



Advanced
Digital
Water
Analysis



PRODUCT CATALOG

Consistency, Reliability, Durability and Performance

PROFESSIONAL
INSTRUMENTS
& LAB ANALYSIS

- pH**
- ISE**
- ORP**
- EC**
- TDS**
- DO**
- TEMP**

PROFESSIONAL
INSTRUMENTS FOR WATER
& LAB ANALYSIS

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Adwa Instruments

Founded in 1998, Adwa Instruments is one of the leading manufacturers of instrumentation to measure pH, Conductivity, ORP, Dissolved Oxygen and Temperature for Research and Industry. Headquartered in Szeged, Hungary and with a manufacturing plant in Romania, Europe, Adwa Instruments is dedicated through a worldwide distributor network, to provide top class instrumentation and service.

Thanks to the customers' feedback, we have developed a line of user-friendly products which are durable, reliable and accurate, with an excellent cost-performance ratio. All of our instruments are supplied complete with the necessary electrodes, probes, calibration solutions and are ready for use. Some units combine two or more parameters, providing added versatility and excellent value for money. From basic hand-held units to high-performance benchtop type laboratory instruments, Adwa Instruments has a reputation for reliability and accuracy.

Total quality and customer satisfaction is the guiding principle of Adwa Instruments. We try to anticipate, to understand and go beyond the expectations of our customers. Total quality demands continuous improvement in all our processes, products and services.

As a result, our corporate philosophy is focused on total customer satisfaction.



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Standard Pocket Testers

AD100-AD101

Standard Pocket pH Testers

Microprocessor based pH testers, assure to produce fast and stable readings.

They come with features such as automatic temperature compensation, low battery indication, automatic shut-off after 8 minutes and others.

They are also incorporated with easy push buttons for automatic calibration and splash-proof keypad that prevents water infiltration.



Calibrate directly in buffer solution sachets

Calibration can be performed right in buffer solution sachets for the most accurate readings.



Easy battery replacement

An easily removable cover provides access to the replaceable battery.



Protective cap

Protect the pH bulb from external environmental effects when the meter is non-use.



1 or 2 point automatic calibration

These testers are feature automatic 1 or 2 point calibration to a known buffer.

Automatic temperature compensation

Readings are automatically compensated for variations in temperature.



AD100 and AD101 are supplied with

AD70004 - pH4 calibration solutions in sachet (20 ml); **AD70007** - pH7 calibration solutions in sachet (20 ml); Protective cap; Batteries (4 x 1.5V, button types); Instruction manual

Accessories

- AD70004P** - pH 4.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70007P** - pH 7.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70010P** - pH 10.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70000P** - Rinse solution (20 ml sachet, 25 pcs.)
- AD70300** - Electrode storage solution (230 ml bottle)
- AD7061** - Electrode cleaning solution (230 ml bottle)

| | AD100 | AD101 |
|---------------------|--|---------------------------|
| Range | pH -2.0 to 16.0 pH | -2.00 to 16.00 pH |
| Resolution | pH 0.1 pH | 0.01 pH |
| Accuracy | pH ±0.1 pH | ±0.02 pH |
| Calibration | pH Automatic at 1 or 2 points | Automatic at 1 or 2 point |
| Temp. Compensation | Automatic | Automatic |
| Battery Type / Life | 4 x 1.5V Button type / Approx. 250 hours | |
| Dimensions / Weight | 173 x 41 x 22 mm / Approx. 100 g | |

AD203-AD204

Standard Pocket Conductivity Testers

Easy to use, simple maintenance and yet high accuracy Conductivity pocket testers for daily measuring purposes.

With its built-in automatic temperature compensation feature, it ensures accurate readings under any ambient conditions.

Features such as splash-proof keypad prevent water infiltration into the testers, easy to read display among others make the testers easy and simple to maintain but yet provide professional measurements.

If calibration is necessary, simply submerge the electrode tip into the calibration solution and adjust the easily accessible trimmer on the side of the tester.



Automatic temperature compensation

Readings are automatically compensated for variations in temperature.



AD201-AD202

Standard Pocket TDS Testers

These pocket testers have an easy to read display and for better resolution they also show the full scale readout so to obtain the actual test values.

These TDS pocket testers provide a fast and dependable way to measure the Total Dissolved Solids in your water samples.

The built-in automatic temperature compensation feature ensures accurate readings under any ambient conditions.

The splash-proof keypad prevents water infiltrations into the testers.

If calibration is necessary, simply submerge the electrode tip into the calibration solution and adjust the easily accessible trimmer on the side of the tester.

AD203 is supplied with

AD70031 - 1413 $\mu\text{S}/\text{cm}$ calibration solution in sachet (20 ml); Protective cap; Screwdriver for calibration; Batteries (4 x 1.5V, button types); Instruction manual

AD204 is supplied with

AD70030 - 12.88 mS/cm calibration solution in sachet (20 ml); Protective cap; Screwdriver for calibration; Batteries (4 x 1.5V, button types); Instruction manual

AD201 is supplied with

AD70032 - 1382 ppm calibration solution in sachet (20 ml); Protective cap; Screwdriver for calibration; Batteries (4 x 1.5V, button types); Instruction manual

AD202 is supplied with

AD70030 - 12.88 mS/cm calibration solution in sachet (20 ml); Protective cap; Screwdriver for calibration; Batteries (4 x 1.5V, button types); Instruction manual

| | AD203 | AD204 | AD201 | AD202 |
|---------------------|--|-----------------------------------|---------------------|----------------|
| Range | EC | 0 to 1999 $\mu\text{S}/\text{cm}$ | 0.00 to 19.99 mS/cm | - |
| | TDS | - | - | 0 to 1999 ppm |
| Resolution | EC | 1 $\mu\text{S}/\text{cm}$ | 0.01 mS/cm | - |
| | TDS | - | - | 1 ppm |
| Accuracy | EC/TDS | $\pm 2\%$ f.s. | $\pm 2\%$ f.s. | $\pm 2\%$ f.s. |
| Conversion factor | | - | 0.5 ppm | 0.5 ppm |
| Temp. Compensation | | Automatic | Automatic | Automatic |
| Battery Type / Life | 4 x 1.5V Button type / Approx. 150 hours | | | |
| Dimensions / Weight | 173 x 41 x 22 mm / Approx. 100 g | | | |

Accessories

- AD70031P** - 1413 $\mu\text{S}/\text{cm}$ EC standard solution (20 ml sachet, 25 pcs.) [AD203]
- AD70030P** - 12.88 mS/cm EC standard solution (20 ml sachet, 25 pcs.) [AD204, AD202]
- AD70032P** - 1382 ppm TDS standard solution (20 ml sachet, 25 pcs.) [AD201]
- AD70442P** - 1500 ppm TDS standard solution (20 ml sachet, 25 pcs.) [AD201]
- AD70000P** - Rinse solution (20 ml sachet, 25 pcs.)
- AD7061** - Electrode cleaning solution (230 ml bottle)

Calibration, Rinse and other solutions see on page 20

Waterproof Pocket Testers

AD11-AD12

Professional Waterproof pH-Temperature Pocket Testers with replaceable probe

AD11 and AD12 are the most advanced micro-processor based Waterproof pH/Temp pocket testers in the market.

These fast, stable and precise pocket testers are for users who require the greatest accuracy. The modular design allows replacing the electrode in a fast and simple way. Features such as stability indicator, automatic calibration, and automatic temperature compensation make these waterproof pocket testers a must-have in a variety of industries.



AD11P - Replaceable combination probe for AD11 and AD12
• pH/Temperature



AD14

Professional Waterproof pH-ORP-Temperature Pocket Tester with replaceable probe

AD14 is designed for simultaneous pH, ORP and Temperature measurements. The large 2 row display (LCD) also has graphic symbols to guide you through the operations. Calibration is performed automatically in 1 or 2 points.



AD14P - Replaceable combination probe for AD14

- pH/ORP/Temperature



Automatic temperature compensation (ATC)

- All pH readings are automatically temperature compensated. The encapsulated sensor allows fast and accurate temperature measurement and compensation.
- Temperature values can be displayed in °C or °F units.



HOLD function

Freezes the display for easy and accurate recording.



Stability indicator

The meter displays an hourglass symbol that will disappear when the measurement has achieved stability, and the reading should be taken.



Replaceable probe

Simple user-replaceable probe: just unscrew the plastic ring on the top of the electrode and replace the probe with a new one!



Low battery indicator

When the batteries become weak, the battery symbol on the LCD lights up to indicate a low battery condition.



Calibrate directly in buffer solution sachets

Calibration can be performed right in buffer solution sachets for the most accurate readings.

1 or 2 point automatic calibration

The meter can be calibrated at one or two points for pH with auto-buffer recognition and against 3 memorized buffer values

Accessories

- AD11P - pH/Temperature probe [AD11, AD12]
- AD14P - pH/ORP/Temperature probe [AD14]
- AD70004P - pH 4.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70007P - pH 7.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70010P - pH 10.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
- AD70300 - Electrode storage solution (230 ml bottle)
- AD7061 - Electrode cleaning solution (230 ml bottle)
- AD7020 - ORP test solution, 200/275 mV (230 ml bottle) [AD14]

| | AD11 | AD12 | AD14 |
|-------------------------|---|---|-----------------------------------|
| Range | pH | -2.0 to 16.0 pH | -2.00 to 16.00 pH |
| | ORP | - | ±1000 mV |
| | Temp. | -5.0 to 60.0°C 23.0 to 140.0°F | -5.0 to 60.0°C 23.0 to 140.0°F |
| Resolution | pH | 0.1 pH | 0.01 pH |
| | ORP | - | 1 mV |
| | Temp. | 0.1°C / 0.1°F | 0.1°C / 0.1°F |
| Accuracy (at 25°C/77°F) | pH | ±0.1 pH | ±0.01 pH |
| | ORP | - | ±2 mV |
| | Temp. | ±0.5°C / ±1°F | ±0.5°C / ±1°F |
| Calibration | pH | Automatic, 1 or 2 point with 2 sets of memorized buffers (pH 4.01/7.01/10.01 or 4.01/6.86/9.18) | |
| | ORP | - | Factory calibrated |
| Temp. Compensation | Automatic for pH readings | | |
| Probe (Included) | AD11P - pH/Temp probe | AD11P - pH/Temp. probe | AD14P - pH/ORP/Temp. probe |
| Battery Type / Life | 4 x 1.5V Button type / Approx. 300 hours of use | | |
| Dimensions / Weight | 175.5 x 39 x 23 mm / 100 g | | |

AD11 and AD12 are supplied with

AD11P - pH/Temperature probe; AD70004 - pH4 calibration solutions in sachet (20 ml); AD70007 - pH7 calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

AD14 is supplied with

AD14P - pH/ORP/Temperature probe; AD70004 - pH4 calibration solution in sachet (20 ml); AD70007 - pH7 calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

Electrodes, Probes and other Accessories see on page 18;
Calibration, Rinse and other solutions see on page 20

AD31-AD32

Professional Waterproof Conductivity-TDS-Temperature Pocket Testers with replaceable probe

AD31 and AD32 are waterproof Conductivity, TDS and temperature testers. The housing has been completely sealed against humidity. All Conductivity and TDS readings are automatically temperature compensated (ATC), and temperature values can be displayed in °C or °F units. The Conductivity/TDS conversion factor (CONV) can be selected by the user, as well as the coefficient β (BETA) for temperature compensation. The instruments can be calibrated at one point. Measurements are highly accurate with a unique stability indicator right on the LCD. The models are also provided with a low battery symbol which warns the user to replace the batteries.



AD32P - Replaceable combination probe for AD31 and AD32

The **AD32P** probe supplied with the meters, is interchangeable and can be easily replaced by the user. The encapsulated temperature sensor allows fast and accurate temperature measurement and compensation

AD33-AD35

Professional Waterproof Conductivity-Temperature Pocket Testers with replaceable probe

AD33 and AD35 are waterproof Conductivity testers, that also measure and display temperature. The housing has been completely sealed against humidity. All Conductivity readings are automatically temperature compensated, and temperature values can be displayed in °C or °F units.

Conductivity calibration is automatic at one point, while temperature is factory calibrated and the user can perform an adjustment only. To prolong battery life, these models are provided with an auto-off feature that turns them off after 5 minutes of non-use.

Moreover, when batteries become too weak to ensure reliable readings the meter automatically turns off.



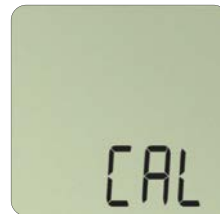
AD33P - Replaceable combination probe for AD33 and AD35

The **AD33P** probe supplied with the meters, is interchangeable and can be easily replaced by the user. The encapsulated temperature sensor allows fast and accurate temperature measurement and compensation



Battery percentage indicator [AD31, AD32]

After turn on the meter, all the used segments will be visible for one second (or as long as the button is pressed), followed by the percentage indication of the remaining battery life.



Automatic calibration

Simple and easy automatic 1 point calibration.

AD31 is supplied with

AD32P - EC/TDS/Temperature probe; **AD70031** - 1413 $\mu\text{S}/\text{cm}$ calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

AD32 is supplied with

AD32P - EC/TDS/Temperature probe; **AD70030** - 12.88 mS/cm calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

AD33 is supplied with

AD33P - EC/Temperature probe, **AD70031** - 1413 $\mu\text{S}/\text{cm}$ calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

AD35 is supplied with

AD33P - EC/Temperature probe; Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual



Replaceable probe

Simple user-replaceable probe: just unscrew the plastic ring on the top of the electrode and replace the probe with a new one!

Accessories

AD32P - Replaceable EC/TDS/Temperature probe [AD31, AD32]

AD33P - Replaceable EC/Temperature probe [AD33, AD35]

AD7033 - 84 $\mu\text{S}/\text{cm}$ calibration solution (230 ml bottle) [AD35]

AD70030P - 12.88 mS/cm EC standard solution (20 ml sachet, 25 pcs.) [AD32]

AD70031P - 1413 $\mu\text{S}/\text{cm}$ EC standard solution (20 ml sachet, 25 pcs.) [AD31, AD33]

AD70442P - 1500 ppm TDS standard solution (20 ml sachet, 25 pcs.)

AD70000P - Rinse solution (20 ml sachet, 25 pcs.)

AD7061 - Electrode cleaning solution (230 ml bottle)

| | AD31 | AD32 | AD33 | AD35 |
|-------------------------|--|-----------------------------------|-------------------------------------|-----------------------------------|
| Range | EC | 0 to 3999 $\mu\text{S}/\text{cm}$ | 0.00 to 20.00 mS/cm | 0 to 1999 $\mu\text{S}/\text{cm}$ |
| | TDS | 0 to 2000 ppm | 0.00 to 10.00 ppt | - |
| | Temp. | 0.0 to 60.0°C / 32.0 to 140.0°F | 0.0 to 60.0°C / 32.0 to 140.0°F | 0.0 to 60.0°C / 32.0 to 140.0°F |
| Resolution | EC | 1 $\mu\text{S}/\text{cm}$ | 0.01 mS/cm | 1 $\mu\text{S}/\text{cm}$ |
| | TDS | 1 ppm | 0.01 ppt | - |
| | Temp. | 0.1°C / 0.1°F | 0.1°C / 0.1°F | 0.1°C / 0.1°F |
| Accuracy (at 25°C/77°F) | EC/TDS | ±2% f.s. | ±2% f.s. | ±2% f.s. |
| | Temp. | ±0.5°C / ±1°F | ±0.5°C / ±1°F | ±0.5°C / ±1°F |
| Calibration | EC/TDS | Automatic, 1 point | | |
| Temp. Compensation | Automatic | | | |
| Probe (Included) | AD32P - EC/TDS/Temp. probe AD32P - EC/TDS/Temp. probe AD33P - EC/Temp. probe AD33P - EC/Temp. probe | | | |
| Battery Type | 4 x 1.5V Button type | | | |
| | Approx. 100 hours of use | | Approx. 150 hours of use | |
| Dimensions / Weight | 175.5 x 39 x 23 mm / 100 g | | | |

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20

Continuous Monitors

ECO209

Continuous pH Monitor

ECO209 is a continuous pH monitor suitable for constant monitoring of pH level of a given water or solution sample such as aquarium tank, ponds, hydroponics systems, among others. It is easy to use, with simple maintenance features, with 2 calibration points for better accuracy.

| ECO209 | |
|-------------------------|---|
| Range | pH 0.0 to 14.0 pH |
| Resolution | pH 0.1 pH |
| Accuracy (at 25°C/77°F) | pH ±0.2 pH |
| Calibration | Manual, 2 points through trimmer |
| Probe (Included) | AD1230B - epoxy body pH electrode with double junction, BNC connector |
| Environment | 0 to 50°C, 95% RH max |
| Power Supply | External, 12 Vdc |
| Dimensions / Weight | 120 x 134 x 54 mm / Approx. 250 g |

ECO209 is supplied with

AD1230B - pH electrode with epoxy body, double junction, BNC connector; Stainless steel grounding probe; AD70004 - pH4 calibration solution in sachet (20 ml); AD70007 - pH7 calibration solution in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter; Instruction manual

Electrodes, Probes and other Accessories see on page 18;
Calibration, Rinse and other solutions see on page 20



AD1230B - pH electrode
The monitor utilizes a gel-filled interchangeable pH electrode and has been specially designed to address the needs of growers.

Accessories

AD1230B - pH electrode
AD1286 - pH electrode
AD70004P - pH 4.01 calibration solution (20 ml sachet, 25 pcs.)
AD70007P - pH 7.01 calibration solution (20 ml sachet, 25 pcs.)

AD70010P - pH 10.01 calibration solution (20 ml sachet, 25 pcs.)
AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
AD70300 - Electrode storage solution (230 ml bottle)
AD7061 - Electrode cleaning solution (230 ml bottle)

ECO406-ECO407

Continuous Conductivity [ECO406] and TDS [ECO407] Monitors

These continuous indicators are designed for easy maintenance, simple to read, accurate readings and cost effective purpose, to meet the general requirements of all range of users. They come with single point manual calibration and automatic temperature compensation that makes these monitors even more reliable.

The meters are supplied with an epoxy body (EC, TDS) probe for a more durable life-span, with calibration solutions and screwdriver for calibration purposes. The ideal tool to monitor your nutrient solution continuously without having to worry about dead batteries.



AD7632 - EC probe for ECO406

| | ECO406 | ECO407 |
|-------------------------|---------------------------------------|---------------------------------------|
| Range | EC 0 to 9.99 mS/cm | - |
| | TDS - | 0 to 1990 ppm |
| Resolution | EC 0.01 mS/cm | - |
| | TDS - | 10 ppm |
| Accuracy (at 25°C/77°F) | ±2% f.s. | ±2% f.s. |
| TDS factor | - | Approx. 0.7 |
| Calibration | Manual, single point, through trimmer | Manual, single point, through trimmer |
| Temp. Compensation | Automatic | Automatic |
| Probe (Included) | AD7632 - EC probe for ECO406 | AD7634 - TDS probe for ECO407 |
| Environment | 0 to 50°C, 95% RH max | 0 to 50°C, 95% RH max |
| Power Supply | External, 12 Vdc adapter | |
| Dimensions / Weight | 120 x 134 x 54 mm / Approx. 300 g | |

ECO406 is supplied with

AD7632 - EC probe for ECO406 with 2 m cable; AD70031 - 1413 µS/cm calibration solutions in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter, Instruction manual

ECO407 is supplied with

AD7634 - TDS probe for ECO407 with 2 m cable; AD70032 - 1382 ppm calibration solutions in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter; Instruction manual

Accessories

AD7632 - EC probe for ECO406 with 2 m cable
AD7634 - TDS probe for ECO407 with 2 m cable
AD70031P - 1413 µS/cm EC calibration solution (20 ml sachet, 25 pcs.) [ECO406]
AD70032P - 1382 ppm calibration solution (20 ml sachet, 25 pcs.) [ECO407]
AD70442P - 1500 ppm TDS standard solution (20 ml sachet, 25 pcs.) [ECO407]
AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
AD7061 - Electrode cleaning solution (230 ml bottle)



AD7634 - TDS probe for ECO407

Standard Professional Portable Meters

ATC / MTC

Automatic and manual temperature compensation.

Hold Function

Freeze the first stable reading on the LCD.

Low battery indicator

When the batteries become weak, the battery symbol on the LCD lights up to indicate a low battery condition.

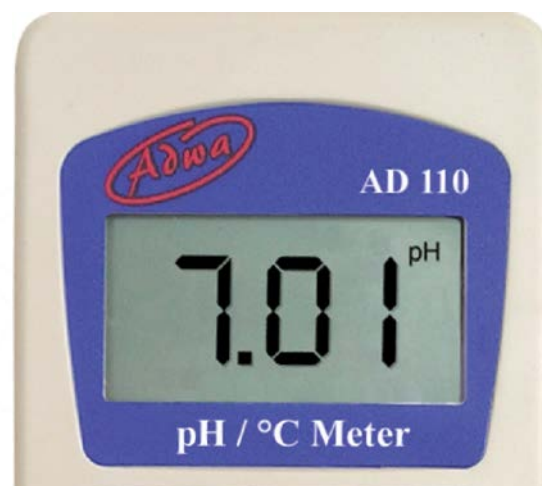
Stability indicator

The meter displays an hourglass symbol that will disappear when the measurement has achieved stability, and the reading should be taken.

Auto Shut-off

To save battery life, the meters have an auto-off feature.

| | pH | ORP | EC | TDS | Temperature | ATC | MTC | Stability Indicator | Low Battery Indicator | Hold Function | Auto Shut-off |
|-------|----|-----|----|-----|-------------|-----|-----|---------------------|-----------------------|---------------|---------------|
| AD110 | • | | | | • | • | | • | • | • | • |
| AD111 | • | • | | | • | • | | • | • | • | • |
| AD310 | | | • | | • | • | • | • | • | • | • |
| AD410 | | | | • | • | • | • | • | • | • | • |



AD110-AD111

Standard Professional pH-Temperature (AD110) and pH-ORP-Temperature (AD111) Portable Meters

AD110 and **AD111** are compact pH meters featuring automatic pH calibration, HOLD function, low battery indication, temperature measurement and compensation. In addition, **AD111** can measure in the mV range.

AD110 and **AD111** offer you the greatest value-for-money for basic pH, ORP [AD111] and Temperature measurements. 2 points push-button calibration with auto buffer recognition in 3 points (pH 4.01, pH 7.01 and pH 10.01).

Auto-off after 8 minutes of non-use conserves energy and lengthens battery life-span.



Optional AD3230B - ORP electrode [AD111]

- Gel filled combination ORP electrode with platinum contact

AD110 and **AD111** are supplied with **AD1230B** - pH electrode with epoxy body, double junction, BNC connector and 1 m cable; **AD7662** - Stainless steel temperature probe with 1 m cable; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solution in sachet (20 ml); Batteries (4 x 1.5V, AA alkaline); Instruction manual

Accessories

Find an accessory guide for portable meters on page 13



| | AD110 | AD111 |
|-------------------------|--|---|
| Range | pH | -2.00 to 16.00 pH |
| | mV | - |
| | Temp. | -5.0 to 105.0°C |
| Resolution | pH | 0.01 pH |
| | mV | - |
| | Temp. | 0.1°C |
| Accuracy (at 25°C/77°F) | pH | ±0.02 pH |
| | mV | - |
| | Temp. | ±0.5°C up to 60°C ±1°C (outside) |
| Calibration | pH | Automatic, 1 or 2 point, with 3 memorized buffers value |
| | mV | - |
| | Temp. | Factory calibrated |
| Probes (included) | AD1230B - epoxy body pH electrode with double junction, BNC connector and 1 m cable; AD7662 - Stainless steel temperature probe with 1 m cable | |
| Temp. Compensation | Automatic or 25°C fixed | |
| Battery Type / Life | 4 x 1.5V AA batteries / Approx. 1500 hours of continuous use | |
| Dimensions / Weight | 70 x 145 x 26 mm / Approx. 200 g | |

AD310-AD410

Standard Professional Conductivity-Temperature [AD310] and TDS-Temperature [AD410] Portable Meters

AD310 and **AD410** are portable microprocessor-based instruments for measuring EC or TDS, and temperature.

The auto ranging feature of the EC and TDS readings automatically sets the instrument to the scale with the highest resolution.

Measurements are compensated for temperature effect automatically (ATC) or manually (MTC). The temperature compensation feature can also be disabled to measure actual conductivity or TDS. The temperature coefficient is user selectable. The instruments also feature a measurement stability indicator.



AD310 is supplied with

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor and 1 m cable; **AD70031** - 1413 µS/cm calibration solutions in sachet (20 ml); Batteries (4 x 1.5V, AA alkaline); Instruction manual

AD410 is supplied with

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor and 1 m cable; **AD70032** - 1382 ppm calibration solutions in sachet (20 ml); Batteries (4 x 1.5V, AA alkaline); Instruction manual

| | AD310 | AD410 |
|--------------------------|---|---|
| Range | EC | 19.99 µS/cm 199.9 µS/cm 1999 µS/cm 19.99 mS/cm 199.9 mS/cm |
| | TDS | 9.99 ppm 99.9 ppm 999 ppm 9.99 ppt 99.9 ppt |
| | Temp. | -9.9 to 120.0°C |
| Resolution | EC | 0.01 µS/cm 0.1 µS/cm 1 µS/cm 0.01 mS/cm 0.1 mS/cm |
| | TDS | - |
| | Temp. | 0.1°C |
| Accuracy (at 25°C/77°F) | EC | ±1% f.s. |
| | TDS | - |
| | Temp. | ±0.5°C |
| Calibration | EC | Offset: 0.0 µS/cm; Slope: 1 point with 6 memorized standards (84.0, 1413 µS/cm; 5.00, 12.88, 80.0, 111.8 mS/cm) or one custom value |
| | TDS | - |
| Temperature Compensation | ATC/MTC, -9.9 to 120.0°C | ATC/MTC, -9.9 to 120.0°C |
| Temperature Coefficient | Selectable from 0.00 to 6.00% / °C | Selectable from 0.00 to 6.00% / °C |
| Reference Temperature | Selectable at 20.0 or 25.0°C | Selectable at 20.0 or 25.0°C |
| Probe (Included) | AD76309 - Stainless steel, 4-ring EC/TDS/Temperature probe with DIN connector and 1 m cable | |
| Battery Type / Life | 4 x 1.5V AA batteries / Approx. 200 hours of continuous use | |
| Dimensions / Weight | 70 x 145 x 26 mm / Approx. 200 g | |

Accessories

Find an accessory guide for portable meters on page 13

Professional Waterproof Portable Meters

ATC / MTC

Automatic and manual temperature compensation.

Stability indicator

The meter displays an hourglass symbol that will disappear when the measurement has achieved stability, and the reading should be taken.

GLP

GLP allows storage and retrieval of data regarding the status of the system.

Memory

Store your current readings, samples on demand, with a time stamp.

PC Interface

Logged data can be transferred to a PC or printer through the RS232 port.

Auto Shut-off

To save battery life, the meters have an auto-off feature.

Low battery indicator

When the batteries become weak, the battery symbol on the LCD lights up to indicate a low battery condition.

| | pH | ORP | EC | TDS | Temperature | Dissolved Oxygen | ATC | MTC | Stability Indicator | Low Battery Indicator | Hold Function | Auto Shut-off | Pc Interface | GLP | Memory |
|-------|----|-----|----|-----|-------------|------------------|-----|-----|---------------------|-----------------------|---------------|---------------|--------------|-----|--------|
| AD130 | • | • | | | • | | • | • | • | • | • | • | | | |
| AD131 | • | • | | | • | | • | • | • | • | • | • | | • | |
| AD132 | • | • | | | • | | • | • | • | • | • | • | • | • | • |
| AD330 | | | • | • | • | | • | • | • | • | • | • | | • | |
| AD331 | | | • | • | • | | • | • | • | • | • | • | | • | |
| AD332 | | | • | • | • | | • | • | • | • | • | • | | • | |
| AD630 | | | • | • | • | | • | • | • | • | • | • | | • | |



AD130

Professional Multi-Parameter Splash-Proof pH-ORP-Temp Portable Meter

AD130 is a heavy-duty portable pH meter designed to provide laboratory results and accuracy even under harsh industrial conditions.

- 7 memorized buffers for pH calibration (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01 and 12.45)
- Messages on the LCD to make the calibration easy and accurate
- pH readings with manual or automatic
- Temperature compensation
- pH calibration using pH buffers with 0.01 resolution
- Temperature range from -20 to 120°C (-4 to 248°F) using A7662 probe

AD130 can also use ORP electrodes to measure mV, with a resolution up to 0.1 mV.



AD130 is supplied with

AD1230B - pH electrode with epoxy body, double junction, BNC connector and 1 m cable; **AD7662** - Stainless steel temperature probe with 1 m cable; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solution in sachet (20 ml); Wrist strap; Batteries (4 x 1.5V, AA alkaline); Instruction manual

Optional AD3230B - ORP electrode

- Gel filled combination ORP electrode with platinum contact



Accessories

Find an accessory guide for portable meters on page 13

AD131 - AD132

Professional Waterproof pH-ORP-Temperature Portable Meter with GLP & RS232 interface

AD131 and AD132 are heavy-duty portable waterproof meters for pH, ORP (Oxidation Reduction Potential) and temperature measurements, designed to provide laboratory results and accuracy even under harsh industrial conditions.

- 7 memorized buffers for pH calibration (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01 and 12.45)
- Messages on the LCD to make the calibration easy and accurate
- pH readings with manual or automatic temperature compensation
- Calibration time-out alarm
- Log-on-demand
- HOLD feature to freeze stable reading on the LCD
- GLP feature to view last calibration data for pH and relative mV
- PC interface [AD132]
- AD132 allows connection to an external serial printer with the following specification: at least 16 characters/line, baud rate 9600 and 9-pin RS232 input



AD131 and AD132 are supplied with

AD1230B - pH electrode with epoxy body, double junction, BNC connector and 1 m cable; **AD7662** - Stainless steel temperature probe with 1 m cable; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solution in sachet (20 ml); Wrist strap; Batteries (4 x 1.5V, AA alkaline); Instruction manual; **AD9551** - Serial communication cable [AD132]

Optional AD3230B - ORP electrode

- Gel filled combination ORP electrode with platinum contact



Accessories

Find an accessory guide for portable meters on page 13

| | AD130 | AD131 - AD132 |
|--------------------------|--|--|
| Range | pH | -2.00 to 16.00 |
| | ORP | ±1999 mV |
| | Temp | -20.0 to 120.0°C / -4.0 to 248.0°F |
| Resolution | pH | 0.01 pH |
| | ORP | 0.1 ±699.9 mV / 1 mV (outside) |
| | Temp | 0.1°C (0.1°F) |
| Accuracy (at 25°C/77°F) | pH | ±0.01 pH |
| | ORP | ±0.2 up to ±699.9 mV / ±1 mV (outside) |
| | Temp | ±0.4°C (±0.8°F) (excluding probe error) |
| Calibration | pH | 1 or 2 point calibration, 7 standard buffers available (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) |
| | ORP | Factory calibrated |
| Temperature compensation | ATC/MTC, -20.0 to 120.0°C (-4.0 to 248.0°F) | ATC/MTC, -20 to 120°C (-4.0 to 248.0 °F) |
| Unit | °C and °F | °C and °F |
| Memory | - | Log-on-demand 500 samples |
| GLP | - | Yes (With time stamp) |
| Hold function | Yes | Yes (Auto End Point) |
| Low battery indication | Yes | - |
| Stability indicator | Yes | Yes |
| Auto shutt-off | 20 min. (can be disabled) | 5 min. (can be disabled) |
| PC Interface | - | RS232 for PC software and External Printer [AD132] |
| Probe (Included) | AD1230B - epoxy body pH electrode with double junction, BNC connector and 1 m cable; AD7662 - Stainless steel temperature probe with 1 m cable | Up to 5-point calibration, with 7 standard buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) |
| Battery Type / Life | 4 x 1.5V AA batteries / Approx. 500 hours of continuous use | 4 x 1.5V AA batteries / Approx. 300 hours of continuous use |
| Dimensions / Weight | 188 x 96 x 70 mm / 460 g | 188 x 96 x 70 mm / 460 g |



4 rings, stainless steel probe

The meter comes with an AD76309 EC/TDS/Temperature probe with built-in temperature sensor



AD331

Professional Waterproof Conductivity-Temperature Portable Meter with GLP

AD331 is a waterproof portable meter that reads Conductivity in 5 ranges and temperature. The auto ranging feature of the EC range automatically sets the instrument to the scale with the highest resolution. Measurements are compensated for temperature effect automatically (ATC) or manually (MTC). It is also possible to disable the temperature compensation feature to measure the actual conductivity. The temperature coefficient is user selectable. This instrument also features a measurement stability indicator, GLP capability, and a user selectable ID code to uniquely identify the instrument.

| AD331 | |
|---|---|
| Range | EC 0.00 to 19.99 $\mu\text{S}/\text{cm}$ 20.0 to 199.9 $\mu\text{S}/\text{cm}$ 200 to 1999 $\mu\text{S}/\text{cm}$ 2.00 to 19.99 mS/cm 20.0 to 199.9 mS/cm |
| | Temp. -9.9 to 120.0 $^{\circ}\text{C}$ |
| Resolution | EC 0.01 $\mu\text{S}/\text{cm}$ 0.1 $\mu\text{S}/\text{cm}$ 1 $\mu\text{S}/\text{cm}$ 0.01 mS/cm 0.1 mS/cm |
| | Temp. 0.1 $^{\circ}\text{C}$ |
| Accuracy (at 25 $^{\circ}\text{C}/77^{\circ}\text{F}$) | EC/TDS $\pm 1\%$ f.s. |
| | Temp. ± 0.5 $^{\circ}\text{C}$ |
| Calibration | EC Offset 0.0 $\mu\text{S}/\text{cm}$; Slope: 1 point with 6 memorized standards (84.0, 1413 $\mu\text{S}/\text{cm}$; 5.00, 12.88, 80.0, 111.8 mS/cm) or one custom value |
| Temperature compensation | ATC/MTC, -9.9 to 120 $^{\circ}\text{C}$ |
| Temperature coefficient | Selectable from 0.00 to 10.00% / $^{\circ}\text{C}$ |
| Reference temperature | Selectable from 15.0 to 30.0 $^{\circ}\text{C}$ |
| Probe (included) | AD76309 - Stainless steel, 4-ring EC/TDS/Temperature probe with DIN connector and 1 m cable |
| Memory | Log-on-demand: Up to 250 samples |
| GLP | Yes with time stamp |
| Hold function | Yes (Auto) |
| Low battery indication | Yes |
| Auto shutt-off | User selectable: 5 minutes or disabled |
| Battery Type / Life | 4 x 1.5V AA batteries / Approx. 200 h of continuous use |
| Dimensions / Weight | 188 x 96 x 70 mm / 460 g |

AD331 is supplied with

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor; AD70031 - 1413 $\mu\text{S}/\text{cm}$ calibration solutions in sachet (20 ml); AD70030 - 12.88 mS/cm calibration solutions in sachet (20 ml); Wrist strap; Batteries (4 x 1.5V, AA alkaline); Instruction manual

Accessories

Find an accessory guide for portable meters on page 13

AD330 - AD332

Professional Waterproof Conductivity-TDS-Temperature Portable Meter with GLP & RS232 interface

AD330 and AD332 are waterproof portable meters that read TDS and Conductivity in 5 ranges and temperature.

The auto ranging feature of the EC and TDS ranges automatically sets the instrument to the scale with the highest resolution. Measurements are compensated for temperature effect automatically (ATC) or manually (MTC). It is also possible to disable the temperature compensation feature to measure the actual conductivity.

The temperature coefficient is user selectable. These instruments also features a measurement stability indicator, GLP capability, and a user selectable ID code to uniquely identify the instrument. Moreover, AD332 includes PC interface and printing function.

| AD330 - AD332 | |
|---|---|
| Range | EC 0.00 to 19.99 $\mu\text{S}/\text{cm}$ 20.0 to 199.9 $\mu\text{S}/\text{cm}$ 200 to 1999 $\mu\text{S}/\text{cm}$ 2.00 to 19.99 mS/cm 20.0 to 199.9 mS/cm |
| | TDS 0.00 to 9.99 ppm 10.0 to 99.9 ppm 100 to 999 ppm 1.00 to 9.99 ppt 10.0 to 99.9 ppt |
| | Temp. -9.9 to 120.0 $^{\circ}\text{C}$ |
| Resolution | EC 0.01 $\mu\text{S}/\text{cm}$ 0.1 $\mu\text{S}/\text{cm}$ 1 $\mu\text{S}/\text{cm}$ 0.01 mS/cm 0.1 mS/cm |
| | TDS 0.01 ppm 0.1 ppm 1 ppm 0.01 ppt 0.1 ppt |
| | Temp. 0.1 $^{\circ}\text{C}$ |
| Accuracy (at 25 $^{\circ}\text{C}/77^{\circ}\text{F}$) | EC/TDS $\pm 1\%$ f.s. |
| | Temp. ± 0.5 $^{\circ}\text{C}$ |
| Calibration | EC Offset: 0.0 $\mu\text{S}/\text{cm}$; Slope: 1 point with 6 memorized standards (84.0, 1413 $\mu\text{S}/\text{cm}$; 5.00, 12.88, 80.0, 111.8 mS/cm) |
| Temperature compensation | ATC/MTC, -9.9 to 120 $^{\circ}\text{C}$ |
| Temperature coefficient | Selectable from 0.00 to 10.00% / $^{\circ}\text{C}$ |
| Reference temperature | Selectable from 15.0 to 30.0 $^{\circ}\text{C}$ |
| TDS factor | User selectable from 0.40 to 1.00 (default value: 0.50) |
| Probe (included) | AD76309 - Stainless steel, 4-ring EC/TDS/Temperature probe with DIN connector and 1 m cable |
| Memory | Log-on-demand: Up to 250 samples [AD332] |
| GLP | Yes with time stamp |
| Printer | External through RS232 [AD332] |
| Hold function | Yes (Auto) |
| Low battery indication | Yes |
| Auto shutt-off | User selectable: 5 minutes or disabled |
| PC Interface | RS232 for PC software and External Printer [AD332] |
| Battery Type / Life | 4 x 1.5V AA batteries / Approx. 200 h of continuous use |
| Dimensions / Weight | 188 x 96 x 70 mm / 460 g |



- AD332 allows connection to an external serial printer with the following printer specifications: at least 16 characters/line, baud rate 9600 and 9-pin RS232 input

AD330 and AD332 are supplied with

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor; AD70031 - 1413 $\mu\text{S}/\text{cm}$ calibration solutions in sachet (20 ml); AD70030 - 12.88 mS/cm calibration solutions in sachet (20 ml); Wrist strap; Batteries (4 x 1.5V, AA alkaline); Instruction manual; AD9551 - Serial communication cable [AD332]

Accessories

Find an accessory guide for portable meters on page 13

AD630

Dissolved Oxygen & Temperature Waterproof Portable Meter with GLP & RS232 interface

AD630 is a heavy-duty portable waterproof meter for DO (Dissolved Oxygen) and temperature measurements, designed to provide laboratory results and accuracy even under harsh industrial conditions.

- DO readings displayed in ppm or % saturation units
- DO calibration at 1 or 2 standard points (0 and 100%), or at 1 custom point (>20%)
- Galvanic DO probe with built-in temperature sensor
- Automatic temperature compensation
- Log-on-demand
- Setup mode for setting altitude & salinity compensation factors, temperature measure unit (°C or °F), serial communication parameters, date & time, auto-off, instrument ID code
- HOLD feature to freeze stable reading on the LCD
- GLP feature to view last calibration data
- PC interface via RS232 port

AD630 is supplied with

AD8001/3 - Galvanic DO probe with built-in temperature sensor;
AD8001A/P - Spare membrane with O-ring; **AD9072S** - Electrolyte solution (30 ml bottle); **AD9551** - Serial communication cable; Wrist strap; Batteries (4 x 1.5V, AA alkaline); Instruction manual

Accessories

AD8001/3 - Galvanic DO probe with built-in temperature sensor
AD8001A/P - Spare membrane with O-ring (5 pcs)
AD7040 - Two-component zero oxygen solution
AD9072S - Electrolyte solution for DO galvanic probe
AD9316 - Application software
AD9551 - Serial communication cable
AD9345 - Hard carrying case (Dimensions: 400 mm x 300 mm x 100 mm)

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20



AD8001/3 galvanic DO probe with built-in temperature sensor

- Galvanic probe: Unlike polarographic probes, Galvanic DO probes do not require any conditioning time when the unit is switched on, saving time when many measurements are required.

| | AD630 |
|---------------------------------|--|
| Range | 0.00 to 45.00 ppm O ₂ 0.0 to 300.0 % saturation 0.0 to 50.0°C / 32.0 to 122.0°F |
| Resolution | 0.01 ppm / 0.1% 0.1°C / 0.1°F |
| Accuracy | ±1.5% f.s. (DO) ±0.5°C / ±1.0°F |
| DO calibration | Automatic, at 1 or 2 standard points (0 and 100%) or 1 custom point (> 20%) |
| Temperature Calibration | User offset adjustment |
| Temperature Compensation | Automatic from 0 to 50°C |
| Altitude Compensation | 0 to 4000 m (resolution 100 m) |
| Salinity Compensation | 0.0 to 50.0 g/l (resolution 0.1 g/l) |
| Memory | Log-on-demand: Up to 100 samples |
| GLP | Yes |
| PC Interface | RS232 port |
| Probe (included) | AD8001/3 - Galvanic DO probe with internal temperature sensor, DIN connector and 3 m cable |
| Environment | 0 to 50°C (32 to 122°F) RH max. 100% non-condensing |
| Battery Type / Life | 4 x 1.5 V AA, alkaline battery / Approx. 200 hours of continuous use |
| Auto shutt-off | User selectable: 5 minutes or disabled |
| Dimensions / Weight | 188 x 96 x 70 mm / 460 g |

Accessory guide for portable meters



AD9551 - Serial communication cable
[AD132, AD332, AD630]



AD9316 - Application software
[AD132, AD332, AD630]



AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
AD7061 - Electrode cleaning solution (230 ml bottle)



AD9345 - Hard carrying case for waterproof portable meters
Dimensions:
400 mm x 300 mm x 100 mm

AD110 - AD111 - AD130 - AD131 - AD132



AD1131B - pH electrode



AD1230B - pH electrode



AD1286 - pH electrode



AD7662 - Temperature probe



AD3230B - ORP electrode
[AD111, AD130, AD131, AD132]

AD70004P - pH 4.01 calibration solution (20 ml sachet, 25 pcs.);
AD70007P - pH 7.01 calibration solution (20 ml sachet, 25 pcs.);
AD70010P - pH 10.01 calibration solution (20 ml sachet, 25 pcs.);
AD7020 - ORP test solution, 200/275 mV (230 ml bottle);
AD70300 - Electrode storage solution (230 ml bottle);
AD7082 - Electrode refillable solution 3.5 M KCl (30 ml bottle, 4 pcs.)



AD310 - AD410 - AD330 - AD331 - AD332



AD76309 - Conductivity probe with built-in temperature sensor



AD9350 - Hard carrying case for standard portable meters
Dimensions:
240 mm x 180 mm x 80 mm



AD70030P - 12.88 mS/cm EC standard solution (20 ml sachet, 25 pcs.)
AD70031P - 1413 μS/cm EC calibration solution (20 ml sachet, 25 pcs.)
AD70032P - 1382 ppm calibration solution (20 ml sachet, 25 pcs.)
AD7033 - 84 μS/cm calibration solution (230 ml bottle)
AD7034 - 80000 μS/cm calibration solution (230 ml bottle)
AD7035 - 111800 μS/cm calibration solution (230 ml bottle)
AD7039 - 5000 μS/cm calibration solution (230 ml bottle)



More about electrodes and probes on page 18; About calibration, rinse and other solutions on page 20

Benchtop Meters

Compact assistance for work and education



AD1131B Electrode

The AD1000 family is supplied with the AD1131 - refillable, glass body pH electrode with double junction and BNC connector.



Non-skid footpads

The footpads are ensuring stability for the meters even on slippery surfaces.



Mountable electrode holder

Electrode holder can be mounted to either side of the benchtop meters.



AD1000-AD1020

Professional Multi-Parameter pH-ORP-Temperature and pH-ORP-ISE-Temperature Benchtop Meters with RS232/USB interface & GLP

AD1000 and **AD1020** are professional benchtop meters with ranges for pH, ORP (Oxidation Reduction Potential), ISE [1020] and temperature measurements. Relative mV readings are also provided.

- Up to 5-point calibration with 7 memorized buffers and two custom buffers
- Calibration time-out alarm
- pH calibration using buffers with 0.001 resolution
- pH readings with manual or automatic temperature compensation
- Log-on-demand (up to 50 samples) and automatic logging (up to 1000 samples)
- Two selectable alarm limits
- User selectable logging interval mode
- HOLD feature to freeze the stable reading on the LCD
- GLP feature to view last calibration data for pH, ISE and relative mV
- PC interface/RS232/USB

AD1030-AD1040-AD1200

Professional Multi-Parameter pH-ORP-Temperature and pH-ORP-ISE-Temperature Benchtop Meters with GLP

AD1030, **AD1040** and **AD1200** are professional benchtop meters for pH, ORP (Oxidation Reduction Potential), ISE (**AD1200** only) and temperature measurements. Relative mV readings are also provided.

- Up to 3-point calibration with 7 memorized buffers and two custom buffers
- Calibration time-out alarm
- pH calibration using buffers with 0.001 resolution
- pH readings with manual or automatic temperature compensation
- Up to 50 samples for log-on-demand [AD1040, AD1200]
- Two selectable alarm limits
- HOLD feature to freeze the stable reading on the LCD
- GLP feature to view last calibration data for:
 - pH and relative mV ranges [AD1040]
 - pH, ISE and relative mV ranges [AD1200]

Optional electrode holder

AD9315 is an adjustable arm with great stability and flexibility



Optional AD3230B ORP electrode

Gel-filled combination ORP electrode with platinum contact



Optional AD1230B pH electrode

Gel-filled, epoxy body, interchangeable pH electrode



“Cal Due” Alarm

Visual reminder when recalibration is necessary.

Data Logging

[AD1000, AD1020, AD1040, AD1200]

Store your samples into a built-in memory.

PC interface - Data transfer

[AD1000, AD1020]

Transfer your measurement's data to your PC.



GLP

[AD1000, AD1020, AD1040, AD1200]

GLP allows storage and retrieval of data regarding the status of the system.



HOLD Function

Freeze the first stable reading on the LCD.

| | AD1000 | AD1020 | AD1030/1040 | AD1200 |
|-------------------------|--|---|---|---|
| Range | pH | -2.00 to 16.00 pH / -2.000 to 16.000 pH | -2.00 to 16.00 pH / -2.000 to 16.000 pH | -2.00 to 16.00 pH / -2.000 to 16.000 pH |
| | ORP | ±2000 mV | ±2000 mV | ±2000 mV |
| | ISE | - | 0.001 to 19999 ppm | - |
| | Temp. | -20.0 to 120.0°C (-4.0 to 248.0°F) | -20.0 to 120.0°C (-4.0 to 248.0°F) | -20.0 to 120.0°C (-4.0 to 248.0°F) |
| Resolution | pH | 0.01 pH / 0.001 pH | 0.01 pH / 0.001 pH | 0.01 pH / 0.001 pH |
| | ORP | 0.1 mV (±999.9 mV) / 1 mV (outside) | 0.1 mV (±999.9 mV) / 1 mV (outside) | 0.1 mV (±999.9 mV) / 1 mV (outside) |
| | ISE | - | 0.001 ppm (0.001 to 9.999) 0.01 ppm (10.00 to 99.99) 0.1 ppm (100.0 to 999.9) 1 ppm (1000 to 19999) | - |
| | Temp. | 0.1°C (0.1°F) | 0.1°C (0.1°F) | 0.1°C (0.1°F) |
| Accuracy (at 25°C/77°F) | pH | ±0.01 pH / ±0.002 pH | ±0.01 pH / ±0.002 pH | ±0.01 pH / ±0.002 pH |
| | ORP | ±0.2 mV up to ±699.9 mV ±0.5 mV up to ±999.9 mV ± 2 mV outside | ±0.2 mV up to ±699.9 mV ±0.5 mV up to ±999.9 mV ± 2 mV outside | ±0.2 mV up to ±699.9 mV ±0.5 mV up to ±999.9 mV ± 2 mV outside |
| | ISE | - | ±0.5% f.s. ISE | - |
| | Temp. | ±0.4°C (±0.7°F) (excluding probe error) | ±0.4°C (±0.7°F) (excluding probe error) | ±0.4°C (±0.7°F) (excluding probe error) |
| Calibration | pH | Up to 5 point calibration, with 2 custom and 7 standard buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) | Up to 5 point calibration, with 2 custom and 7 standard buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) | Up to 3 point calibration, with 2 custom and 7 standard buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) |
| | ISE | - | Up to two-point calibration, 5 standard solutions available (0.1, 1, 10, 100, 1000 ppm) | - |
| Memory | Log-on-demand: Up to 50 samples; Automatic logging: Up to 1000 samples | Log-on-demand: Up to 50 samples; Automatic logging: Up to 1000 samples | Log-on-demand: Up to 50 samples [AD1040] | Log-on-demand: Up to 50 samples |
| PC Interface | USB and RS232 | USB and RS232 | - | - |
| Probes (included) | AD1131B - Refillable, glass body pH electrode with double junction, BNC connector and 1 m cable; AD7662 - Stainless steel temperature probe with 1 m cable | | | |
| Power supply | 12 Vdc power adapter | | | |
| Dimensions | 230 x 180 x 50 mm | | | |
| Weight | 1.8 kg | | | |

AD1000 and AD1020 are supplied with

AD1131B - Refillable glass body pH electrode with BNC connector and 1 m cable; **AD7662** - Stainless steel temperature probe with 1 m cable; Electrode holder; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solutions in sachet (20 ml); **AD9551** - Serial communication cable; 12 Vdc power adapter; Instruction manual.

AD1030, AD1040 and AD1200 are supplied with

AD1131B - Refillable glass body pH electrode with BNC connector and 1 m cable; **AD7662** - Stainless steel temperature probe with 1 m cable; Electrode holder; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solutions in sachet (20 ml); 12 Vdc power adapter; Instruction manual.

Accessories

- AD1131B** - pH electrode
- AD1230B** - pH electrode
- AD1286** - pH electrode
- AD3230B** - Combination ORP electrode
- AD7662** - Temperature probe
- AD7000** - Rinse solution, 20 ml sachet (230 ml bottle)
- AD7004** - pH 4.01 calibration solution (230 ml bottle)
- AD7007** - pH 7.01 calibration solution (230 ml bottle)
- AD7010** - pH 10.01 calibration solution (230 ml bottle)
- AD7020** - ORP test solution, 200/275 mV (230 ml bottle)
- AD70300** - Electrode storage solution (230 ml bottle)
- AD7061** - Electrode cleaning solution (230 ml bottle)
- AD7082** - Electrode refillable solution 3.5 M KCl (30 ml bottle, 4 pcs.)
- AD7082S** - Electrode refillable solution 3.5 M KCl (30 ml bottle)
- AD9315** - Electrode holder
- AD9316** - Application software [AD1000, AD1020]
- AD9551** - Serial communication cable [AD1000, AD1020]

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20

AD3000

Professional Multi-Parameter Conductivity-TDS-Temperature Benchtop Meter with GLP

AD3000 is a microprocessor-based conductivity, TDS and temperature meter.

The auto ranging feature of the EC and TDS ranges automatically sets the instrument to the scale with the highest resolution. Measurements are compensated for temperature effect automatically (ATC) or manually (MTC) with the conductivity probe with built-in temperature sensor. It is also possible to disable the temperature compensation and measure the actual conductivity. The temperature coefficient is user selectable. The instrument is equipped with a stability indicator, to indicate when the measurement is to be recorded.



Custom or Automatic Calibration

With **AD3000** you can choose between Custom or Automatic calibration.

Wide-scale of measuring ranges

AD3000 features 5 measuring ranges both EC and TDS.

Autoranging

The EC and TDS scales are autoranging. The meter automatically sets the scale with the highest possible resolution.



Stability indicator

The meter displays an hourglass symbol that will disappear when the measurement has achieved stability, and the reading should be taken.



GLP

With the GLP function, AD3000 allows the user to enter an ID code to uniquely identify the instrument. GLP also allows to store and retrieve data regarding the status of the system.



Hold Function

Freeze the first stable reading on the LCD.

Data Logging

AD3000 allows you to store up to 250 samples. By storing a sample, a complete information is memorized:

- Date



- EC or TDS readings



- Temperature readings



| AD3000 | | |
|-------------------------|-------|--|
| Range | EC | 0.00 to 19.99 $\mu\text{S}/\text{cm}$ 20.0 to 199.9 $\mu\text{S}/\text{cm}$ 200 to 1999 $\mu\text{S}/\text{cm}$ 2.00 to 19.99 mS/cm 20.0 to 199.9 mS/cm |
| | TDS | 0.00 to 9.99 ppm 10.0 to 99.9 ppm 100 to 999 ppm 1.00 to 9.99 ppt 10.0 to 99.9 ppt |
| | Temp. | -9.9 to 120 °C |
| Resolution | EC | 0.01 $\mu\text{S}/\text{cm}$ 0.1 $\mu\text{S}/\text{cm}$ 1 $\mu\text{S}/\text{cm}$ 0.01 mS/cm 0.1 mS/cm |
| | TDS | 0.01 ppm 0.1 ppm 1 ppm 0.01 ppt 0.1 ppt |
| | Temp. | 0.1 °C |
| Accuracy (at 25°C/77°F) | EC | ±1% f.s. |
| | TDS | ±1% f.s. |
| | Temp. | ±0.5 °C |
| Calibration | EC | Offset at 0.00 $\mu\text{S}/\text{cm}$; Slope at 1 point with 6 memorized values (84.0, 1413 $\mu\text{S}/\text{cm}$; 5.00, 12.88, 80.0, 111.8 mS/cm) or with custom value |
| Memory | | Log-on-demand: Up to 250 samples |
| Probes (included) | | AD76309 - Stainless steel, 4-ring EC/TDS/Temperature probe with DIN connector and 1 m cable |
| Power supply | | 12 Vdc power adapter |
| Dimensions | | 230 x 180 x 50 mm |
| Weight | | 1.8 kg |

AD3000 is supplied with

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor; **AD70031** - 1413 $\mu\text{S}/\text{cm}$ calibration solutions in sachet (20 ml); **AD70030** - 12.88 mS/cm calibration solutions in sachet (20 ml); 12 Vdc power adapter; Instruction manual.

Accessories

AD76309 - EC/TDS/Temperature probe with built-in temperature sensor
AD7030 - 12.88 mS/cm EC standard solution (230 ml bottle)
AD7031 - 1413 $\mu\text{S}/\text{cm}$ EC calibration solution (230 ml bottle)
AD7032 - 1382 ppm calibration solution (230 ml bottle)
AD7033 - 84 $\mu\text{S}/\text{cm}$ calibration solution (230 ml bottle)
AD7034 - 80000 $\mu\text{S}/\text{cm}$ calibration solution (230 ml bottle)
AD7035 - 111800 $\mu\text{S}/\text{cm}$ calibration solution (230 ml bottle)
AD7039 - 5000 $\mu\text{S}/\text{cm}$ calibration solution (230 ml bottle)
AD7000 - Rinse solution (230 ml bottle)
AD7061 - Electrode cleaning solution (230 ml bottle)

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20

AD8000

Professional Multi-Parameter pH-ORP-Conductivity-TDS-Temperature Benchtop Meter with GLP



AD8000 is a microprocessor-based pH, ORP, conductivity, TDS, and temperature benchtop meter. Relative mV feature is also provided. The auto-ranging feature of the EC and TDS ranges automatically sets the instrument to the scale with the highest resolution. pH measurements are compensated for temperature effect automatically (ATC) using an AD7662 temperature probe, while the EC readings can be compensated automatically (ATC) using the supplied conductivity probe with a built-in temperature sensor, or manually (MTC). It is also possible to disable the temperature compensation and measure the actual conductivity. The temperature coefficient is user selectable. The pH calibration can be performed at 1, 2, or 3 points with five memorized buffers (pH 4.01, 6.86, 7.01, 9.18, 10.01).

Besides, **AD8000** is provided with calibration timeout alarm, GLP feature to view last calibration data, and automatic HOLD feature to freeze the first stable reading on the LCD.

| AD8000 | | |
|-------------------------|---|--|
| Range | pH | -2.00 to 16.00 pH / -2.000 to 16.000 pH |
| | ORP | ±699.9 mV / ±2000 mV |
| | EC | 0.00 to 19.99 μ S/cm 20.0 to 199.9 μ S/cm 200 to 1999 μ S/cm 2.00 to 19.99 mS/cm 20.0 to 199.9 mS/cm |
| | TDS | 0.00 to 9.99 ppm 10.0 to 99.9 ppm 100 to 999 ppm 1.00 to 9.99 ppt 10.0 to 99.9 ppt |
| | Temp. | -9.9 to 120 °C (pH range) 0.0 to 100.0°C (EC range) |
| | Resolution | pH |
| ORP | | 0.1 mV (±699.9 mV) / 1 mV (±2000 mV) |
| EC | | 0.01 μ S/cm 0.1 μ S/cm 1 μ S/cm 0.01 mS/cm 0.1 mS/cm |
| TDS | | 0.01 ppm 0.1 ppm 1 ppm 0.01 ppt 0.1 ppt |
| Temp. | | 0.1°C |
| Accuracy (at 25°C/77°F) | | pH |
| | ORP | ± 0.2 mV up to ± 699.9 mV ± 1 mV up to ± 2000 mV |
| | EC | ±1% f.s. |
| | TDS | ±1% f.s. |
| | Temp. | ±0.5 °C |
| Calibration | pH | Up to 3-point calibration, 5 buffer available (4.01, 6.86, 7.01, 9.18, 10.01 pH) |
| | EC | Offset at 0.00 μ S/cm; Slope at 1 point with 6 memorized values (84.0, 1413 μ S/cm; 5.00, 12.88, 80.0, 111.8 mS/cm) or with custom value |
| Probes (included) | AD1131B - Refillable, glass body pH electrode with double junction, BNC connector and 1 m cable; AD76309 - Stainless steel, 4-ring EC/TDS/Temperature probe with DIN connector and 1 m cable; AD7662 - Stainless steel temperature probe with 1 m cable | |
| Power supply | 12 Vdc power adapter | |
| Dimensions | 230 x 180 x 50 mm | |
| Weight | 1.8 kg | |

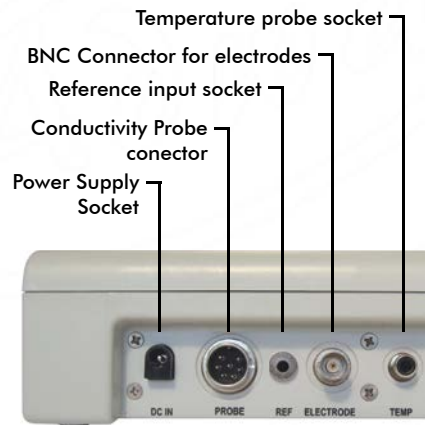
AD8000 is supplied with

AD1131B - Refillable glass body pH electrode with BNC connector and 1 m cable; **AD76309** - EC/TDS/Temperature probe with built-in temperature sensor; **AD7662** - Stainless steel temperature probe with 1 m cable; **AD70004** - pH4 calibration solution in sachet (20 ml); **AD70007** - pH7 calibration solutions in sachet (20 ml); **AD70031** - 1413 μ S/cm calibration solutions in sachet (20 ml); **AD70030** - 12.88 mS/cm calibration solutions in sachet (20 ml); 12 Vdc power adapter; Instruction manual.



EC/TDS/Temperature and pH electrode included

The AD8000 comes with the AD76309 EC/TDS/Temperature probe with a built-in temperature sensor, with the AD1131B refillable, glass body pH electrode and with the AD7662 stainless steel temperature probe.



Temperature probe socket

BNC Connector for electrodes

Reference input socket

Conductivity Probe connector

Power Supply Socket



Optional electrode

- AD3230B Gel filled combination ORP electrode with platinum contact



Optional electrode holder

- AD9315 is an adjustable arm with great stability and flexibility

Accessories

- AD1131B** - pH electrode
- AD1230B** - pH electrode
- AD1286** - pH electrode
- AD3230B** - Combination ORP electrode
- AD76309** - EC/TDS/Temperature probe with built-in temperature sensor
- AD7662** - Temperature probe
- AD7000** - Rinse solution, 20 ml sachet (230 ml bottle)
- AD7004** - pH 4.01 calibration solution (230 ml bottle)
- AD7007** - pH 7.01 calibration solution (230 ml bottle)
- AD7010** - pH 10.01 calibration solution (230 ml bottle)
- AD7030** - 12.88 mS/cm EC standard solution (230 ml bottle)
- AD7031** - 1413 μ S/cm EC calibration solution (230 ml bottle)
- AD7032** - 1382 ppm calibration solution (230 ml bottle)
- AD7033** - 84 μ S/cm calibration solution (230 ml bottle)
- AD7034** - 80000 μ S/cm calibration solution (230 ml bottle)
- AD7035** - 111800 μ S/cm calibration solution (230 ml bottle)
- AD7039** - 5000 μ S/cm calibration solution (230 ml bottle)
- AD7020** - ORP test solution, 200/275 mV (230 ml bottle)
- AD70300** - Electrode storage solution (230 ml bottle)
- AD7061** - Electrode cleaning solution (230 ml bottle)
- AD7082** - Electrode refillable solution 3.5 M KCl (30 ml bottle, 4 pcs.)
- AD7082S** - Electrode refillable solution 3.5 M KCl (30 ml bottle)
- AD9315** - Electrode holder

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20

GLP

GLP is a set of functions that allow data storage (and retrieval) about the electrode status and maintenance. All data regarding pH, relative mV and EC calibrations are stored in the instrument memory.

Autoranging

The EC and TDS scales are autoranging. The meter automatically sets the scale with the highest possible resolution.

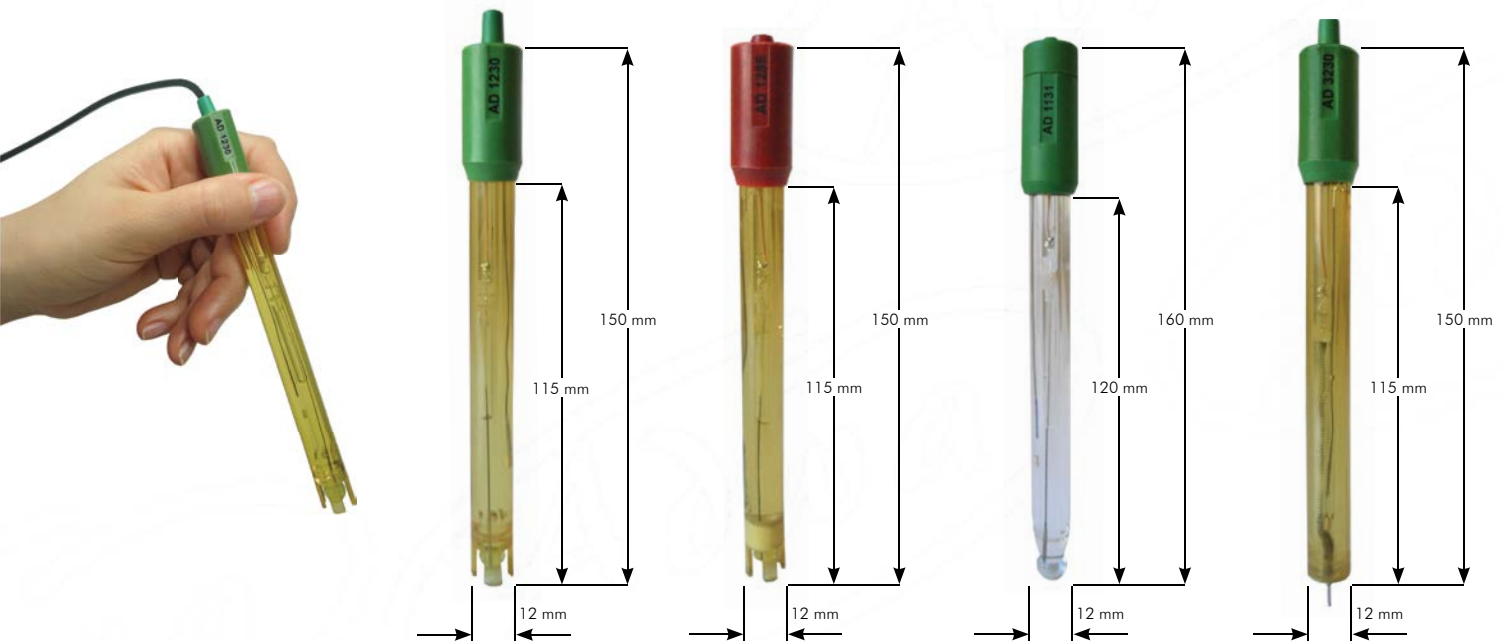


Hold Function










Freeze the first stable reading on the LCD.

ACCESSORIES

Electrodes and Probes



| | AD1230B | AD1286 | AD1131B | AD3230B |
|--|-----------------------------------|-------------------------|--------------------------------------|---|
| Description | Combination pH electrode | pH electrode | Refillable, combination pH electrode | Gel filled, combination ORP electrode with platinum contact |
| Reference | Double, Ag/AgCl | Double Ag/AgCl | Double Ag/AgCl | Single Ag/AgCl |
| Junction/Flow rate | Ceramic, single / 15-20 μ L/H | PTFE | Ceramic, single / 15-20 μ L/H | Ceramic, single |
| Electrolyte | Gel | Polymer | KCl 3.5M | Gel |
| Max. Pressure | 2 bar | 3 bar | 0.1 bar | 2 bar |
| Range | pH: 0 to 13 | pH: 0 to 13 | pH: 0 to 13 | ORP: \pm 2000mV |
| Recommended Operational Temperature | 0 to 70°C (32 to 158°F) | 0 to 80°C (32 to 176°F) | 0 to 100°C (32 to 212°F) | -5 to 70°C (23 to 158°F) |
| Tip/Shape | Spheric (dia: 7.5 mm) | Spheric (dia: 7.5 mm) | Spheric (dia: 9.5 mm) | Platinum pin |
| Temperature Sensor | No | No | No | No |
| Body Material | PEI | PEI | Glass | PEI |
| Cable | Coaxial: 1m (3.3') | Coaxial: 2m (6.6') | Coaxial: 1m (3.3') | Coaxial: 1m (3.3') |
| Connector | BNC | BNC | BNC | BNC |

| | | |
|---|----------|---|
|  | AD76309 | 4 RING STAINLESS STEEL CONDUCTIVITY/TDS PROBE WITH INTERNAL TEMPERATURE SENSOR AND 1 METER LONG CABLE |
|  | AD7632 | CONDUCTIVITY PROBE WITH 2 METERS LONG CABLE FOR ECO406 |
|  | AD7634 | TDS PROBE WITH 2 METERS LONG CABLE AND WITHOUT CONNECTOR FOR ECO407 |
|  | AD7662 | STAINLESS STEEL TEMPERATURE PROBE WITH 1 METER LONG CABLE. SUPPLIED WITH BENCHTOP AND PORTABLE METERS |
|  | AD8001/3 | GALVANIC DO PROBE WITH BUILT-IN TEMPERATURE SENSOR, DIN CONNECTOR AND 3 METERS LONG CABLE FOR AD630 |
|  | AD11P | REPLACEABLE pH/TEMP ELECTRODE FOR AD11 AND AD12 |
|  | AD14P | REPLACEABLE pH/ORP/TEMPERATURE ELECTRODE FOR AD14 |
|  | AD32P | REPLACEABLE EC/TDS/TEMP ELECTRODE FOR AD31 & AD32 |
|  | AD33P | REPLACEABLE EC/TEMP ELECTRODE FOR AD33, AD34, AD35 & AD36 |

ACCESSORIES

Other accessories

| | | |
|---|-------------------|--|
|  | <p>AD8001 A/P</p> | <p>SPARE MEMBRANES WITH O-RING (5 PCS) FOR AD8001/3 DO GALVANIC PROBE</p> |
|  | <p>AD9315</p> | <p>ELECTRODE HOLDER FOR BENCHTOP METERS</p> |
|  | <p>AD9316</p> | <p>APPLICATION SOFTWARE FOR BENCHTOP METERS AND WATERPROOF PORTABLE METERS</p> |
|  | <p>AD9335</p> | <p>EUROPEAN ADAPTER FOR BENCHTOP METERS WITH EURO PLUG (TYPE C) INPUT: 220 VAC OUTPUT: 12 VDC</p> |
|  | <p>AD9336</p> | <p>US ADAPTER FOR BENCHTOP METERS WITH US PLUG (TYPE A) INPUT: 110 VAC OUTPUT: 12 VDC</p> |
|  | <p>AD9337</p> | <p>AUSTRALIAN ADAPTER FOR BENCHTOP METERS WITH AUSTRALIAN 2 PIN PLUG (TYPE I) INPUT: 230-240 VAC OUTPUT: 12 VDC</p> |
|  | <p>AD9338</p> | <p>UK ADAPTER FOR BENCHTOP METERS WITH UK PLUG (TYPE G) INPUT: 230 VAC OUTPUT: 12 VDC</p> |
|  | <p>AD9345</p> | <p>HARD CARRYING CASE FOR ADWA WATERPROOF PORTABLE METERS (AD130, AD131, AD132, AD330, AD331, AD332, AD630) DIMENSIONS: 400 mm x 300 mm x 100 mm</p> |
|  | <p>AD9350</p> | <p>HARD CARRYING CASE FOR ADWA STANDARD PORTABLE METERS (AD110, AD111, AD310, AD410) DIMENSIONS: 240 mm x 180 mm x 80 mm</p> |
|  | <p>AD9551</p> | <p>RS232 SERIAL COMMUNICATION CABLE</p> |

CALIBRATION AND OTHER SOLUTIONS

Adwa's calibration solutions are made from established formulas. The pH calibration solutions are available in 230ml durable plastic bottles and are economical and convenient for laboratory use, or in 20 ml sachets for quick, accurate and convenient calibrations. All of our pH, Conductivity, TDS and ORP calibration solutions have a lot number and expiration date printed on them. Cleaning solutions and storage solutions are also available.



| CODE | DESCRIPTION | CODE | DESCRIPTION |
|----------|--|----------|---|
| AD7000P | Electrode rinse solution, 20 ml sachet in box of 25 pcs. | AD7032 | 1382 ppm buffer solution in 230 ml |
| AD70004P | pH 4.01 buffer solution, 20 ml sachet in box of 25 pcs. | AD7033 | 84 µS/cm calibration solution in 230 ml bottle |
| AD70007P | pH 7.01 buffer solution, 20 ml sachet in box of 25 pcs. | AD7034 | 80000 µS/cm calibration solution in 230 ml bottle |
| AD7000 | Electrode rinse solution in 230ml bottle | AD7035 | 111800 µS/cm calibration solution in 230 ml bottle |
| AD70010P | pH 10.01 buffer solution, 20 ml sachet in box of 25 pcs. | AD7039 | 5000 µS/cm calibration solution in 230 ml bottle |
| AD70030P | 12.88 mS/cm calibration solution, 20 ml sachet in box of 25 pcs. | AD7040 | Zero oxygen solution, supplied in carton box with dry chemical reagent, 12 g (AD7040-1) and solvent in bottle 500 ml (AD7040-2); CERTIFICATE included |
| AD70031P | 1413 µS/cm calibration solution, 20 ml sachet in box of 25 pcs. | AD7442 | 1500 ppm TDS buffer solution in 230 ml bottle |
| AD70032P | 1382 ppm calibration solution, 20 ml sachet in box of 25 pcs. | AD70442P | 1500 ppm calibration solution, 20 ml sachet in box of 25 pcs. |
| AD7004 | pH 4.01 buffer solution in 230 ml bottle | AD7061 | Electrode cleaning solution in 230 ml bottle |
| AD7007 | pH 7.01 buffer solution in 230 ml bottle | AD7071S | Electrode refillable solution 3.5 M KCL+ AgCl, 30ml |
| AD7010 | pH 10.01 buffer solution in 230 ml bottle | AD7082S | Electrode refillable solution 3.5 M KCL 30ml |
| AD7020 | ORP test solution (200/275 mV) , 230 ml bottle | AD7082 | Electrode refillable solution 3.5 M KCL, 4 X 30ml |
| AD70300 | Electrode storage solution in 230 ml bottle | AD9072S | Electrolyte solution for DO galvanic probe in 30 ml bottle |
| AD7030 | 12.88 mS/cm buffer solution in 230 ml bottle | AD9072 | Electrolyte solution for DO galvanic probe, 4 X 30ml |
| AD7031 | 1413 µS/cm buffer solution in 230 ml bottle | | |

Authorized Distributor

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