b> 1" G.F.	Code <b>9900100134</b> PG 13,5	60°C	16 bar	PP + PVC
<b>SPP FIL</b> 3/4" or 1" 1/4 G.M.	Code <b>9900100135</b> PG 13,5	80°C	16 bar	PP

**Pressurized probe holders**

Pressurised probe holders are used to immerse the probe directly into the pipe where the sample to be measured passes. The probe must always be positioned vertically or slanting in the direction of the flow at a maximum of 45°. The probe holder connection line must be fitted between two isolation valves (input and output) in order to permit the prevention of the flow during maintenance of the probes.

# Cables, buffer solutions and probe accessories

## Accessories

### Probe Accessories

Temperature sensor



Connection	Mechanical Connection	Material
<b>PT 100 NUT</b> 1 m 2-wire cable	Code <b>9900101178</b> 3/4" GAS M	PVC
<b>PT 100 NUT</b> 1 m 2-wire cable	Code <b>9900101113</b> 1/2" GAS M	PVC
<b>PT 100V</b> 5 m 3-wire cable	Code <b>9900105061</b> Standard Ø 12	Pyrex
<b>PT 100V PG</b> 6 m 3-wire cable	Code <b>9900105062</b> PG 13,5	Pyrex

### Temperature probes

In order to correctly measure the pH in environments with variable temperatures, it is necessary to correct the response error of the probe resulting from temperature change. The measuring instrument must therefore be connected to a special temperature sensor.

**Max Pressure 7 bar**

Electrical surge suppressor



**RNC**

**Electrical surge suppressor**  
Allows the elimination of Eddy currents  
AISI 316 material - Ø 12 mm.

Code **9900101134**





Probe cables

### Probe cables with S7 heads

(\*) **HT** - High Quality Cable for higher protection from electrical interference.

Length	Type of Cable	Terminal block
<b>CE 1/B</b>	Code CE <b>9900108001</b> CEB <b>9900109001</b>	
1 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 5/B</b>	Code CE <b>9900108003</b> CEB <b>9900109003</b>	
5 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 10/B</b>	Code CE <b>9900108004</b> CEB <b>9900109004</b>	
10 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 20/B</b>	Code CE <b>9900108006</b> CEB <b>9900109006</b>	
20 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 10 HT<sup>®</sup>/B</b>	Code CE <b>9900110001</b> CEB <b>9900110101</b>	
10 mt.	Mod. HT <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 20 HT<sup>®</sup>/B</b>	Code CE <b>9900110002</b> CEB <b>9900110102</b>	
20 mt.	Mod. HT <b>5 mm</b>	Crimping BNC Soldered BNC
<b>CE 30 HT<sup>®</sup>/B</b>	Code CE <b>On demand</b> CEB <b>9900110103</b>	
30 mt.	Mod. HT <b>5 mm</b>	Crimping BNC Soldered BNC



Probe cables

### Cables for CTK Probe

with 4-pole connectors

Length	Version	No. poles
<b>CC 5</b>	Code <b>9900110111</b>	
5 mt.	standard	4
<b>CC 10</b>	Code <b>9900110112</b>	
10 mt.	standard	4
<b>CC 15</b>	Code <b>9900110113</b>	
15 mt.	standard	4

# Cables, buffer solutions and probe accessories

## Accessories

### Probe Accessories



**PE 10/B**

Probe cables

Extension Cables for  
**BNC-F Probe**  
**BNC-M Probe**

(\*) **HT** - High Quality Cable for higher protection from electrical interference.

Length	Type of Cable	Terminal block
<b>PE 10/B</b>	Code PE <b>9900108007</b> PEB <b>9900109007</b>	
10 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>PE 20/B</b>	Code PE <b>9900108008</b> PEB <b>9900109008</b>	
20 mt.	Mod. RG58 <b>5 mm</b>	Crimping BNC Soldered BNC
<b>PE 20 HT<sup>®</sup>/B</b>	Code PE <b>9900110004</b> PEB <b>9900110104</b>	
20 mt.	Mod. HT <b>5 mm</b>	Crimping BNC Soldered BNC
<b>PE 30 HT<sup>®</sup>/B</b>	Code PE <b>9900110005</b> PEB <b>9900110105</b>	
30 mt.	Mod. HT <b>5 mm</b>	Crimping BNC Soldered BNC



**ST PH**

**ST MS**

**ST RX**

Certified buffer solutions

The precision and reliability of a pH, Redox or Conductivity measurement is determined by the buffer solution used for calibrating the probe. The special double-plug container ensures that a new unpoluted buffer is always available.

Buffer solution

Solution	Value	Quantity
<b>ST PH 4</b>	Code <b>9900122007</b>	
pH	4,00 pH 20 °C	250 ml
<b>ST PH 7</b>	Code <b>9900122008</b>	
pH	7,00 pH 20 °C	250 ml
<b>ST PH 9</b>	Code <b>9900122009</b>	
pH	9,22 pH 20 °C	250 ml
<b>ST RX 465</b>	Code <b>9900122010</b>	
Redox	465 mV 25 °C	250 ml
<b>ST MS 8</b>	Code <b>9900122018</b>	
Conductivity	84 µS/cm 25°C	500 ml
<b>ST MS 14</b>	Code <b>9900122019</b>	
Conductivity	1423 µS/cm 25°C	500 ml
<b>ST MS 128</b>	Code <b>9900122020</b>	
Conductivity	12880 µS/cm 25°C	500 ml

Signal amplifiers



**ASV**

### Signal amplifiers

#### Battery-powered live ASV signal amplifier

In order to connect a pH or Redox measurement probe at a distance of over 15 meters, it is necessary to use the ASV signal amplifier to be connected between the probe cable and the extension cable of the measurement instrument.

Measurement	Function	Output	Power supply
ASV	Code <b>TPM032PX0000</b>		
pH / Redox	Amplifier	Voltage	Battery lasts 4 years

### Dehumidifier and reduction flange for Turby Sensor



Reduction Flange

#### REDUCTION FLANGE

2"1/2 to 1/2" GAS F IN/OUT

Code **9900316011**



DEHUMIDIFIER

#### DEHUMIDIFIER

Power supply 230 Vac 50Hz  
4x6 mm hydraulic connections

Code **9900316012**

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