meters and testers for water analysis

pH - ORP - Conductivity - TDS - Salinity - Turbidity - Dissolved oxygen

APERA INSTRUMENTS

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AUXILAB S.L.
Material de laboratorio
Laboratory supplies

APERA INSTRUMENTS

AUXILAB presents the new range of analytical meters and testers for the measurement of physicochemical parameters, through quality products developed with an innovative technology. We offer instruments for the analysis of pH, ORP, conductivity, salinity, turbidity and dissolved oxygen in formats of pocket, portable or benchtop meters.

POCKET METERS - Premium Series

We have two series of high quality pocket meters for pH, ORP and conductivity parameters, Premium Series and Smart Series

- Parameters: pH, ORP, Conductivity, TDS, Salinity, Temperature
- With different types of replaceable and interchangeable electrodes or probes.
- Automatic temperature compensation
- Automatic recognition of 5 types of buffer solutions
- Triple-colour backlit display with icons indicator
- Battery indicator icons. Duration >2000 h (Premium Series); >1000 h (Smart)
- Water and dust resistant IP67
- Self-diagnosis and calibration warning
- Supplied with carrying case, quick reference manual, lanyard, AAA batteries (x4), storage solution (3M KCl), two calibration bottles, 50 mL calibration solutions: pH 7, pH 4 and/or 1413 µS, 12.88 mS

Code. - **KDB004**

Code. - **KDB005**

Code. - **KDB006**

Code. - **KZD005**

Code. - **KGB011**

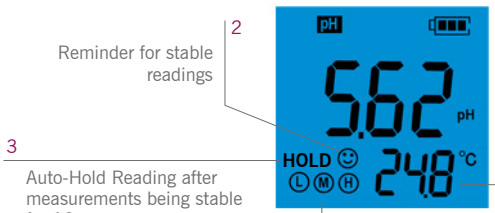
Code	KDB004	KDB005	KDB006	KZD005	KGB011
Parameter		pH/ORP/°C		pH/EC/°C	EC/ °C
pH					
Range		-2.00-16.00 pH			-
Resolution / Accuracy		0.01 pH / ±0.01 pH			-
Calibration		1 to 3 points			-
ORP					
Range		±1000 mV		-	-
Accuracy		±0.2%Fs		-	-
Conductivity					
Range	-	-	-	0-200.0 µS/cm	
	-	-	-	0-2000 µS/cm	
	-	-	-	0-20.00 mS/cm	
	-	-	-	0-50.0°C	
Resolution/ Accuracy	-	-	-	0.1/1 µS, 0.01 mS	
	-	-	-	±1%Fs	
Calibration	-	-	-	1 to 3 points	
Temp. comp. coefficient	-	-	-	0.00 a 4.00% / °C	
Temperature			0-50.0 °C		
TDS					
Range	-	-	-	0.00 ppm to 10.00 ppt	
TDS coefficient	-	-	-	0.4 to 1.0	
Salinity	-	-	-	-	0 to 10.00 ppt
Temp compensation			Automatic, from 0 to 50.0°C		
Electrode	Bulb glass	Flat	Spear	Bulb glass Platinum	Platinum

PREMIUM SERIES - display features - 3 color backlight display

[3 color backlight display]
Measurement mode
Blue color

[3 color backlight display]
Calibration mode
Green color

[3 color backlight display]
Heads-up mode
Red color



PREMIUM SERIES - electrodes - 5 different models

[PH5-E]
KDG014
Glass Bulb

General water solution pH test

[PH5F-E]
KDG015
Flat Glass

Surface and micro-volume pH test

[PH5S-E]
KDG016
Spear Glass

Solid/Semi-solid pH test

[COND5-E]
KGG007
Platinum Black

Conductivity / TDS / Salinity test

[PC5-E]
KZD009
Glass Bulb+Platinum

pH / Conductivity / TDS / Salinity test

Code pHmeter	KDB004	KDB005	KDB006	KZD005	KGB011
Compatible probe	KDG014	KDG014	KDG014	KDG014	KGG007
	KDG015	KDG015	KDG015	KDG015	
	KDG016	KDG016	KDG016	KDG016	
				KZD009	

POCKET METERS - Smart Series

- Smart analyzers of new generation: the Smart Series allows the registration of the measured parameters in mobile devices (Android or iOS) through the ZenTest application via Bluetooh 5.0
- It can be used in a conventional way without connection to a mobile device.
- Four data display modes: Simple, Dial, Graphic, Table
- Step-by-step operation guide, calibration reminders, self-diagnostics, measurement
- Calibration status and electrode status message.
- Extensive management of recorded data sets:
  - Administrator name
  - Sample name
  - GPS Location
  - Notes
  - Pictures
  - Recorded parameters
- Organization of datasets into folders or files with the ossibility of instantaneous sending of data via e-mail

Code. - **KDB007**

Code. - **KDB008**

Code. - **KDB009**

Code. - **KZD006**

Code. - **KGB012**

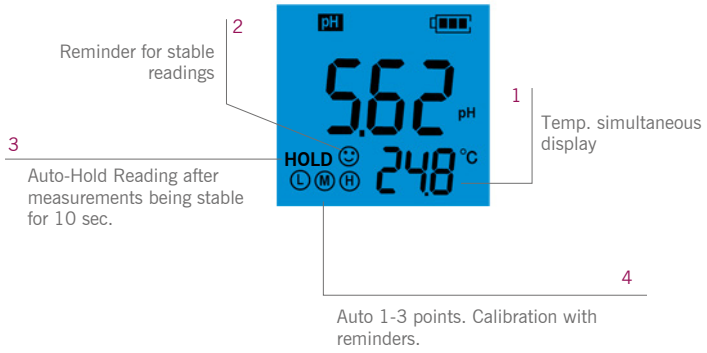
Code	KDB007	KDB008	KDB009	KZD006	KGB012
Parameter		pH/ORP/°C		pH/EC/°C	EC/ °C
pH					
Range		-2.00-16.00 pH			-
Resolution / Accuracy		0.01 pH / ±0.01 pH			-
Calibration		1 to 3 points			-
ORP					
Range		±1000 mV		-	-
Accuracy		±0.2%Fs		-	-
Conductivity					
Range	-	-	-	0-200.0 µS/cm	
	-	-	-	0-2000 µS/cm	
	-	-	-	0-20.00 mS/cm	
	-	-	-	0-50.0°C	
Resolution/ Accuracy	-	-	-	0.1/1 µS, 0.01 mS	
	-	-	-	±1%Fs	
Calibration	-	-	-	1 to 3 points	
Temp. comp. coefficient	-	-	-	0.00 to 4.00% / °C	
Temperature			0-50.0 °C		
TDS					
Range	-	-	-	0.00 ppm ato10.00 ppt	
TDS coefficient	-	-	-	0.4 a 1.0	
Salinity	-	-	-	-	0 ato10.00 ppt
Resistivity	-	-	-	-	50 Ω·cm to 20 Ω·cm
Temp. compensation	Automatic, from 0 to 50.0°C				
Electrode	Bulb glass	Flat	Spear	Bulb glass Platinum	Platinum

POCKET METERS - Smart Series - display features - 3 color backlight display

[3 color backlight display]
Measurement mode
Blue color

[3 color backlight display]
Calibration mode
Green color

[3 color backlight display]
Heads-up mode
Red color



POCKET METERS - Smart Series - electrodes - 5 different models

KDG017
Glass Bulb

General water solution pH test

KDG018
Flat Glass

Surface and micro-volume pH test

KDG019
Spear Glass

Solid/Semi-solid pH test

KGG008
Platinum Black

Conductivity / TDS / Salinity test

KZD010
Glass Bulb+Platinum

Conductivity / TDS / Salinity test

KDG044
Platinum needle

ORP analysis

Code pHmeter	KDB007	KDB008	KDB009	KZD006	KGB012
Compatible probe	KDG017	KDG017	KDG017	KDG017	KGG008
	KDG018	KDG018	KDG018	KDG018	
	KDG019	KDG019	KDG019	KDG019	
	KDG044	KDG044	KDG044	KZD010	

PORTABLE METERS - 850 Series

The 850 Series instruments are designed at laboratory level for measurement or analysis of parameters in the work area or field. They combine intelligent functions with a robust structure. Their IP57 protection rating, waterproofing, silicone connection protectors and rubber coating make them suitable for use in harsh environments, such as industrial environments or outdoor measurements with harsh environmental conditions.
They are equiped with a large LCD display for measured values, calibration indicators, stable reading icons and self-diagnostics.

- Parameters: pH, ORP, Conductivity, TDS, Salinity, Temperature
- Supplied with pH and/or conductivity combination electrodes with builtin temperature probe
- Automatic temperature compensation
- Large LCD screen with automatic lock and shutdown
- Battery indicator icons.
- Water and dust resistant IP57
- Self-diagnosis and calibration warning
- Supplied with carrying case, user manual, AA batteries (x3), calibration bottles, 50 mL calibration solutions: pH 7, pH 4 and/or 1413 μS, 12.88 mS (50 mL)

REF. - KDD007: pH meter
REF. - KZD007: pH meter and conductivity meter
REF. - KDG004: Conductivity meter

1
There is a rubber cap to seal and protect the connector, better waterproof.

2
Acrylic transparent window, resistant to scratches, waterproof.

3
Calibration solution indicators

4
Ergonomic design, suitable for hand operating. IP57 waterproof rating.

5
Keyboard for controlling the operating parameters

6
Calibration & operating instruction on the back side.

PORTABLE METERS - 850 Series - Technical features

Code	KDD007	KZD007	KGD004
Model	pH850	PC850	EC850
Parameter	pH/mV/Temp	pH/mV/Temp/Cond/TDS	Cond/TDS/Temp
pH			
Range	0-14		-
Resolution	0.1/0.01 pH		-
Accuracy	±0.01 pH ± 1 digit		-
Temp. compensation	0-100ºC		-
Calibration	1 to 3 points (USA/NIST)		-
mV			
Range	±1000 mV		-
Resolution	1 mV		-
Accuracy	± 0.2% FS ± 1 digit		-
Conductivity			
Range		0 – 19.99 µS/cm 20.0 – 199.9 µS/cm 200-1999 µS/cm 2 – 19.99 mS/cm 20 - 200.0 mS/cm	
Resolution		0.01/0.1/1 µS, 0.01/0.1 mS	
Accuracy		± 1.0% FS ± 1 digit	
Electrode constant		0.1/1.0/10.0 cm-1	
Temp. compensation		0 – 50ºC	
Calibration		1 to 3 points	
TDS			
Range		0.1 mg/mL – 100 g/L	
Coeficiente TDS		0.40-1.00	
Temperature			
Range	0 – 100ºC		
Resolution	0.1ºC		
Accuracy	±0.5ºC ±1 digit		

PORTABLE METERS - 850 Series - Electrodes and conductivity cells

KDG021

Electrode for pH with temperature probe, 201T-F

KZD026

Conductivity electrode with Tª probe (k=1), 2301T-S

Code portable meter	KDD007	KZD007	KDG004
Electrode or conductivity cell	KDG021	KDG021	KZD026
		KZD026	

PORTABLE TURBIDITY METERS

Portable TN turbiditymeters generate fast and accurate analyses between 0 and 1000 NTU. They are designed to be used both in the laboratory and outdoors (protection class IP67), such as drinking water analysis, soft drink analysis, environmental controls, etc. They have a large color TFT screen, with support for graphic operation guides and text, and a bar that indicates the progress of the measurement.

Turbidity measurement is performed by the nephelometric method of measuring light scattered at 90°, which provides greater accuracy at low measurement values. The TN meters follow the ISO 7027/ DIN EN 27027 standard, with an infrared light source of 860 nm wavelength (models TN400 and TN500i); or the U.S. EPA180.1 standard with a tungsten lamp emitting a white light source (model TN500).

The 500 models have more advanced features such as data storage (up to 200 data sets) and computer transmission and analysis (Windows OS), rechargeable battery, language settings (English, Spanish) or TruRead measurement mode. It is possible to configure the reading mode by setting the TruRead mode, which increases the reading accuracy by minimizing the impact of factors external and internal to the sample such as sample uniformity and precipitates, bubbles, direct light disturbances, spots or optical errors in the sample vials, etc. It is especially suitable for samples that vary rapidly in value. It is possible to select the number of continuous readings we want to register, and we can see on the screen the result of each measurement, maximum and minimum measurement, as well as the average result. We can also transfer this data to the computer thanks to its storage capacity of 200 data groups and the USB output

Generate fast and accurate turbidity analysis

Large TFT display color with graphic and text operation guide

PORTABLE TURBIDITY METERS - Technical features

Code	KZF001	KZF004	KZF005
Model	TN400	TN500	TN500i
Measuring method	90° scattering measurement		
Standars	ISO 7027	U.S. EPA 180.1	ISO 7027
Light source	860 nm LED	Tungsten lamp	860 nm LED
Detector	Yeslice photodiode		
Measuting range	0 – 1000 NTU		
Accuracy	± 2% of reading + stray light		
Repetibility	≤ ± 1 % / 0.02 NTU		
Calibration points	0 NTU, 20 NTU, 100 NTU, 400 NTU, 800 NTU		
Measuring mode	Normal	Normal / TruRead	
Parameter configuration	No	TruRead: 5/10/15/20 reading	
Languages	English	English / Spanish	English / Spanish
Data storage	No	200 data sets	
Data output	No	USB	
Sample vials	3	6	6
Vials volume	18 mL		
Power supply	AA x 4	3.7V Lithium rechargable - AAx4	

PORTABLE TURBIDITY METERS - Complete kit

Complete kit

The kits are supplied with a carrying case, instructions for use, sample analysis vials, silicone oil, batteries, cleaning cloth, and with 4/5 standard solutions of AMCO high molecular weight polymers (0.02, 20.0, 100, 400 and 800 NTU), which are U.S. EPA certified for non-toxicity, stable, accurate and easy to use.

PORTABLE TURBIDITY METERS - Presentation of standard solutions and placement on the equipment

Standard solutions

It provides 4 types of easy-to-use standard solutions of Reagecon high molecular weight polymer (0.02 NTU, 20.0 NTU, 100 NTU, 800 NTU), U.S. EPA certified, non-toxic, and easy to use, which has extensive advantages over standard solutions.

Placement of standard solutions

Open the lid of the instrument to insert the measuring bottles into the instrument.

DO8500 PORTABLE DISSOLVED OXYGEN METER

Durable and robust structure design

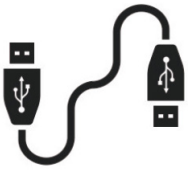
The DO8500 meter has a robust design and an IP57 rating that allows it to be used in harsh environmental conditions, it has automatic temperature and salinity compensation, a large backlit LCD display with simultaneous dissolved oxygen and temperature readings.
The equipment is supplied in a carrying case with the dissolved oxygen sensor (KZD011) and conductivity probe (KZD014) with 3 meters of connecting cable, OD sensor calibration case, combination electrode junction, USB connecting cable, PC-Link Communication software, water conservation sponge, batteries and user manual.
Accessories: 10-meter optical sensor for DO8500 meter (KZD012); 10-meter salinity probe for DO8500 (KZD015); luminescent cover for optical sensor (KZD013)

Smart features

It has advanced digital processing technology, supporting stable reading modes and automatic display lock. It has data storage capacity of up to 500 data sets with time and date, and USB connector for automatic data transfer.
It is suitable for agriculture, aquaculture, drinking water and waste water treatment, environmental monitoring, oenology or brewing.

Complete kit

Supplied with carrying case, dissolved oxygen sensor, conductivity probe, calibration sleeve, combination electrode junction, USB connector cable, software, water conversion sponge, batteries and user manual



USB data connection

PC connectivity via USB connection

DO8500 PORTABLE DISSOLVED OXYGEN METER - Technical features

Code	KZB004
Model	DO8500
Dissolved oxigen	
Range	0-200 %; 0 – 20.0 mg/L
Resolution	0.1/1 %, 0.01/0.1 mg/L (ppm)
Accuracy	±2% reading or ±2% saturation; ±2% reading or ±0.2 mg/L (ppm)
Response time	< 30 s (25ºC, 90% response)
Calibration	Zero oxygen y oxygen saturation
Temp. compensation	Automatic, 0 to 50ºC
Pressure compensation	Automatic, 60 to 120 kPa
Salinity compentation	Automatic or manual, 0 to 45 ppt
Temperature	
Range	0 to 50 ºC
Resolution	0.1 ºC
Accuracy	± 0.5 ºC
Data storage	500 data set
Data output	USB
Date and time	Yes
Power supply	AA x 3

DO8500 PORTABLE DISSOLVED OXYGEN METER - Latest generation optical OD sensor

The DO8500 portable dissolved oxygen meter uses a state-of-the-art optical luminescent sensor with many features that make it stand out from traditional dissolved oxygen sensors.

- Minimal maintenance required. No preparation or maintenance solutions are required.
- Quick and easy to calibrate, although it is not necessary to do so before each use.
- No membrane, no electrolyte. This makes its useful life longer (more than 8000 hours of useful life)
- The special coating of the luminescent cover makes it anti-interference and is not affected by light or chemicals
- A calibration cap is included, allowing it to be calibrated and stored in saturated air.
- The electrode does not consume oxygen. It has a fast response time (15 sec), so that readings are stable.

700 SERIES BENCHTOP METERS

The pH and Conductivity Meters 700 Series are plain and affordable benchtop instruments that offer reliable and accurate performance. They meet advanced digital processing technology that improves response time and measurement accuracy. In addition, they combine intelligent functions such as automatic temperature recognition, automatic standard solution recognition and calibration mode, data storage or max/min measurement modes. It is supplied with high quality electrodes that provide high accuracy over a wide measuring range. The 700 Series benchtop instruments provide a fast and stable reading for basic pH/ORP or conductivity analyses valid for any laboratory.

- Equipped with long-lasting 3-in-1 pH combination electrode and conductivity combination electrode, with integrated temperature probe
- Reconocimiento automático de 6 tipos de soluciones estándar de pH y de 8 tipos de conductividad
- Automatic recognition of 6 types of pH standard solutions and 8 types of conductivity
- Auto Calibration Mode, Auto Calibration Guide and Auto Verification
  50 data storage groups
- Electrode holder arm and calibration standard solutions included
- IP54 protection range
- BNC connector for the pH or conductivity electrodes and RCA for the temperature probe

KDD008
Laboratory pH meter PH700

pH analysis

KGD005
Laboratory conductivity meter EC700

Conductivity analysis

700 SERIES BENCHTOP METERS - Technical features

Code	KDD008	KGD005
Model	pH700	EC700
Parameters	pH/mV/°C	Cond. / °C
pH		
Range	0 – 14 pH	-
Resolution	0.1/0.01 pH	-
Accuracy	±0.01 pH ± 1 digit	-
Temp. compensation	0 – 100°C	-
Calibration	1 to 3 points, automatic	-
mV		
Range	± 1999 mV	-
Resolution	1 mV	-
Accuracy	±0.1 % FS ± 1 digit	-
Conductivity		
Range	-	0 – 19.99 µS/cm
	-	20.0 – 199.9 µS/cm
	-	200-1999 µS/cm
	-	2 – 19.99 mS/cm
	-	20 - 200.0 mS/cm
Resolution	-	0.1/1 µS, 0.01/0.1 mS
Accuracy	-	± 1.0% FS ± 1 digit
Electrode constant	-	0.1/1.0/10.0 cm-1
Temp. compensation	-	0 – 50°C
Calibration	-	1 to 4 points, automatic
Temperature		
Range	0 – 100°C	-
Resolution	0.1°C	-
Accuracy	±0.5°C ±1 digit	-
Data storage	50 data set	-

BENCHTOP METERS - 700 series - Electrodes and conductivity cells

KDG021

Electrode for pH with temperature probe, 201T-F

KZD017

Glass condictivity electrode (k=1) 2401-C

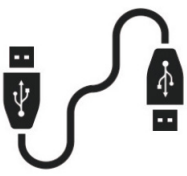
Code	KDD008	KGD005
Electroded	KDG021	KZD017
Connectors	BNC / RCA / Code	BNC / RCA

BENCHTOP METERS SERIES 820

The Series 820 benchtop meters are the most accurate pH, ORP and conductivity (±0.002 pH / ± 0.5 % FS conductivity) analysis instruments. They are suitable for laboratories requiring the highest accuracy, such as clinical laboratories, research, chemical industry, water analysis, power industry, petrochemicals, etc.
They are equipped with a premium long-life glass electrode for pH and platinum back brush-resistant conductivity (BPB) and temperature combined electrode. Its intelligent processor automatically recognizes up to 15 types of pH buffer solutions and up to 8 types of standard conductivity solutions (Optional series: U.S, NIST, user configurable). They have automatic multi-point calibration, calibration guidance and automatic verification. Data management according to Good Laboratory Practice (GLP).

- Fast pH and conductivity readings with maximum accuracy (±0.002 pH / ± 0.5 % FS conductivity)
- Calibration reminder (automatic, quick and easy) Also displays the pH electrode curve to quickly see its status

- Large LCD screen with simultaneous display of pH/Cond and temperature, stable reading icons and calibration completion
- Storage of 500/1000 data sets for GLP
- USB data output, cable and 820 Series PC-link software (Windows only) included
- Electrodo de vidrio de larga duración para pH
- Long life glass electrode for pH. Combined conductivity (BPB) and temperature electrode
- Temperature probe MP 500
- Flexible holder for 3 electrodes included
- Calibration solutions for pH pH (4.00, 7.00, 10.01 pH) and/or conductivity (84μS/cm, 1413μS/cm, 12.88mS/cm)
- IP54 dust and water protection



USB data connection

PC connectivity via USB connection

BENCHTOP METERS SERIES 820 - Technical features

Code	KDD009	KZD008	KGD006
Model	PH820	PC820	EC820
Parameters	pH/mV/ºC	pH/mV/ Cond/TDS/Sal/ºC	Cond/TDS/Sal/ºC
pH			
Range		-2.000 – 19.999 pH	-
Resolution		0.1/0.01/0.001 pH	-
Accuracy		±0.002 pH ± 1 digit	-
Stability		±0.002 pH ± 1 digit/3 hours	-
Temp. compensation		0 – 100ºC	-
Calibration		1 to 5 points, automatic	-
mV			
Range		± 1999 mV	-
Resolution		0.1 mV	-
Accuracy		±0.03 % FS ± 1 digit	-
Conductivity			
Range	-	0.00 – 19.99 µS/cm	
	-	20.0 – 199.9 µS/cm	
	-	200-1999 µS/cm	
	-	2 – 19.99 mS/cm	
	-	20 – 199.9 mS/cm	
	-	200 – 1999 mS/cm	
Resolution	-	0.01/0.1/1 µS, 0.01/0.1/1 mS	
Accuracy	-	± 0.5% FS ± 1 digit	
Electrode constant	-	0.01/0.1/1.0/10.0 cm-1	
Temp. compensation	-	0 – 50ºC	
Calibration	-	1 to 4 points, automatic	
TDS			
Range	-	0.1 mg/L – 100 g/L (500 g/L S9500)	
Coeficiente	-	0.40 – 1.00	
Salinity			
Range	-	0 – 100 ppt	
Resistivity			
Range	-	0 – 100 MΩ*cm (20 MΩ*cm S9500)	
Temperature			
Range		-10 – 110ºC	
Resolution		0.1ºC	
Accuracy		±0.4ºC ±1 digit	
Data storage	500 sets	1000 sets	500 sets
Data output	USB – Software PC-link		

BENCHTOP METERS - 820 series - Electrodes and conductivity cells

KDG022

Routine pH electrode, LabSen 211

KZD019

Glass conductivity electrode with probe T[a] (k=1), 2401T-F

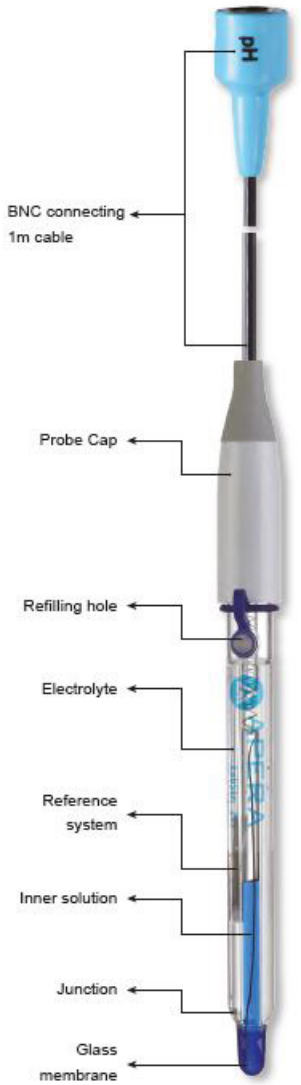
KDG039

Temperature probe MP500

Code	KDD009	KZD008	KGD006
Connectors	KDG022 / KDG039 BNC / RCA / Code / USB	KDG022 / KZD019 BNC / RCA / Code / USB	KZD019 BNC / RCA / USB

LabSen ELECTRODES FOR pH

LabSens professional electrodes meet together patented sensor technology with the best components for fast and reliable results for a wide variety of applications



Glass membrane

Glass membrane is the most important part of pH electrode.
LabSen pH electrodes are equipped with 4 types of glass membrane to meet various
applications: S membrane, H membrane, HF membrane and PHY membrane.
For example HF membrane is used for HF resistance electrode.
LabSen glass membrane has good impact resistance. It will not be damaged by general
intensity impact, completely differentiating from conventional glass membranes.
LabSen glass membrane with different shapes are shown as below:

Junction

Junction is the electrolyte interface between reference system and the solution to be measured, LabSen electrode adopts the following types of junctions:
Ceramic - the most frequently used junction, easy to be blocked by protein-containing or suspension solution.
Pore without diaphragm - it is used with solid electrolyte, no clogging, maint nance-free.
Movable sleeve - easy to clean, suitable for suspension, emulsion, low ion concentration solution and nonaqueous solution. The infiltration rate of electrolyte is determined by the tightness of the sleeve during installation.
PTFE - a kind of Teflon material with multi pores, hard to be contaminated.

Inner solution

The inner solution of LabSen electrode is in a unique dark blue. With a special gel treatment, the inner solution does not flow and will not cause air bubbles. The electrode can work well even when being upside down.

Reference system

Besides routine Ag/AgCl reference electrode, LabSen pH electrodes are more likely to adopt Long-life reference electrode and Yeslver-ion-trap reference electrode.
Long-life reference system is composed of a glass tube, AgCl and reference silver wire. The top end of the slim glass tube is stuffed with cotton, which will prevent reaction between AgCl and electrolyte when temperature changes, improving the stability of reference electrode and service life.

KDG020

Electrodo para pH, 201-C

KDG021

Electrodo para pH con sonda de temperatura, 201T-F

KDG022

Electrodo de rutina para pH, LabSen 211

KDG023

Electrodo de precisión para pH, LabSen 221

Code	KDG020	KDG021	KDG022	KDG023
Model	201-C	201T-F	211	221
Range	0 – 14 pH	0 – 14 pH	0 – 14 pH	0 – 14 pH
Body	PC	PC	Glass	Glass
Temp probe	No	NTC 30KΩ	No	No
Junction	Ceramic	Ceramic	Ceramic	Ceramic, movable sleeve
Electrolyte	Gel KCl	Gel KCl	3M KCl	3M KCl
Membrane	Glass, spherical with cap	Glass, spherical with cap	Glass, hemispherical	Glass, hemispherical
Reference system	Ag/AgCl	Ag/AgCl	Long-life	Long-life
Connector	BNC	BNC	BNC	BNC
Range Temp use	0-80ºC	0-80ºC	-5 – 100ºC	-5 – 100ºC
Dimensions (mm)	Ø 12x 160	Ø 12x 160	Ø 12x 120	Ø 12x 130
Application	General or research laboratories and in-field applications		General use, water, buffer solutions	Viscous solutions and low ion concentration samples

KDG024

Plastic precision electrode p/pH, LabSen 331

KDG025

Semi-micro electrode f/pH, Lab-Sen 241-6

KDG026

Micro electrode p/pH, LabSen 241-3

Code	KDG024	KDG025	KDG026
Model	231	241-6	241-3
Range	0 – 14 pH	0 – 14 pH	0 – 14 pH
Body	Glass	Glass	Glass
Temp probe	No	Probe	Probe
Junction	Ceramic	Ceramic	Ceramic
Electrolyte	Polymer	3M KCl	3M KCl
Membrane	Glass, cylindrical	Glass, slim (6 mm)	Glass, slim (3 mm)
Reference system	Long-life	Long-life	Long-life
Connector	BNC	BNC	BNC
Range Temp use	-5 – 80ºC	0 – 100ºC	0 – 100ºC
Dimensions (mm)	Ø 12x 120	Ø 12-6 x 150 (100)	Ø 12-3 x 150 (70)
Application	Testing emulsion, suspension, wastewater and samples containing protein and sulfide.	Small volume (≥0.2 mL)	Micro volume (≥ 30 µL)

KDG027

Electrode on lance p/pH,
LabSen 251

KDG028

Routine p/pH electrode with
temperature probe ,
LabSen 213

KDG029

Precision p/pH electrode with
temperature probe
LabSen 223

Code	KDG027	KDG028	KDG029
Model	251	213	223
Range	0 – 14 pH	0 – 14 pH	0 – 14 pH
Body	Glass	Glass	Glass
Temp probe	No	NTC 30kΩ	NTC 30kΩ
Junction	Ceramic + 1 pore	Ceramic	Ceramic, movable sleeve
Electrolyte	Polymer	3M KCl	3M KCl
Membrane	Glass, spear	Glass, cylindrical	Glass, cylindrical
Reference system	Long-life	Long-life	Long-life
Connector	BNC	BNC/RCA	BNC/RCA
Range Temp use	0 – 80ºC	-5 – 100ºC	-5 – 80ºC
Dimensions (mm)	Ø 12-6 x 100	Ø 12x 120	Ø 12x 130
Application	Soft solid meduim (gels, agar medium) or food (cheese, fruit, rice)	General use, water, buffer solutions	Viscous solutions and low ion concentration samples, titration

KDG030

Precision plastic p/pH electrode
with temperature probe
LabSen 333

KDG031

pH electrode f/purified water,
with T[a] probe
LabSen 803

KDG032

Electrode for acid pH,
LabSen 831

Code	KDG030	KDG031	KDG032
Model	333	803	831
Range	0 – 14 pH	1 – 11 pH	0 – 11 pH
Body	POM	Glass	Glass
Temp probe	NTC 30kΩ	NTC 30kΩ	No
Junction	1 pore	Ceramic, movable sleeve	Ceramic
Electrolyte	Polymer	3M KCl	3M KCl
Membrane	Glass, spheric	Glass, cylindrical	Glass, hemispherical
Reference system	Long-life	Yeslver ion trap	Yeslver ion trap
Connector	BNC	BNC/RCA	BNC
Range Temp use	0 -80ºC	0-80ºC	0 – 100ºC
Dimensions (mm)	Ø 12x 120	Ø 12x 130	Ø 12x 120
Application	Testing wastewater, emulsion suspension	Purified water measurement, RO water distilled.	Solution containing HF (>3 pH) or strong acid solutions

KDG033

Electrode for basic pH, LabSen 841

KDG034

pH electrode for viscous solutions, LabSen 851-1

KDG035

pH electrode for liquid foods
LabSen 823

KDG036

Stainless steel pH electrode in lance, with T[a] probe
LabSen 753

Code	KDG033	KDG034	KDG035	KDG036
Model	841	851-1	823	753
Range	2 -14 pH	0 – 14 pH	0 – 14 pH	0 – 14 pH
Body	Glass	Glass	Glass	Acero inoxidable
Temp probe	No	No	NTC 30kΩ	NTC 30kΩ
Junction	Ceramic	Ceramic *3	Ceramic *3	Ceramic + 1 pore
Electrolyte	3M KCl	Polymer	Polymer	Polymer
Membrane	Glass, hemispherical	Glass, hemispherical	Glass, hemispherical	Glass, pointed
Reference system	Yeslver ion trap	Yeslver ion trap	Yeslver ion trap	Long-life
Connector	BNC	BNC	BNC/RCA	BNC/RCA
Range Temp use	0 – 100ºC	0- 100ºC	0-80ºC	0-80ºC
Dimensions (mm)	Ø 12x 120	Ø 12x 120	Ø 12x 120	
Application	High temperature and strong base solutions	Viscous solutions	Protein containt dairy or other liquid food	Soft solid foods, cheese, bread, fruit, vegetables, rice.

ORP ELECTRODES

KDG037

Electrode for ORP, 301PT-C

Code	KDG037	KDG038
Model	301Pt-C	3501Pt-Glass
Range	± 2000 mV	± 2000 mV
Body	PC	Glass
Sensor	Platinium ring	Platinium ring
Sensor size(mm)	Ø6 x 2.5	Ø 6 x 5
Junction	Ceramic	Ceramic
Reference system	Ag/AgCl	Ag/AgCl
Electrolyte	Gel KCl	Gel KCl
Connector	BNC	BNC
Application	General water solutions, wastewater, electroplating solutions	General water solutions, wastewater, electroplating solutions, organic sample solutions, high temperature and continuos measuring.

CONDUCTIVITY ELECTRODES

KZD016

Conductivity electrode (k=1), 2301-C

KZD017

Glass condictivity electrode (k=1), 2401-C

KZD019

Glass conductivity electrode with probe Tª (k=1), 2401T-F

Code	KZD016	KZD017	KZD018	KZD019
Model	2301-C	2401-C	2301T-F	2401T-F
Range	0.5 µS/cm - 200 mS/cm			
Temp probe	No	No	Yes	Yes
Body	PC	Glass	PC	Glass
Sensor size(mm)	Platinum rod; Ø 1.6 x 5.5	Platinum plate; Ø 5 x 7	Platinum rod; Ø 1.6 x 5.5	Platinum plate;Ø 5 x 7
Constante	K=1 ±0.2cm^-1			
Dimensions (mm)	Ø 12x155	Ø 12x145	Ø 12x155	Ø 12x145
Connector	BNC	BNC	BNC/RCA	BNC/RCA
Application	General use on laboratory or in-field	High accuracy laboratory measurements	General use on laboratory or in-field	High accuracy laboratory measurements

KZD021

Electrodo de conductividad (k=10), 2310-C

KZD022

Electrodo de conductividad con sonda Tª (k=10), 2310T-F

Code	KZD020	KZD021	KZD022
Model	DSJ-0.1-F	2310-C	2310T-F
Range	0 µS/cm - 200 µS/cm	20 – 2000 mS/cm	
Temp probe	No	No	Yes
Body	Glass	PC	PC
Sensor size (mm)	Platinum plate; 7 x 18	Platinium ring; Ø 5 x 5	Platinium ring; Ø 5 x 5
Constante	K=1 ±0.2cm^-1	K= 0.1 ±0.02cm^-1	K=10 ±1 cm^-1
Dimensions (mm)	Ø 12x155	Ø 12x150	Ø 12x150
Connector	BNC/RCA	BNC	BNC/RCA
Application	Purified water or ultra pure water analysis. Removable glass flow cell	Concentrate electrolyte, seawater, high concentrated saltwater	

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