eXact® pH+
SMART METER SYSTEM™
with Bluetooth® SMART

DIGITAL ACCURACY WITH EZ PH PROCEDURE

SMART DIGITAL WATER TESTING

SMART GUIDE

CONTENTS

WELCOME TO YOUR NEW EXACT® PH+ SMART METER SYSTEM

Thank you for your eXact® pH+ purchase! This guide will quickly walk you through the technical details of your new pH+. You are on your way to smart digital water testing! The benefits of purchasing an eXact pH+ with Bluetooth® SMART is the ability to connect your pH meter to a smartphone or tablet and use our specially designed app to easily save, send, and share your test results. The eXact pH+ meter is IP-67 rated for water and dust protection. Therefore, it is able to withstand being submerged in 1m of water for up to 30 minutes.

Please read this entire manual before unpacking, setting up, or operating this equipment. Pay attention to all precaution statements. Failure to do so could result in damage to the equipment. Make sure that the safeguards provided by this equipment are not impaired. Use this equipment according to the specified instructions in this manual.

WHAT YOU WILL NEED TO GET STARTED

- Four (4) AAA batteries (confirm batteries are good)
- Clean Water (distilled, deionized, purified bottled water)
- Soft paper towel for drying body/side of meter

SMART METER SYSTEM®

Using eXact iDip® app in combination with our photometer completes the eXact® pH+ Smart Meter System.

WARRANTY (2 YEARS)

Registration of your eXact® pH+ must be received within 30 days from date of purchase to activate the warranty. The eXact® meter is warranted to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase by the customer. The replaceable pH and ORP probes are warranted for one (1) year. Breakage of glass bulb is not covered by the warrantee. ITS will repair or replace any part of the product which is deemed to be faulty or otherwise defective. The non–transferable warranty does not cover product damage caused by abuse or improper use. If the meter is faulty or otherwise defective contact ITS by phone (+1–803–329–9712 Ext. 0) or email (its@sensafe.com) to describe the problem and obtain a return authorization form before returning the meter to ITS. Damage caused by improper packing of the meter for return shipment to ITS will not be covered by the warranty. Customer is responsible for shipping charges to ITS. ITS pays postage when meter is returned to customer. A maximum processing fee of $100 will be charged for repair or replacement of non–registered meters and damages not covered by this warranty. Registration is available over the phone (+1–803–329–9712 Ext. 0) or on–line at http://www.sensafe.com/micro/warranty/ (Personal data is kept confidential).

KIT	CONTAINS	PART NUMBER
eXact® pH Multi Kit	eXact® pH+ meter (with pH probe), four AAA batteries, lanyard, 3M KCl storage solution, two pH calibration bottles, two pH calibration solutions, two conductivity calibration bottles, two conductivity calibration solutions, pH+ sample collection bottle	486301
eXact® ORP Kit	eXact® pH+ meter (with ORP probe), four AAA batteries, lanyard, 3M KCl storage solution, pH+ sample collection bottle	486302
eXact® Master Kit with ORP and pH	eXact® pH+ meter (with pH probe), ORP probe, four AAA batteries, lanyard, 3M KCl storage solution, two pH calibration bottles, two pH calibration solutions, one conductivity calibration bottle, two conductivity calibration solutions, pH+ sample collection bottle	486303

GETTING STARTED

If first-time use, or if the meter hasn't been used for a long time, add 3M KCL storage solution into the probe cap to the fill line (about 1/5 of the cap) and soak probe for a minimum of 15 minutes. Rinse the probe and place into the pH 4.00 storage solution.

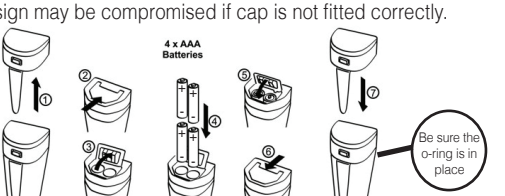
When not in use, store the pH probe in a pH 4.00 storage solution. Use enough to completely immerse the pH glass bulb. If the probe was stored dry, soak in pH 4.00 storage buffer for at least 4 hours to restore the probe's sensitivity. Soak the probe for 12 hours or more to maximize accuracy and stability.

If the unit is stored dry, the probe will not be permanently damaged, but will temporarily lose its stability. Stability can be restored by soaking the probe in the supplied 3M KCl storage solution (one 10ml bottle of storage solution comes with the kit). If this solution becomes cloudy replace it as soon as possible.

*** DO NOT** use a different brand of storage solution. Using a different chemical may, potentially, cause the probe to function poorly (also void the warranty).

"AAA" BATTERY INSTALLATION

1. Pull up the battery cover with clip.
2. Slide the battery cap in the direction of arrow.
3. Open the battery cap
4. Insert the 4 batteries (ALL POSITIVE SIDES FACING UP)
5. Close the battery cap
6. Slide and lock the battery cap in the direction of arrow
7. Replace the battery cover with clip. Be sure to push all the way down. Waterproof design may be compromised if cap is not fitted correctly.



YOUR NEW EXACT PH+ IS IDEAL FOR TESTING AND MAINTAINING YOUR DRINKING WATER.

BATTERY COVER WITH CLIP
Black o-ring around perimeter protects the battery compartment from water damage

LCD SCREEN
Displays results and test type

ON/READ BUTTON
Turns on/off meter, on/off blue backlight, exits cailbration mode and is used for parameters setting (see page 8).

MENU BUTTON
Cycles through available tests

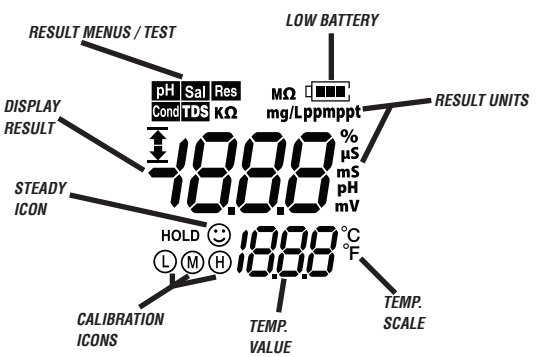
CALIBRATION BUTTON
Performs calibration and navigates parameter settings

PROBE
Install/replace probe here

PROBE/STORAGE CAP
Protects and keeps the sensors wet while not in use.

PROBE COLLAR
Holds the probe in place. Uncrews to allow probe replacement.

waterproof IP67
Protected against the effects of immersion in water to depth of 1m.



FOR BEST ACCURACY

Buffers for calibration should be based on the measurement range.

Follow the calibration procedure properly.

Be sure to remove air bubbles from pH glass bulb for accurate measurements.

Store the meter and all test materials out of direct sunlight, heat, and away from chemical storage areas.

Minimize exposure of meter and calibration solutions to heat above 100°F (38°C).

Dry the outside of the meter when testing is complete or before storage of the meter.

Pour pH 4.0 buffer solution up to the "FILL" line of the storage cap. Always store the pH probe in clean 4.00 pH buffer solution.

Do not store the pH probe in a distilled or deionized water. This will cause permanent damage to the probe.

Always fill the sample collection bottle with enough sample to completely immerse the probe.

Rinse pH probe properly before putting in storage solution.

The meter has an automatic shut-off after 8 minutes of idle time.

This meter performs best in pool and typical tap water and does not give reliable readings in distilled or deionized water.

Remove batteries when meter is not used for more than a month (Warranty Requirement).

Do not touch or rub the pH glass bulb.

To avoid cross-contamination, rinse the probe properly with clean water in between measurements.

To clean the **ORP sensor**, dip the probe into 0.1 mol/L dilute hydrochloric acid for 30 minutes; clean the platinum surface with dishwashing liquid; or use plain white toothpaste to gently clean the platinum surface. Then, rinse with clean water and soak for 6 hours in the KCl storage solution.

SAFETY INFORMATION

The manufacturer is not responsible for any damages due to misapplication of this product including, but not limited to, direct, indirect, incidental and consequential damages, and disclaims such damages to the full extent permitted under applicable law. The user is solely responsible to identify critical application risks and install appropriate safeguards to protect processes during a possible equipment malfunction. **Caution:** The pH probe has a glass bulb, do not immerse directly in pool.

PROBE REPLACEMENT

1. Turn off the meter.
2. Unscrew the probe collar by turning counter-clockwise.
3. Gently pull downward to disconnect the probe from the meter. Carefully plug in the replacement probe (pay attention to the probe orientation when plugging into the meter).
4. Put back the probe collar and tighten firmly to secure the probe to the meter (do not overtighten).

Listed below are possible situations that may arise while testing. Please contact one of our customer service representatives, or watch our video online, if you require assistance.

Subject	Cause	Solution
"ER1" on pH+ LCD (DISPLAY)	Wrong calibration solution or the range of calibration solution exceeds standards	Check if calibration solution is correct (1st pH calibration must be pH 7.00) [1]
		Check if probe is damaged
		Check if there is any air bubble in the pH glass bulb [2]
"ER2" on pH+ LCD (DISPLAY)	CAL is pressed before measurement is stable (☺ comes up and stays)	Wait for the smile icon to appear and stay, then press CAL
No Bluetooth icon () appears on the pH+	Bluetooth function has been turned off	Press and hold the MENU button for three seconds to toggle Bluetooth function

[1] The 1st point calibration must be in pH 7.00 buffer. Perform the 2nd point calibration (pH 4.00) immediately after the 1st point. Do NOT turn off the meter before you conduct the 2nd point calibration. If the meter is turned off after the 1st point calibration the calibration process must be repeated. Calibrating directly in pH 4.00 after turning the meter off and back on will cause Er1.

[2] If you find air bubbles in the pH glass bulb, shake the probe a few times in an upward/downward motion to remove the bubbles. If air bubbles are attached to the outside of the glass bulb, swirl the probe in the solution to remove them. Air bubbles in the glass bulb will cause unstable measurements.

ICONS AND SPECIAL FUNCTIONS

1. Calibration points indication:
   Ⓛ (4.00pH) Ⓜ (7.00pH) Ⓗ (10.00pH)
2. Stable Measurement: ☺
3. Reading value Auto Lock: **HOLD**
4. Self-Diagnostic Information: **Er1, Er2**
5. Low-Battery warning: **flashes, replace battery**
6. Two-Color backlight:
   Blue—**Measurement Mode**;
   Green—**Calibration Mode**;
7. Auto. Power off in 8 minutes if no operation.

When pH+ meter is turned off, press and hold (READ) button to enter Parameter Setting. Then, press (MENU) to cycle through P1-P2…P8. Press (CAL), parameter starts to flash. Press (MENU) to choose parameter. Next, press (CAL) to confirm. Press and hold (READ) to exit Parameter Setting and enter Read mode. Lastly, press and hold (READ) to turn off meter.

Symbol	Parameter Setting Contents	Code	Factory Set
P1	Select pH buffer standards	USA - NIST	USA
P2	Select automatic hold	Off - On	On
P3	Select backlight	Off - 1 - On	1 (auto)
P4	Temperature compensation factor	0.00 - 4.00%	2.00%
P5	TDS factor	0.40 - 1.00	0.71
P6	Salinity unit	ppt - g/L	ppt
P7	Select temperature unit	°C - °F	°F
P8	Back to factory default	No - Yes	No

P1 Select standard pH buffer solution: There are two options for standard buffer solutions: **USA** series or **NIST** series. Refer to following chart:

Three-point Calibration		pH Standard Buffer Solution Series	
pH Value	**Icons**	**USA Series (pH)**	**NIST Series (pH)**
4.00	(L)	1.68 and 4.00	1.68 and 4.01
7.00	(M)	7.00	6.86
10.00	(H)	10.01 and 12.45	9.18 and 12.45

P2 Automatic **HOLD** function
Select "ON" to activate the auto-lock function. When the reading is stable for more than 10 seconds, the tester will lock the value automatically, and the **HOLD** icon will display on the LCD. Press the CAL key to cancel auto hold. When auto-lock is off, take the reading when the number on screen is stable for 10 seconds while the stable icon ☺ is present.

P3 Backlight: "1" is preferred
"**Off**"-turn off backlight
"**On**"-turn on backlight
"**1**"- backlight will last for 1 minute

P4 Temperature Compensation Factor: "**2.00%**" is recommended default.
See chart on page 16 for examples of temperature compensation factors for various solutions.

P5 TDS Factor: "**0.71**" is recommended default.
This factor can be modified for the different types of minerals and salts dissolved in the water sample.

P6 Salinity Unit: "**ppt**" is recommended default.
Can be changed to "**mg/L**" by preference.
1,000 **mg/L**= 1 **ppt**

P7 Temperature Scale: "**°C**" is Celsius
"**°F**" is Fahrenheit (Factory Set).

P8 Factory default setting:
Only select "Yes" to reset instrument calibration to the initial theoretical value (pH value in zero potential is 7.00, slope is 100%). This function can be used when the instrument does not work well in calibration or measurement. Calibrate and measure again after returning the instrument to factory default status.

PH CALIBRATION PROCEDURE

Things needed in addition to what's in the kit:
A clean plastic cup, clean water (distilled, deionized, or purified bottled water) for rinsing (16oz), and soft paper towels for drying the outside body. Ensure **pH probe** is securely installed (see image at right).
If not, see page 6 for Probe Replacement.

1 POWER ON METER

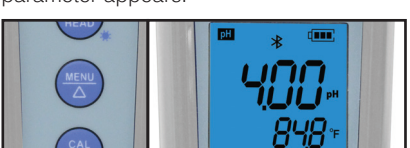
Press the (READ) button 1 second to turn on the meter.

2 RINSE PH PROBE

Remove Probe/Storage Cap and use clean water to throughly rinse the pH probe. Wipe probe body with soft paper towel or cloth to remove excess water. **(never rub or touch the pH glass bulb)**.

3 SELECT MENU

Press and re-press the (MENU) button until the pH test parameter appears.



NOTE: If pH 4.00 Storage Solution reads between 3.96 to 4.04 then Calibration of eXact pH is not needed unless you require best Accuracy. If your pH 4.00 Storage Solution pH reads between 3.90 to 4.10, a 1-POINT Calibration (7.00) may be adequate. After 1-POINT Calibration with 7.00 Standard and the reading of a fresh pH 4.00 Storage Solution reads very close to 4.00, you can elect to use unit for measuring or elect to complete 2nd POINT Calibration with the pH 4.00 Storage Solution.

PREPARATION FOR 1-POINT, 2-POINT CALIBRATION

Quality 7.00 pH and 4.00 pH calibration solutions should be in place in calibration bottles. Refresh standards if used more than ten times.
Be sure the bottle has enough of the standard to completely immerse the bulb sensor into the solution.

4 RUN 1ST CALIBRATION (1-POINT)

Dip the meter in 7.00 pH calibration solution, swirl gently, and allow the probe to sit in the solution until a stable reading is reached. Press and hold the CAL button to enter calibration mode until green backlight appears (press READ to exit). When the ☺ stable icon appears on the LCD, press the CAL key until green backlight starts blinking. Once the green backlight disappears **1-POINT** calibration is complete.
The meter returns to measurement mode and the (M) icon will appear at the bottom left of the LCD.

5 RINSE PH PROBE

Remove Probe/Storage Cap and use clean water to throughly rinse the pH probe. Wipe probe body with soft paper towel or cloth to remove excess water. **(never rub or touch the pH glass bulb)**.

6 RUN 2ND CALIBRATION (2-POINT)

Dip the meter in 4.00 pH calibration solution, stir gently, and allow the probe to sit in the solution until a stable reading is reached. Press and hold the CAL button to enter calibration mode until green backlight appears (press READ to exit). When the ☺ stable icon appears on the LCD, press the CAL key to complete one-point calibration. Once the green backlight disappears **2-POINT** calibration is complete. The meter returns to measurement mode and the (L)(M) icons will appear at the bottom left of the LCD.

7 RUN 3RD CALIBRATION (OPTIONAL)

If necessary, rinse the probe in distilled water, blot it dry, enter calibration mode, and then dip the meter in 10.01 pH buffer solution (not supplied in kit and sold separately). Repeat as in step 6 to complete the 3 point calibration. The (L)(M)(H) icons will appear at the bottom left of the LCD.

Things needed in addition to what's in the kit:
A clean plastic cup, clean water (distilled, deionized, or purified bottled water) for rinsing (16oz), and soft paper towels for drying the outside body. Ensure **pH probe** is securely installed.
If not, see page 6 for Probe Replacement.

1

POWER ON METER

Press the (READ) button 1 second to turn on the meter.

2

RINSE PH PROBE

Remove Probe/Storage Cap and use clean water to throughly rinse the pH probe. Wipe probe body with soft paper towel or cloth to remove excess water. **(never rub or touch the pH glass bulb)**.

3

SELECT MENU

Press and re-press the (MENU △) button until **pH** appears in the top left corner of the display and to the right of the large digit reading.

4

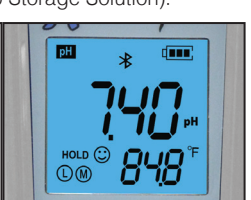
COLLECT SAMPLE

Fill Sample Collection Bottle with sample to be tested. Immerse the probe into the sample and swirl gently. Then allow eXact® pH⁺ to sit in the bottle.

5

READ RESULTS

The ☺ stable icon appears, followed by **HOLD**.
NOTE: If using the eXact iDip® app, be sure the eXact® pH⁺ is Bluetooth® connected. Tap **Save Result** at the top of the Bluetooth page to store the value in **Results**. Rinse the probe with clean water and replace Probe/Storage Cap (with pH 4.00 Storage Solution).



- The meter will automatically recognize 5 types of pH buffer solution (see USA/NIST series list below). Users can perform 1-point, 2-point (recommended), or 3-point calibration.
- Perform one-point (M) calibration (7.00 buffer) first before proceeding to two-point and three-point calibration.
- Use pH buffers for two-point and three-point calibration as in the table below:

Calibration	USA Series (pH)	NIST Series (pH)	LCD Icon	Recommended Accuracy and Range (pH)
1-point	(1) 7.00	(1) 6.86	(M)	Accuracy ≥ 0.1
2-point	(1) 7.00 (2) 4.00 or 1.68	(1) 6.86 (2) 4.01 or 1.68	(M) (L)	Measurement Range <9.00
	(1) 7.00 (2) 10.01 or 12.45	(1) 6.86 (2) 9.18 or 12.45	(M) (H)	Measurement Range >9.00
3-point	(1) 7.00 (2) 4.00 or 1.68 (3) 10.01 or 12.45	(1) 6.86 (2) 4.01 or 1.68 (3) 9.18 or 12.45	(M) (L) (H)	Custom Measurement Range

- To maintain the accuracy of the pH buffer standards, replace them before ten (10) uses. To prevent contamination, NEVER pour used pH Buffer solutions back into the original pH Buffer solution bottles.
- This pH probe was not designed to give accurate readings for distilled or deionized water There are not enough ions present in these waters for accurate detection.
- When testing purified water like spring water or drinking water, it will take longer for the readings to stabilize (typically 3-5 minutes) because there are low levels of ions for the sensor to detect.
- DO NOT store the pH probe in distilled water. This will cause permanent damage to the probe.
- pH Buffers for calibration should be selected based on the measurement. 2-point (7.00 and 4.00) Calibration is recommended for most applications.
- Avoid cross-contaminating the pH buffers. Rinse the pH probe and blot excess water after each measurement.
- Do not rub or touch the pH glass bulb!

Important Operation Note: the eXact pH⁺ Smart Meter was especially engineered/designed for the nontechnical service person who requires a quick and accurate (within ±0.05) on-site pH measurement. The test methodology, if followed carefully, is this:

Perform 2-point calibration weekly and store pH probe in 4.00 pH Buffer between measurements. During the week of use, each time you power ON eXact pH⁺ meter, the pH should display between 3.97 and 4.03. This verifies the meter is still maintaining calibration. When display is <3.97 or >4.03. discard the solution and pour a fresh pH 4.0 buffer solution and check display again. Remove Probe Storage Cap and set aside with pH 4.00 Buffer solution. Rinse the pH probe with clean water, then proceed to pH measurement. More frequent calibrations may be needed if testing solutions in extreme temperatures or substantial changes in pH such as from 10 to 4.

Things needed in addition to what's in the kit:
A clean plastic cup, clean water (distilled, deionized, or purified bottled water) for rinsing (16oz), and soft paper towels for drying the outside body. Ensure **pH probe** is securely installed. If not, see page 6 for Probe Replacement.

CALIBRATION PROCEDURE

1

POWER ON METER

Press the (READ) button 1 second to turn on the meter.

2

RINSE METER SENSORS

Remove Probe/Storage Cap and use clean water to throughly rinse the pH probe. Wipe probe body with soft paper towel or cloth to remove excess water. **(never rub or touch the pH glass bulb)**.

3

SELECT MENU

Press and re-press the (MENU △) button to select the conductivity test parameter.

4

CALIBRATION SOLUTION

Pour 1413µS/cm and 12.88 mS/cm conductivity calibration solutions into separate calibration bottles. Pour enough to completely immerse the sensors into the solution.

5

ENTER CALIBRATION MODE

Press and hold the (CAL ↵) button to enter calibration mode (press (READ) to exit).

6

RUN CALIBRATION

Dip the meter in 1413 µS/cm calibration solution, stir gently, and allow the probe to sit in the solution until a stable reading is reached. When the ☺ stable icon appears on the LCD, press the (CAL ↵) key to complete one-point calibration. The meter returns to measurement mode and the (M) icon will appear at the bottom left of the LCD.

7 RINSE METER SENSORS

Rinse the sensors in clean water and blot dry **(never rub or touch the pH glass bulb)**.

8 VERIFY CALIBRATION

After calibration, dip the meter in 12.88 mS/cm calibration solution. If the value is accurate, it is not necessary to conduct a 2nd point calibration. If it is inaccurate, follow steps 5 to 6 to complete the 2nd point calibration using the 12.88 mS/cm buffer solution.

TEST PROCEDURE

1 RINSE METER SENSORS

Remove Probe/Storage Cap and use clean water to throughly rinse the pH probe. Wipe probe body with soft paper towel or cloth to remove excess water. **(never rub or touch the pH glass bulb)**.

2 SELECT MENU

Press and re-press the MENU button to select until **Cond** appears in the top left corner of the display.

3 TEST

Fill Sample Collection Bottle with sample to be tested. Immerse the probe into the sample and swirl gently. Then allow eXact® pH+ to sit in the bottle.

4 READ RESULTS

The ☺ stable icon appears, followed by **HOLD**. Press MENU to switch from Conductivity to TDS and Salinity.

NOTE: If using the eXact iDip® app, be sure the eXact® pH+ is Bluetooth® connected. Tap **Save Result** at the top of the Bluetooth page to store the value in **Results**.

Rinse the probe with clean water and replace Probe/Storage Cap (with pH 4.00 Storage Solution).

CONDUCTIVITY TEST NOTES

- The TDS and Salinity measurements are calculated from the conductivity measurements by using conversion factors.
- The meter can recognize 84µS, 1413 µS/cm and 12.88 mS/cm conductivity calibration solutions. The user can conduct 1 to 3 points calibration. Refer to the table below. Usually calibrating the tester with 1413 µS/cm conductivity buffer solution alone shall meet the testing requirement. However, we recommend choosing a calibration solution close to the expected conductivity of your sample.

Calibration indication Icon	Calibration Standards	Measuring Range
Ⓛ	84µS/cm	0 - 200 µS/cm
Ⓜ	1413 µS/cm	200 - 1999 µS/cm
Ⓗ	12.88 mS/cm	2 - 20 mS/cm

- The tester has been calibrated before leaving the factory. For best accuracy we recommend testing a conductivity buffer solution before use. If the error is large, then calibration is needed.
- To maintain the accuracy of conductivity calibration solutions, we recommend replacing the solutions after 3 to 5 uses. To prevent contamination, Do NOT pour used calibration solutions back into the original bottles.
- Temperature compensation factor: The default setting of the temperature compensation factor is 2.0%/°C. Users can adjust the factor depending on the solution or experimental data (see table below). Use parameter setting P4 to adjust the factor.

Solution	Temperature compensation factor
NaCl	2.12%/°C
5% NaOH	1.72%/°C
Dilute ammonia	1.88%/°C
10% Hydrochloric acid	1.32%/°C
5% Sulfuric acid	0.96%/°C

- **1000 ppm = 1 ppt 1000 µS = 1 mS**
- TDS and conductivity are linearly related; the conversion factor ranges from 0.40-1.00. The factory default setting is 0.71. Salinity and conductivity are also linearly related; the conversion factor is 0.5. The tester only needs to be calibrated in Conductivity mode. After calibration for conductivity, the meter can switch from conductivity to TDS or salinity.
- **Conversion Example**: if conductivity measurement is 1000µS/cm, then the default TDS measurement will be 710 ppm (under the default 0.71 conversion factor), and the salinity will be 0.5 ppt.
- Avoid cross-contaminating the conductivity standard solutions. Rinse the sensors and blot dry after every measurement.

Things needed in addition to what's in the kit:
A clean plastic cup, clean water (distilled, deionized, or purified bottled water) for rinsing (16oz), and soft paper towels for drying the outside body. Ensure **ORP probe** is securely installed.
If not, see page 6 for Probe Replacement.

Preparation before use:
Pour enough 3M KCl solution into a small cap to cover the sensors. Soak the probe for 3-5 minutes in the solution to activate the sensor. There is no need to activate the sensor if it is used frequently.

1

POWER ON METER

Press the (READ) button to turn on the meter.

2

RINSE ORP PROBE

Rinse the ORP probe in clean water and blot dry with soft paper towel or cloth to remove excess water.

3

SELECT MENU

Press and re-press the (MENU △) button to select the ORP test parameter (mV unit of measure next to result).

4

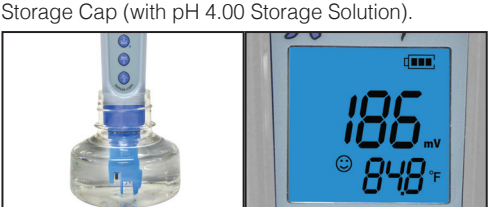
TEST

Fill Sample Collection Bottle with sample to be tested. Immerse the probe into the sample and swirl gently. Then allow eXact® pH⁺ to sit in the bottle.

5

READ RESULTS

The ☺ stable icon appears, followed by **HOLD**.
NOTE: If using the eXact iDip® app, be sure the eXact® pH⁺ is Bluetooth® connected. Tap **Save Result** at the top of the Bluetooth page to store the value in **Results**. Rinse the probe with clean water and replace Probe/ Storage Cap (with pH 4.00 Storage Solution).



USING THE EXACT IDIP® APP
COMPATIBLE SMART DEVICES

SMART PHONE COMPATIBILITY

Updated 05/2019

APPLE	SAMSUNG	SONY	MOTOROLA	HTC
iPhone 4s **AND UP**	Galaxy Ace Style	Xperia E1	Moto E	Desire 610
iPhone SE	Galaxy Alpha	Xperia M2	Moto G	Desire 816
iPod touch 5th **AND UP**	Galaxy Core II	Xperia T2 Ultra	Moto X	One
	Galaxy Core Prime	Xperia XA		One Max
LG	Galaxy Express J1	Xperia Z	**LENOVO**	One Mini
F70	Galaxy Express Prime	Xperia Z ULTRA	Vibe X2	One Mini 2
G Pro2	Galaxy Grand 2	Xperia Z1	Vibe Z2	
G2 **AND UP**	Galaxy Grand Duos	Xperia Z2	Vibe Z2 Pro	**MEIZU**
Optimus Exceed 2	Galaxy Grand Neo	Xperia Z3		MX4
Optimus Fuel	Galaxy J	Xperia ZL	**ZTE**	MX4 Pro
Optimus G (E975)	Galaxy Mega 6.3	Xperia ZR	Nubia X6	
Optimus G Pro	Galaxy Mega 2		Nubia Z7 Max	**OPPO**
Optimus L40	Galaxy S3 Neo	**MOTOROLA DROID**		A37
Optimus L65	Galaxy S4 **AND UP**	Maxx	**HUAWEI**	F1S
Optimus L70	Galaxy Xcover 3	Mini	Ascend Mate 7	R9S
Optimus L80	Galaxy Young II Duos	Razr HD	Ascend P7	
Optimus L90		Razr HD Maxx	Ascend P8	**XIAOMI**
Optimus Zone 2	**GOOGLE**	Razr M	Honor 3C (4G)	Mi Max
Volt	Nexus 4 **AND UP**	Turbo	Honor 6	Mi3
	Pixel	Ultra	Honor 6 Plus	Redmi 3
	Pixel V1			Redmi Note (4G)
	Pixel V2			
	Pixel XL			

TABLET COMPATIBILITY

APPLE	SAMSUNG	LG	SONY	GOOGLE
iPad (3rd) **AND UP**	Galaxy Note II **AND UP**	G Pad	Xperia Tablet Z	Nexus 7 (2013)
iPad Pro **AND UP**	Galaxy Tab 3 **AND UP**		Xperia Tablet Z2	Nexus 9
iPad Mini **AND UP**				

This list is current as of May, 2019. To view the most up-to-date list of compatible devices, please visit sensafe.com/idip-compatible-devices.

VIEW INSTRUCTIONAL VIDEO

eXact iDip

BLUETOOTH® SMART TECHNOLOGY

Bluetooth® SMART is a low-power networking standard which uses short radio waves to allow electronic devices to communicate with each other wirelessly. The eXact® pH+ comes standard with the latest Bluetooth® 4.0 technology (bluetooth.com/Pages/Bluetooth-Smart.aspx). It is a class 2 device with a wireless working distance of up to 30 feet (10 meters) and a 2.1 Mbps data transfer rate. This allows a seamless transfer of data between a smart device and the eXact® pH+.

DOWNLOAD THE APP

eXact iDip

Using your Smart Device, download the eXact iDip® app. Download the latest update to ensure you are using the current version with up-to-date features. To see if your smart device is compatible, visit sensafe.com/idip-compatible-devices.
We are constantly improving the eXact iDip® app and welcome your suggestions. Visit exactidip.com or e-mail exactidip@sensafe.com.

APP STORE

Download on the App Store

GOOGLE PLAY

GET IT ON Google play

Note: If using an Apple® iPad™, select **'iPhone only app'** when searching from the App Store, or scan the QR code above.

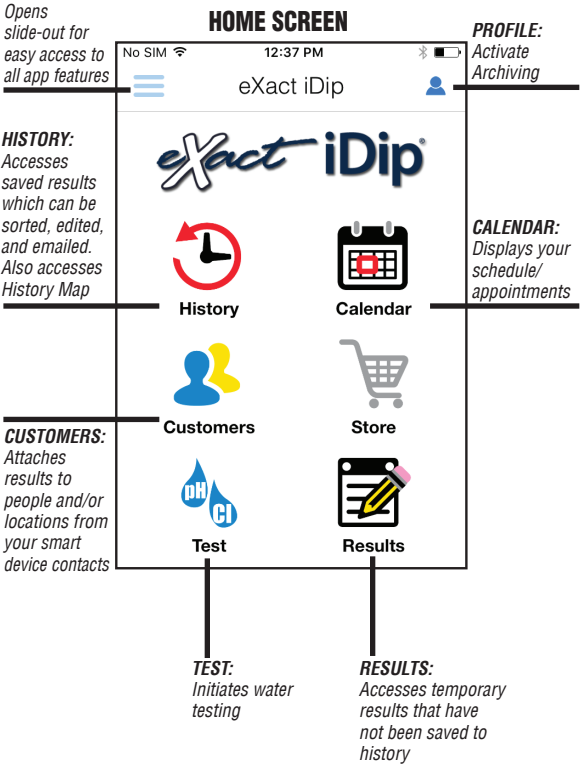
ALLOW ACCESS

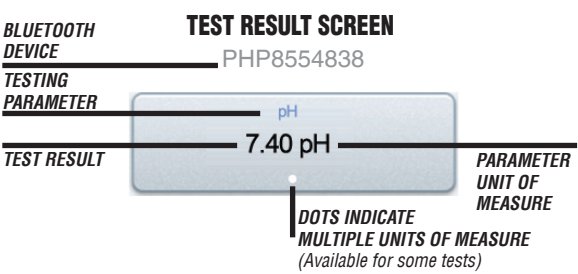
Upon opening, and while using the eXact iDip® app, pop-ups will appear that ask for access to different functions of your phone; **Location**, **Contacts**, **Calendar**, and **Cellular Data**. In order to get full functionality of the app, be sure to allow access to all of these features.

MAKING CALLS

The eXact iDip® photometer is not intended for use while talking on your smart phone. Talking during testing may cause the app to shutdown.

EXACT IDIP® APP OVERVIEW





NAVIGATING THE APP

The Menu slide-out is available from any screen within the app. The Menu allows you to access any of the app's features with ease.

SETTINGS

CURRENT LOCATION

You can view your current GPS coordinates and/or refresh your current location. In order to take advantage of the GPS feature, make sure to allow eXact iDip® app to access your location.

CONFIGURATION FILES

Refreshing the configuration files can help resolve issues with tests not appearing correctly in the app.

ABOUT

Access the End-User License Agreement and contact information to reach our offices in the USA and Europe from the About section, located in the Menu slide-out. In the About section you can find the version of the app you are running. Be sure to check your smart device's app store for updates and install the latest version before running a test as we are constantly updating and adding more features to the app!

FAQS

Here you will find videos, downloads, links, and answers to the most frequently asked questions.

TEST

You can utilize two different testing methods under Test: Manual Entry or Bluetooth Device.

BLUETOOTH TEST

Tests will be performed with your eXact pH⁺ meter.

MANUAL TEST

This feature allows you to utilize other testing methods and manually enter your results into the app. Begin by selecting **'Test'**, **'Manual Entry'**, and select your desired test. Enter the value obtained. Once finished, tap **'SAVE'** at the top left. If the test you need to enter is not available on the list, tap **'Custom*'**. Enter the type of test that was run, the value obtained, and the unit of measure used. Then, tap **'SAVE'** at the top left (see page 27).

HISTORY

The **History** stores all your saved test result information and allows you to sort by date, customer name, or test type.

HOW TO SORT BY CUSTOMER

To sort by **Customer** begin by selecting **'History',** then **'Sort by'**, **'Customer'**. You can then scroll through your list of customers by name, to find a specific test result.

HOW TO SORT BY DATE

To sort by **Date** begin by selecting **'History'** then **'Sort by'**, **'Date'**. You can then scroll through a list of tests performed by date. You can also set a specific date range by selecting **'Date range'**. Then set your **From** and **To** dates.

HOW TO SORT BY TEST

To sort by **Test** begin by selecting **'History'** then **'Sort by', 'Test'.** You can then scroll through a list of tests sorted in alphabetical order.

HOW TO EMAIL AND SHARE DATA

See page 29 for instructions on how to utilize these features

HOW TO ACCESS HISTORY MAP

The History Map stores GPS locations of testing sites.
See page 30 for instructions on how to utilize this feature.

CUSTOMERS

Customers attaches results to people and/or locations in your smart device. In order to fully utilize the features and capabilities of the app, each test result will need to be stored (linked) to a profile. You can add customers in two ways. **1.** By adding from your existing contact list on your smartphone/tablet or **2.** You can create a new contact.

HOW TO ADD EXISTING CONTACTS

To add current contact information already stored on your device, begin by selecting **'Customers'** then **'Add customers from contacts'** (access to Contacts must be allowed on your device).

HOW TO CREATE A NEW CONTACT

To create a new contact, select **'Customers',** tap the **'+',** then enter all of the customers contact information. Once finished, tap **'Done'**.

CALENDAR

Never miss an appointment! With the app's Calendar feature, you can access your device's calendar directly from the app. View by date range to see past entries or future appointments.

TIP

If no entries are visible in the app, you may need to allow the app to access your calendar. You can do this in the settings and security section of your smartphone/tablet (instructions for each will vary by make/model).

RESULTS

You can view details for tests that have not been saved to History, add notes, or clear recent test history from the Results section.

HOW TO ADD NOTES

To add notes begin by selecting **'Results'** then select the test result you would like to add notes to. Tap inside the blue note section of the Results screen and add your notes. The app will automatically save the information you enter. Tap **'Results'** to return to the previous screen.

HOW TO CLEAR PREVIOUS TEST RESULTS

To clear ALL recent test results, tap **'Results'**, then **'Reset'**. A notification screen will display **'Reset data results'**. "Are you sure you want to reset all the results and notes?" Tap **'Yes'** to clear.

PROFILE

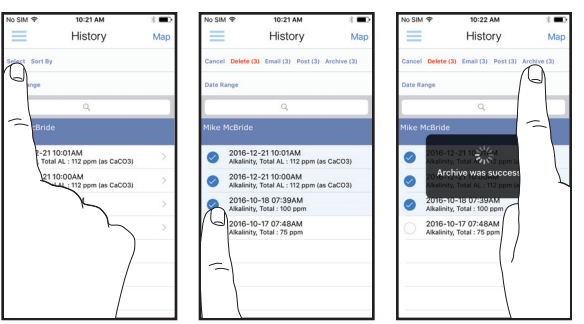
The Profile section of the app can be used to set your preferred units of measure for your tests. Another feature located in the Profile section is Archiving. To access the Profile section of the app, tap the person icon that appears in the top right of the screen throughout the app.

PREFERRED UNITS OF MEASURE

In this section, you are able to select the appropriate unit of measure for your testing needs. To do so, tap Preferred Unit of Measure. Then, scroll until you find the appropriate test parameter (ex. Alkalinity, Total). Lastly, scroll through the various Unit of Measure options until you find the one that works for your needs (ex. dKH). Select that option and tap OK. The test parameter will now show the new preferred unit of measure.

ARCHIVING

After creating an account, the archiving function gives you the opportunity to upload your test results to the Cloud from which they can be accessed at a later date (https://www.idipdata.com). This is a helpful feature if you notice that the app is behaving slowly due to data overload. Images taken and saved with test results will also upload to the cloud when archived. After signed in to the archiving section with your new account, you can begin archiving your results from the History page. While on the History page, tap the Select button at the top left, select the tests to archive, and press the Archive button at the top of the screen.



CONNECT TO PH+

For helpful tips regarding test procedures, refer to tips "FOR BEST ACCURACY" on page 5.

1 SELECT CUSTOMER

a. Select **'Customers'** from the **'Home'** screen.
b. Tap **'Add customer from contacts'**.
c. Select a contact from your list. After selecting a contact, tap on the customer's address if shown. Android users: If no address is found, tap "No addresses found"
d. Verify customer has been selected.

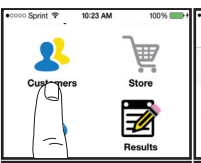
TIP

After adding a customer, a test will need to be conducted and a result saved in order for the customer's information to display in the app's customers list.

Note: In order to take full advantage of the GPS and Data Storage features, each test result is linked to a contact.

Apple

a



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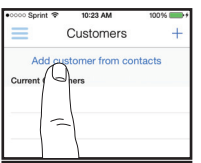

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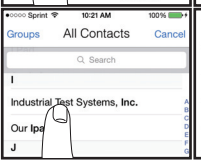

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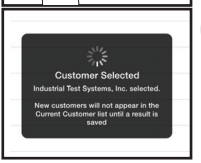
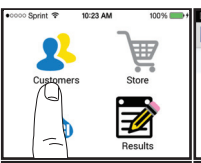


Android

a



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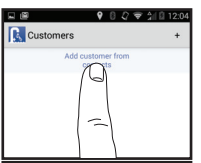


c

d

TIP

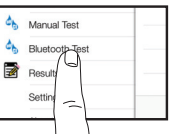
You can also choose to complete this step after testing.

2 POWER ON EXACT® PH+

Press the (READ) button to power on the pH+.

3 SELECT BLUETOOTH® TEST

Tap the menu slide out '☰' and select **'Bluetooth Test'** from the choices shown.

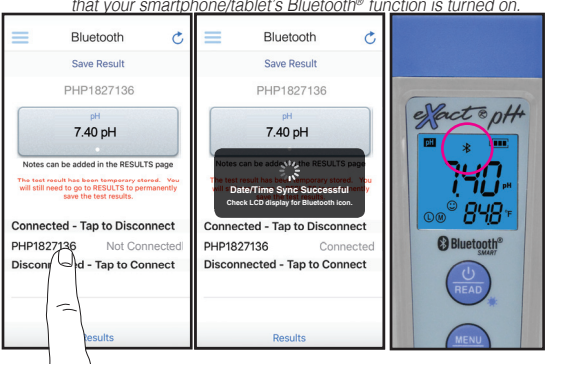


4 CONNECT EXACT® PH+

The eXact iDip® app will automatically connect to the most recently used device. If not, select your eXact® pH+ from the bottom of the screen. **After connecting, proceed with test procedure for chosen parameter.**

Note: Ensure you always connect your pH+ photometer via the Bluetooth® connection within the app. To verify connection look for the Bluetooth icon in top of your photometer. If the Bluetooth icon does not appear on the pH+, refer to troubleshooting on page 7.

If you experience an issue connecting your device, check to ensure that your smartphone/tablet's Bluetooth® function is turned on.



TIP

Easily verify your device.

Refer to the back of your pH+ to determine the serial number for your device. This will also be the name for the Bluetooth® connection.

Once connected to the pH+, you can run tests as usual (see page 10). Test results will be stored in the Results section of the app (see page 28 for next steps).

AUTO-CALCULATED METHODS

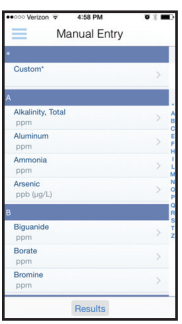
Visit exactph.com for complete test instructions.

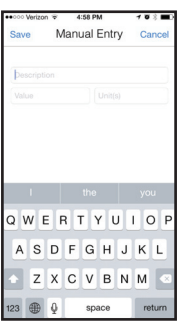
LANGELIER SATURATION INDEX (LSI)

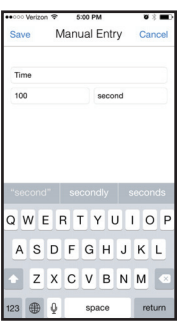
Refer to the instructions and perform the tests for TDS (page 15) and pH (page 12). Then, obtain results for Total Alkalinity and Calcium Hardness via alternate means (eXact iDip® photometer - Part No. 486101 or eXact® Micro 20 photometer - Part No. 486700). Lastly, tap Results at the bottom of the page and an LSI value will be calculated and displayed automatically.

MANUAL ENTRY

This feature allows you to utilize other testing methods and manually enter your results into the app. Begin by selecting **'Test'**, **'Manual Entry'**, select your desired test. Enter the value obtained. Once finished, tap **'SAVE'** at the top left. If the test you need to enter is not available on the list, tap **'Custom*'**. Enter the type of test that was run, the value obtained, and the unit of measure used. Then, tap **'SAVE'** at the top left.

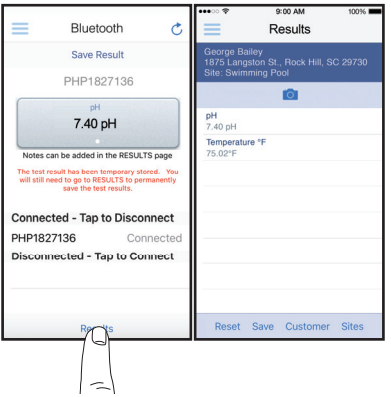






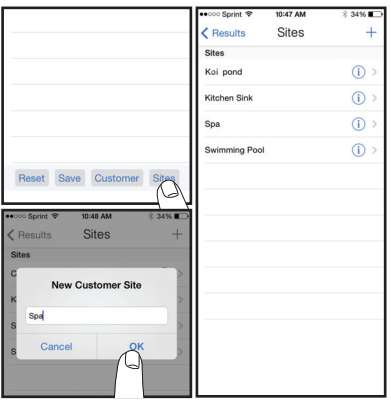
RESULTS

After tests have been performed, tap '**Results**' at the bottom of the screen.



ADD SITES

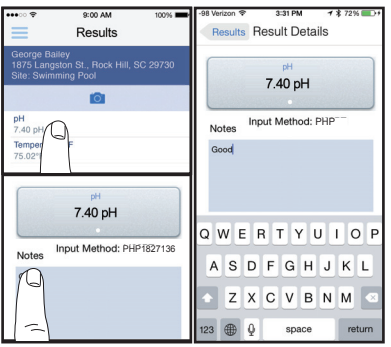
Each set of results can be saved to a customers '**Site**' (water source at the location). Select a site from the list or to add new sites, tap '**Sites**', then '**+**'. Enter a **Site** name, tap '**OK**'.



ADD NOTES

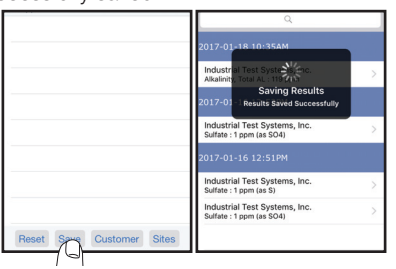
To add notes to each test tap the desired test result.

Type notes in the '**Notes**' box, which are automatically saved. Press '**Results**' to return to the results menu.



SAVE TO HISTORY

In **'Results'** screen, tap **'Save'** to store into **'History'**. If this step is omitted, test results will not be permanently saved. A '**Saving Results**' pop-up appears, verifying that your result is now successfully saved.



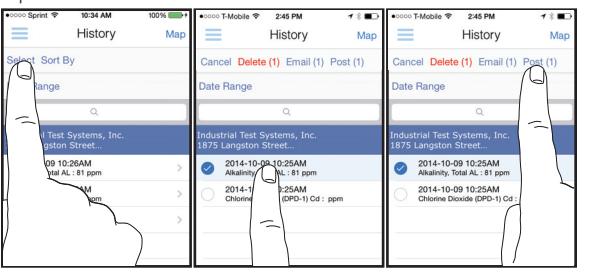
SEND/SHARE VIA EMAIL

In History you can edit, select, and email your results.
To email you can either tap an individual result displayed, or use the **'Select'** button to access multiple data points.
Press the blue envelope icon if you tapped an individual result.
Select **'Email'** at the top if multiple tests are selected. A .csv (spreadsheet) file will be attached at the bottom of the e-mail.

Individual Result **Multiple Results**

SEND/SHARE VIA SOCIAL MEDIA

To share your results on social media, use the **'Select'** button and check the result(s) you want to share. Tap **'Post'** at the top and choose whether to share via Facebook or Twitter.

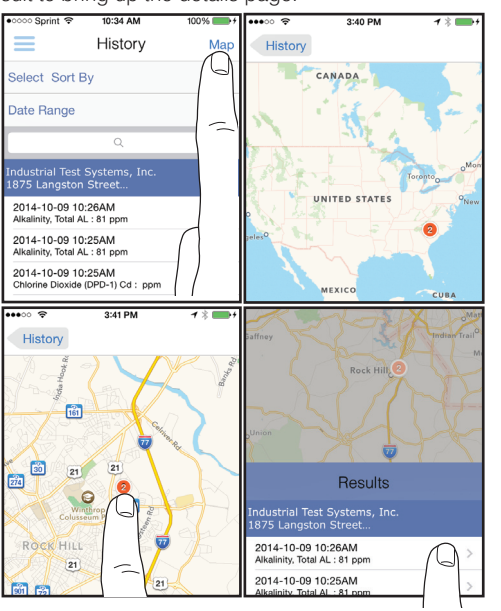


ARCHIVE

See page 22 for details on using the Archiving feature.

USING HISTORY MAP

Tap **'Map'** on History page to access History Map. Double-tap or spread fingers to zoom. Tap on a pin to see results. Tap on a result to bring up the details page.



TIP

Store all your necessary reagents together with your pH+ in our convenient carrying case!

KITS

Each kit contains:

- Carrying case
- eXact® pH+ meter (#486300)
- Probe cover
- AAA batteries x4
- pH+ meter storage solution
- Quick Start Guide(s)

KIT	CONTAINS	PART NUMBER
Multimeter Kit	Conductivity calibration solutions (1413µS and 12.88mS), Conductivity calibration bottles x2, pH calibration solutions (7.00pH and 4.00pH), pH calibration bottles x2, Multimeter probe, lanyard, pH+ Sample Collection Bottle (#481410)	486301
ORP Kit	ORP bottle, ORP probe, lanyard, pH+ Sample Collection Bottle (#481410)	486302
Master Kit	Conductivity calibration solutions (1413µS & 12.88mS), pH calibration solutions (7.00pH & 4.00pH), calibration bottles x4, Multimeter probe, ORP probe , lanyard, pH+ Sample Collection Bottle (#481410)	486303
eXact iDip® Pool Professional Kit	eXact iDip® photometer, cleaning brush, 1 bottle of 25 tests each: Total Alkalinity, Cyanuric Acid, Free Chlorine (DPD-1), Combined Chlorine (DPD-3), and Calcium Hardness	486101-PP-K
eXact iDip® SmartBrew Professional Kit	eXact iDip® photometer, cleaning brush, 1 bottle of 25 tests each: Total Hardness High, Calcium Hardness, Total Alkalinity, Chloride, and Sulfate	486101-SB3-K

TIP

Order online at exactph.com or call one of our helpful customer service representatives at (800) 861-9712

PROBE REPLACEMENT

Screw off the probe ring, unplug the probe, plug in the new replacement probe (pay attention to the probe's position), and screw on the probe ring. The part numbers for replacement probes compatible with the pH+ are:

- PH60-E (Regular pH glass bulb probe)
- PH60S-E (Spear pH probe for solid/semi-solid testing)
- PH60F-E (Flat pH probe for surface testing)
- ORP60-E (ORP probe)
- EC60-E (Conductivity probe)

EXACT® PH+ TEST SPECIFICATIONS

PARAMETER / TEST	RANGE	RESOLUTION	ACCURACY	CALIB POINTS
Conductivity	0 - 200.0 µS	0.1 µS	±1%	1 to 3
	0 - 2000 µS	1 µS		
	0 - 20.0 mS	0.1 mS		
ORP	±1000 mV	1 mV	±0.2%	N/A
pH	0.00 - 14.00 pH	0.01 pH	±0.01 pH	1 to 3
Salinity	0 - 10.00 ppt	N/A	N/A	N/A
TDS	0.1 ppm - 10.00 ppt	TDS Factor 0.40 - 1.00	N/A	N/A
Temperature	32 - 122 °F 0 - 50 °C	0.1 °C	±0.9 °F ±0.5 °C	N/A

Our pH electrode consists of a pH glass/membrane and internal reference (combination pH electrode), which can generate a millivolt voltage potential. The pH glass bulb forms a hydrated layer in any water sample and responds to hydrogen ions (H+). As the Sodium ions (Na+) of the glass are displaced by hydrogen ions (H+), the mv potential change is measured by the eXact® pH+ Meter. The displacement/exchange of Na^+ and H^+ on the pH glass bulb is determined by the acidity/alkalinity of the water. Acidic means many hydrogen ions (H+). Alkali means less hydrogen ions. The liquid inside the pH glass bulb is a proprietary buffer solution that produces the mv potential. This mv value is a very predictable current in our eXact® pH+ Meter. After calibration with pH 7.00 and pH 4.00 Standards, your pH measurements become reliably accurate.

Visit us online: **exactph.com**
for up–to–date product information.

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Industrial Test Systems, Inc. 1875 Langston Street Rock Hill, SC 29730 1–800–861–9712—Inside the U.S.A. 1–803–329–9712—Outside the U.S.A. Fax:1–803–329–9743 Email: ITS@SENSAFE.COM WWW.SENSAFE.COM	ITS EUROPE, LTD The UK Centre for Homeland Security Building 7, Chilmark Salisbury, Wiltshire, SP3 5DU, UK Phone: +44 (0)1722 717911 Email: ITSEUROPE@SENSAFE.COM WWW.ITSEUROPE.CO.UK

Industrial Test Systems, Inc.
Innovators of Water Quality Testing