# **Instruction Manual**

pH 5+ pH/°C pH 6+ pH/°C/mV lon 6+ pH/°C/mV/lon











68X576801 Rev 0 07/2011

Part of Thermo Fisher Scientific

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## 1. INTRODUCTION

Thank you for selecting our pH 5+, pH 6+, or lon 6+ portable meter. This microprocessor-based handheld instrument is both economical and easy to use.

The pH 5+ measures pH and temperature (°C).

The pH 6+ and Ion 6+ measure pH, mV (ORP) and temperature (°C).

The Ion 6+ can also measure direct ion concentration of various ions (mono and divalent) using an ion selective electrodes (ISE). The mV mode is also useful for ISEs.

The 5+/6+ series meters advance our popular 5/6 series meters that were introduced in 1998.

Each meter includes alkaline "AAA" batteries, a rubber armor / stand, and instruction manual. Please refer to <a href="Section—7 Replacements">Section—7 Replacements and Accessories</a> for information on additional accessories and calibration solutions.

We take great pride in every instrument we manufacture and hope this one serves you well.

If you are viewing an electronic PDF version of this manual, look for **bold and underlined hyperlinks** in the Table of Contents and elsewhere. Clicking on them will immediately take you to the corresponding location in the manual.

\*Find other helpful tips listed in grey boxes like this one!

# 2. GETTING STARTED

# **Description of Keypad Functions**

The pH 5+ and pH 6+ have four keys, while the Ion 6+ has six keys on its splash-proof keypad as shown here:

pH 5+ / pH 6+

Ion 6+

ON 6+



Powers the meter on and off. Upon power on, the meter automatically begins in the measurement mode that was last used.



**MODE:** Selects measurement modes (pH, mV, lon (lon6+only), & Temperature).

With meter off, press and hold or to access the buf (buffer), LFL (calibration), and ELE (electrode) setup menus while powering on. Press or again to change setup menus.



**INCREMENT**: (INC) for Temperature setting and calibration.

|       | CALIBRATE: Press to begin calibration of the selected mode. Press again during calibration to abort calibration and return to measurement mode without confirming any values. |  |  |
|-------|---|--|--|
| CAL   | During setup mode, function is similar to "escape" or "go back", returning to the previous screen.  |  |  |
|       | With meter off, press and hold to select the reset menu (r5£) while powering on.  |  |  |
| 0     | Increase value or scroll up in Setup or Cal modes.  |  |  |
| 0     | Decrease value or scroll down in Setup or Cal modes.  |  |  |
| HOLD  | <b>HOLD:</b> Freezes measured reading—indicated by " <b>HO</b> ". Press again to resume live reading.   |  |  |
| ENTER | <b>ENTER:</b> Confirms values in calibration mode. Confirms selections in setup mode.   |  |  |

# **Description of LCD Annunciators**

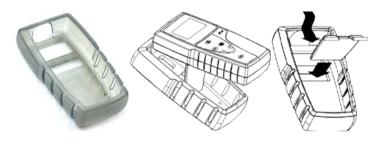
The custom LCD consists of 3½-digit segments which uses annunciators for pH, mV or  $^{\circ}$ C (Temperature). No annunciator is shown in Ion mode. Other annunciators include "HO" (when HOLD function is activated) and "LO" (low battery condition).



## Inserting & Removing the Rubber Armor / Stand

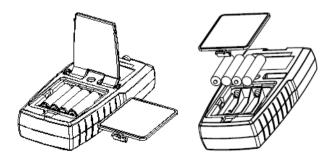
Before removing the meter from the rubber armor, disconnect any electrodes. Push out from the bottom edges of meter until it is completely out of boot.

To insert meter into the armor, slide in from the top of meter before pushing the bottom edges of meter into position. Tilt the stand at the back of meter for table top usage as desired.



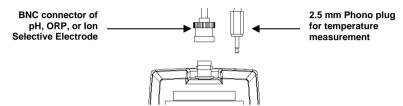
#### Inserting New Batteries

The "LO" annunciator alerts you when battery power is running low. Power off the meter before removing the batteries. After removing the rubber armor, push the battery cover in the direction of the arrow and lift up—no screwdriver is required. Note the polarity of batteries before inserting into position.



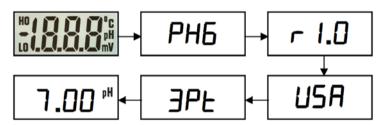
#### Connecting Electrodes and Temperature Sensor

Align the BNC connector slots with the posts of meter's socket and rotate connector clockwise until it locks—do not force. To remove, rotate the connector in counter-clockwise direction until it unlocks, and slide the connector off the socket. Insert the mini phono jack of temperature sensor into the socket on the meter. Unplug the phono jack to perform measurements without temperature compensation (25° C default).



#### Powering the Meter On

Press All LCD segments will display momentarily during the self-diagnostic test, before scrolling the model number, software revision, pH buffer group, and number of pH calibration points selected before returning to the measurement mode:



If a temperature probe is not connected, either  $25.0^{\circ}$ C (factory default) or the last calibrated temperature value is used. If a temperature probe is connected, the current measured temperature is used.

**Note:** The Ion 6+ will display "---" in Ion concentration mode if the meter has not been calibrated or if the meter has been reset. See <u>Section 3—Ion Calibration</u>.

"Ūr" (Over range) and "Ūr" (Under range) indicates the reading exceeds the maximum or minimum measurement range. See Section 6—Specifications. However, the most likely reason for these error messages is that the electrode is not connected or broken.

# 3. CALIBRATION

## 3.1 pH Calibration

The 5+ and 6+ meter is capable of calibrating up to 5 pH values using the USA or NIST buffer groups, or 2 pH values using the Low Ionic buffer group. All new calibration values will automatically override existing calibration data. The non-volatile memory will retain calibration values upon power shut-off, and battery removal.

For best results, periodic calibration with known accurate standards is recommended. Calibrate with standards that bracket your intended measuring range while including a neutral standard (i.e. pH 7.00, 6.86, 6.97). For example, if you expect to measure samples from pH 6.2 to pH 9.5, calibration using 4.01, 7.00, and 10.01 will work well.

To eliminate temperature errors associated with the pH electrode, attach the automatic temperature compensation (ATC) probe for best accuracy. Without temperature compensation, pH accuracy will worsen as samples deviate from 25 °C and pH 7.

Always rinse electrodes with clean water before and after each calibration or sample measurement to avoid cross-contamination.

The following calibration standards are automatically recognized;

| Buffer Group     | Available pH Calibration Values |
|------------------|---------------------------------|
| USA (USA)        | 1.68, 4.01, 7.00*, 10.01, 12.45 |
| NIST (n5t)       | 1.68, 4.01, 6.86*, 9.18, 12.45  |
| Pb ( <i>Р</i> ь) | 4.10, 6.97                      |

<sup>\*</sup>These are the only values suitable for a one-point calibration

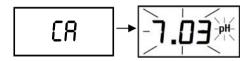
See <u>Section 3.1—Changing the pH Buffer Group</u> to select a different buffer group.

Always use fresh pH buffer solutions for calibration. Do not reuse buffer solutions as they change with prolonged exposure to air (especially pH 10 buffer) resulting in decreased measurement accuracy. Promptly seal containers and store solutions in a dark, dry, cool environment.

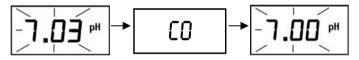
#### pH Calibration Procedure

1. Turn on the meter and select pH mode by pressing wo if necessary.

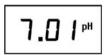
2. Press to begin pH calibration mode. "CR" (calibrate) will display briefly. Notice that the pH reading and "pH" annunciator will both blink.



- 3. Pour pH buffer calibration standard solution into a clean, dry container and dip your pH electrode and temperature probe in the solution. Swirl gently or stir and wait for reading to stabilize (approx. 30 seconds depending on your electrode condition).
- 4. When the pH reading has stabilized, the pH annunciator will stop blinking. Press to confirm the value. "£0" (confirm) will display briefly. The pH value is automatically adjusted to the buffer value shown from your selected buffer group. The example below shows a successful pH 7.00 calibration at 25 °C.



5. For a one-point calibration with pH 7.00 or pH 6.86 only, press to return to measurement mode. However for highest accuracy—perform a multiple-point calibration. Repeat steps 3 & 4 with additional pH buffer calibration standards. When you have completed the preset number of calibration points, the meter will automatically save the calibration, cease blinking, and begin pH measurement.



**Q:** My meter, electrode & buffers are new—why does my pH 10 buffer read "10.06"? **A:** Temperature influences pH. While pH 10 buffer is 10.00 at 25 °C / 77 °F, at 20 °C / 68 °F it is actually 10.06! This is why it is always best to record the temperature as well as the pH reading!

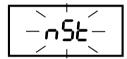
#### Changing the pH Buffer Group

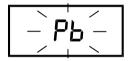
1. Power off the meter while in pH mode. Press and hold wood then press . If successful. "bUF" will blink on the display. Release both keys.



- Press to enter the buffer group selection mode.
- 3. Press to toggle between the available pH buffer groups:







- 4. Press to confirm the pH buffer group. Note: If Pb is selected, measurement mode will begin. If USA or nSL is selected, proceed to step 5.
- Press to togale between the desired number of calibration points (Pt). Note: During pH calibration mode, the meter will automatically complete calibration after the number of points selected here has been completed.









6. Press to confirm the number of calibration points. The meter will automatically begin to measurement mode.

To abort the buffer group selection or go back one step, press



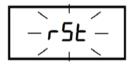
#### Resetting User Calibrated Values

The meter can be completely reset to factory default values, or partially reset for calibration values only using the procedure below.

| Reset Type        | Description   |  |
|-------------------|---|--|
| No (n0)           | No reset is performed; meter returns to measurement                                     |  |
| Calibration ([AL) | Reset of either pH, mV, lon, or Temperature calibration depending on the selected mode* |  |
| Factory (F[L)     | Reset of all calibration values and user settings to factory default settings           |  |

<sup>\*</sup>For calibration reset, measure in the mode that you want to reset prior to step 1 below.

1. Power off the meter. Press and hold then press . If successful," r5Ł" will blink on the display. Release both keys.



- 2. Press to enter the reset menu.
- 3. Press ot to toggle between No Reset (nD), Calibration Reset (ERL), or Factory Reset (FLE). Press can to cancel.







 Press to confirm the selected reset type. The meter will automatically begin measurement mode.

#### 3.2 Ion Calibration (Ion 6+ only)

Ion measurement requires an ion selective electrode (ISE)—sold separately. An ISE will measure one specific ion of interest—such as ammonia or fluoride.

The available calibration values for the lon 6+ are 0.1, 1.0, 10.0, 100.0, and 1000 ppm. Choose any 2 or 3 consecutive values to use and prepare the corresponding ion calibration solutions.

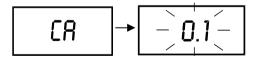
Refer to your ion selective electrode manual for important information regarding electrode maintenance, sample preparation, use of calibration standards, and ionic strength adjustment.

Always rinse electrodes with clean water before and after each calibration or sample measurement to avoid cross-contamination.

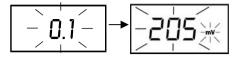
The Ion 6+ will show "- - -" when ion calibration is required.

# Ion Calibration Procedure (Ion 6+ only)

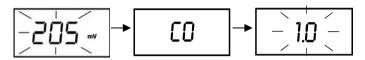
- 1. Turn on the meter and select ion mode by pressing if necessary. For best results, begin lon calibration with your lowest calibration standard and finish with your highest calibration standard value. Ex) 1.0, then 10, then 100.
- 2. Press to begin ion calibration mode. "[R" (calibrate) will display briefly. The ion calibration value "[I, I" will blink.



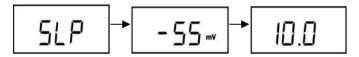
- 3. Dip the ISE into your standard solution. Add ISA if required. Swirl gently or stir. Select the desired ion standard using to choose a higher standard or to choose a lower standard. Press to confirm the desired standard.
- The displayed mV reading corresponds to the selected ppm value. Notice that the mV reading and "mV" annunciator will both blink.



5. When the mV reading has stabilized, the mV annunciator will stop blinking. Press to confirm the value. "[0" (confirm) will display briefly. The display will show the next highest calibration standard value. Rinse the electrode with clean water.



- 6. Repeat steps 3 & 4 & 5 once for a 2-point calibration or twice for a 3-point calibration using additional ion calibration standard(s).
- 7. Press to complete a 2-point calibration. When a 3-point calibration has been performed, the meter automatically completes the calibration.
- A successful calibration will show "5LP" (slope) followed by the mV/decade value, the display will cease blinking and begin ion measurement.



Error message "Er-2" is displayed if CAL is pressed after only one point calibration has been completed. Recalibrate using minimum of 2 points.

Error message "E-4" is displayed if is pressed when the completed calibration points are not consecutive. Recalibrate with calibration standards that are 1 decade apart from each other.

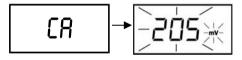
Error message "Fr3" is displayed if the calibration is not successfully stored into memory. This occurs when the slope is <15 mV/decade or >90 mV/decade.

#### 3.3 Millivolt (mV) Calibration (6+ only)

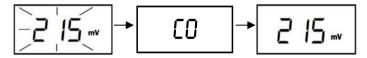
Oxidization Reduction Potential (ORP or Redox) as measured by an ORP electrode in mV units is not a precise measurement, but is useful as a relative indicator. As such, mV offset adjustment is not meant to enhance accuracy, but rather to make readings comparable to a reference.

Commercial ORP solutions are commonly used as a check standard—a meter/electrode system is verified to be close to a given value although adjustments are not made. These solutions can be used as a calibration standard in which adjustments are made in an attempt to match the ORP value, however results are often difficult to reproduce.

- 1. Turn on the meter and select mV mode by pressing of if necessary. Dip the ORP electrode into a solution with a known mV value (e.g. Zobel, Light's, quinhydrone, or iodidetriiodide) and provide brief or slow stirring.
- Press to begin mV calibration mode. "LA" (calibrate) will display briefly. The un-adjusted mV value will blink.



- 3. Use (pH 6+) or (lon 6+) to adjust the reading to the desired value. The maximum adjustment is ± 50 mV.
- 4. When the reading has stabilized, the mV annunciator will stop blinking. Press to confirm the value. "[0" (confirm) will display briefly. The meter will automatically save the calibration, cease blinking, and begin mV measurement.



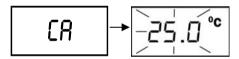
#### 3.4 Temperature Calibration

# With Temperature Probe (Automatic Temperature Compensation)

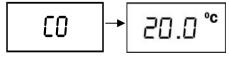
The thermistor sensor used for temperature measurement is accurate and stable, so frequent calibration isn't required. Temperature calibration is recommended upon electrode replacement, whenever the temperature reading is suspect, or if matching against a certified thermometer is desired.

If temperature calibration will be performed, be sure that the thermometry source being used as a reference is accurate!

- Turn on the meter and select °C mode by pressing if necessary. Connect the
  temperature probe and place it into a solution with a known accurate temperature
  such as a constant temperature bath or NIST-traceable thermometer. Allow
  adequate time to stabilize.
- 2. Press call to begin temperature calibration mode. "[F]" (calibrate) will display briefly. The un-adjusted °C value will blink.



- 3. Compare the measured value of the 5+/6+ temperature probe with the reference thermometer. Use (pH 5+ and pH 6+) or (lon 6+) to adjust the reading to the desired value. The maximum adjustment is  $\pm 5$  °C.
- 4. Press to confirm the value. "LD" (confirm) will display briefly. The meter will automatically save the calibration, cease blinking, and begin °C measurement.

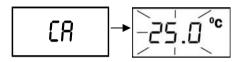


#### Without Temperature Probe (Manual Temperature Compensation)

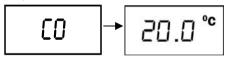
If a temperature probe is not connected, the meter compensates for pH response based on the factory default value at 25.0 °C. This default temperature can be manually adjusted using the procedure below.

For nearly all applications however, Automatic Temperature Compensation (ATC) is recommended for best accuracy.

- Turn on the meter and select °C mode by pressing of necessary. Disconnect the temperature probe.
- 2. Press to begin temperature calibration mode. "L#" (calibrate) will display briefly. The factory default temperature (25.0 °C value will blink.



- 3. Use (pH 5+ and pH 6+) or (lon 6+) to adjust the reading to the desired value. The maximum adjustment is ± 0 to 100 °C.
- 4. Press to confirm the value. "CD" (confirm) will display briefly. The meter will automatically save the calibration, cease blinking, and begin °C measurement with the new default temperature.



# 4. MEASUREMENT

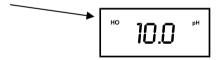
#### Taking Measurements

 Before measurement, rinse the pH/ORP electrode or Ion Selective Electrode and temperature probe with clean water.

- Power on the meter. Press key to select your desired mode of operation (pH, mV, lon, or Temperature).
- Dip both probes gently into an aqueous test sample, swirl or stir gently and allow the reading to stabilize.

#### Holding & Releasing a Reading

To freeze or hold a displayed reading, press . The "HO" annunciator indicates that the HOLD function is activated. Press again to deactivate the HOLD function. The meter reverts to current measurement mode, and the "HO" annunciator will disappear.



# 5. TROUBLESHOOTING

| Problem                  | Cause  | Solution   |  |
|--------------------------|--|--|--|
| No display               | Batteries absent or installed incorrectly  | Insert batteries using correct polarity  |  |
| "LO"                     | Low battery  | Replace batteries.   |  |
| " " on<br>display        | Ion 6+ requires calibration  | Perform either 2 or 3 point ion calibration  |  |
| 11 1 1 .                 | a) Dry electrode   | a) Hydrate / soak pH electrode   |  |
| Unstable<br>reading      | b) Dirty electrode   | b) Clean electrode   |  |
|                          | c) Temperature changing  | c) Allow time for electrodes and solution to stabilize   |  |
|                          | a) Display freezes   | a) Release reading by pressing   |  |
| Not able to<br>calibrate | b) Faulty electrode  | b) Replace electrode.  |  |
| calibrate                | c) Inaccurate buffer   | c) Use fresh buffer solutions  |  |
| Err                      | mV out of range  | Check the probe/ solution  |  |
| Er I                     | Buffer value is out of tolerance   | Use new calibration solution & recalibrate. Ensure correct pH buffer group was selected.                 |  |
| Er2                      | lon calibration exited after 1 point calibration   | Perform at least 2 point ion calibration before exiting. (lon 6+)  |  |
| Er3                      | ISE slope not within the specified tolerance   | Re-calibrate. Check Ion Selective Electrode & refer to ISE manual (Ion 6+)                               |  |
| Er4                      | Ion calibration points are not 1 decade apart  | Perform calibration with consecutive values. For example, use 1, 10, & 100 , not 1 & 100 (lon 6+)        |  |
| Er5                      | Upon exit of calibration mode, a 1-point calibration was attempted with a pH buffer other than 7.00 or 6.86. | Repeat pH calibration using one or more points which include either 7.00 (USA) or 6.86 (NIST) standards. |  |
| Or                       | Over range: reading exceeds maximum value  | Ensure that the value being measured is within the range of the selected mode. Confirm that              |  |
| Ur                       | Under range: reading exceeds minimum value   | electrode(s) are connected and working properly.   |  |

# 6. SPECIFICATIONS

|                             | Model   | pH 5+ | pH 6+    | Ion 6+   |  |
|-----------------------------|---|-------|----------|----------|--|
| Ion Range                   | 0.01 to 0.99; 1.0 to 199.9; 200 to 1999   |       |          | ✓        |  |
| Resolution                  | 0.01 / 0.1 / 1  |       |          | ✓        |  |
| Accuracy                    | ± 1 % full scale  |       |          | ✓        |  |
| Calibration Points          | 2 or 3 consecutive points;  |       |          | ✓        |  |
| Calibration Points          | (0.1, 1.0, 10.0, 100.0, 1000)   |       |          | ·        |  |
| pH Range                    | 0.00 to 14.00 pH  | ✓     | ✓        | ✓        |  |
| Resolution                  | 0.01 pH   | ✓     | ✓        | ✓        |  |
| Accuracy                    | ± 0.01 pH   | ✓     | ✓        | ✓        |  |
| Slope Range                 | 80 to 120%  | ✓     | ✓        | ✓        |  |
| Calibration Points          | 2 to 5 points   | ✓     | ✓        | ✓        |  |
| Buffer Groups               | 1.68, 4.01, 7.00, 10.01, 12.45 (USA)<br>1.68, 4.01, 6.86, 9.18, 12.45 (NIST)<br>4.10, 6.97 (Pb) | ~     | <b>✓</b> | <b>~</b> |  |
| Temperature Range           | 0.0 to 100.0 °C   | ✓     | ✓        | ✓        |  |
| Resolution                  | 0.1 °C  | ✓     | ✓        | ✓        |  |
| Accuracy                    | ± 0.5 °C  | ✓     | ✓        | ✓        |  |
| Compensation                | Automatic / Manual (0 to 100 °C)  | ✓     | ✓        | ✓        |  |
| Millivolt Range             | -1000 to +1000 mV   |       | ✓        |          |  |
| Millivolt Range             | -500 to 500 mV  |       |          | ✓        |  |
| Resolution                  | $\pm$ 1 mV;<br>$\pm$ 0.1 mV between –200 to 200 mV  |       | <b>√</b> | <b>~</b> |  |
| Accuracy                    | $\pm$ 2 mV;<br>$\pm$ 0.2 mV between –200 to 200 mV  |       | <b>~</b> | <b>✓</b> |  |
| Features                    |   |       |          |          |  |
| Auto-Buffer Recognition Yes |   |       |          |          |  |
| Hold Function "HO"          |   |       |          |          |  |
| Auto Shut Off               | After 17 minutes  |       |          |          |  |
| Low Battery Indication      | attery Indication "LO"  |       |          |          |  |
| Operating Temperature       |   |       |          |          |  |
| Power Requirements          | ower Requirements (4) x 1.5V AAA Alkaline Batteries (included)                                  |       |          |          |  |
| Battery Life                | ttery Life 500 hours  |       |          |          |  |
| Meter Dim./Weight           | 15.7 x 8.5 x 4.2 cm / 255 g   |       |          |          |  |

# 7. REPLACEMENTS AND ACCESSORIES

|   | Part number Ordering Code  |                       |  |
|---|----------------------------|-----------------------|--|
| Item Description  | Eutech<br>Instruments      | Oakton<br>Instruments |  |
| pH 5+ with ATC probe  | ECPH501PLUS<br>01X244911   | 35613-50              |  |
| pH 5+ with pH and ATC probes                                      | _                          | 35613-52              |  |
| pH 5+ with pH and ATC probes and solutions in hard carrying case  | ECPH502PLUSK<br>01X244912  | _                     |  |
| pH 5+ with pH/ATC probe and solutions in hard carrying case       | ECPH503PLUSK<br>01X244913  | 35613-54              |  |
| pH 6+ with ATC probe  | ECPH601PLUS<br>01X245025   | 35613-20              |  |
| pH 6+ with pH and ATC probes                                      | _                          | 35613-22              |  |
| pH 6+ with ATC probe and solutions in hard carrying case          | ECPH601PLUSK<br>01X245028  | -                     |  |
| pH 6+ with pH and ATC probes and solutions in hard carrying case  | ECPH602PLUSK<br>01X245026  | _                     |  |
| pH 6+ with pH/ATC probe and solutions in hard carrying case       | ECPH603PLUSK<br>01X245027  | 35613-24              |  |
| Ion 6+ with ATC probe   | ECION601PLUS<br>01X256409  | 35613-80              |  |
| lon 6+ with pH and ATC probes and solutions in hard carrying case | ECION602PLUSK<br>01X256410 | 35613-82              |  |
| ATC Probe, Stainless Steel, 84 x 3 mm                             | PH5TEM01P<br>01X021804     | 35613-05              |  |
| pH electrode, plastic, gel-filled, single-junction                | ECFC7252101B<br>01X099412  | 59001-65              |  |
| pH electrode, plastic, gel-filled, double-junction                | ECFC7252201B<br>01X099417  | 35641-51              |  |
| pH electrode, glass, refillable, double-junction                  | ECFG7370101B<br>93X218819  | 35805-04              |  |
| pH/ATC electrode, plastic, gel-filled, single-junction            | ECFE7352901B<br>01X218964  | 35811-71              |  |

|  | Part number Ordering Code |                       |  |
|--|---------------------------|-----------------------|--|
| Item Description                                       | Eutech<br>Instruments     | Oakton<br>Instruments |  |
| pH/ATC electrode, plastic, gel-filled, double-junction | ı                         | 35811-72              |  |
| ORP electrode, plastic, gel-filled, single-junction    | ECFC7960101B<br>01X256612 | 59001-75              |  |
| ORP electrode, plastic, gel-filled, double-junction    | ECFC7960201B<br>01X256613 | 59001-77              |  |
| pH 1.68 buffer solution, 480 mL bottle                 | ECBU1BT                   | 00654-01              |  |
| pH 4.01 buffer solution, 480 mL bottle (1 pint)        | ECBU4BT                   | 00654-00              |  |
| pH 4.01 buffer sachets, 20 mL x 20 pcs.                | ECBU4BS                   | 35653-01              |  |
| pH 6.86 buffer solution, 480 mL bottle                 | ECBU686BT                 | 00654-03              |  |
| pH 7.00 buffer solution, 480 mL bottle (1 pint)        | ECBU7BT                   | 00654-04              |  |
| pH 7.00 buffer sachets, 20 mL x 20 pcs.                | ECBU7BS                   | 35653-02              |  |
| pH 9.18 buffer solution, 480 mL bottle                 | ECBU918BT                 | 00654-07              |  |
| pH 10.01 buffer solution, 480 mL bottle (1 pint)       | ECBU10BT                  | 00654-08              |  |
| pH 10.01 buffer sachets, 20 mL x 20 pcs.               | ECBU10BS                  | 35653-03              |  |
| pH 12.45 buffer solution, 480 mL bottle                | ECBU12BT                  | 00654-12              |  |
| pH 4.01, 7.00, & 10.01 buffer pack, 480 mL bottles     | _                         | 05942-10              |  |
| Electrode Storage Solution                             | ECRE005                   | 00653-04              |  |
| Electrode Cleaning Solution                            | ECDPCBT                   | 00653-06              |  |

# 8. WARRANTY

This meter is supplied with a warranty against significant deviations in material and workmanship for a period of **THREE** years from date of purchase whereas probe with a **SIX** month warranty.

If repair or adjustment is necessary and has not been the result of abuse or misuse within the designated period, please return – freight prepaid – and correction will be made without charge. Eutech Instruments will determine if the product problem is due to deviations or customer misuse.

Out of warranty products will be repaired on a charged basis.

#### **Exclusions**

The warranty on your instrument shall not apply to defects resulting from:

- Improper or inadequate maintenance by customer
- Unauthorized modification or misuse
- Operation outside of the environment specifications of the products

# 9. RETURN OF ITEMS

Authorization must be obtained from our Customer Service Department or authorized distributor before returning items for any reason. A "Return Goods Authorization" (RGA) form is available through our authorized distributor. Please include data regarding the reason the items are to be returned. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Eutech Instruments will not be responsible for damage resulting from careless or insufficient packing. A restocking charge will be made on all unauthorized returns.

NOTE: Eutech Instruments Pte Ltd reserves the right to make improvements in design, construction, and appearance of products without notice.

# For more information on our products, please contact our channel partner or visit our websites listed below:

#### **Oakton Instruments**

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