

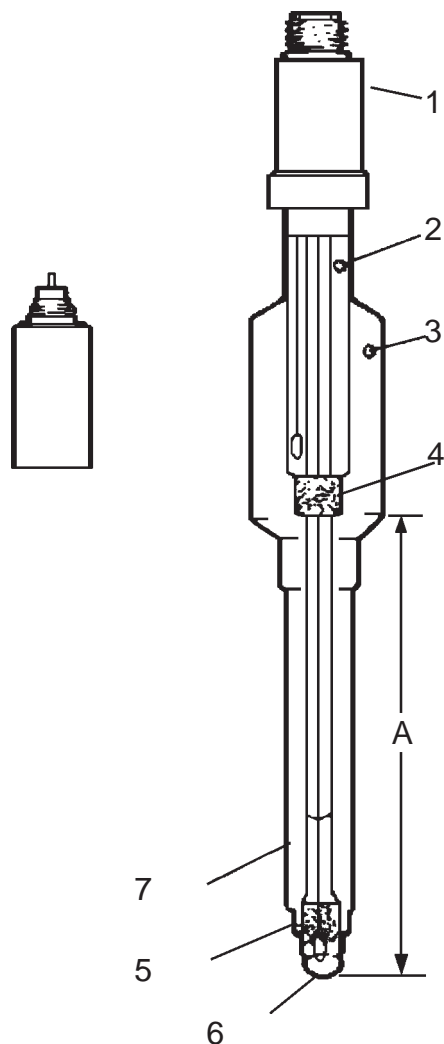
# REFILLABLE pH AND ORP ELECTRODES

2/07



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## Single pH and ORP Electrodes



This series of steam-sterilizable electrodes are designed for small fermentors where sterilization is performed in an autoclave in non-pressurized operation. The electrodes can withstand repeated sterilization up to 130°C and feature a detachable cable assembly insulated with a water tight connector. The electrodes are autoclaved with the cable detached and a protective cap over the connector. The electrode construction features an annular ceramic reference junction to eliminate junction problems which normally occur with autoclavable steam-sterilizable electrodes. Both reference chambers are refillable with a special high temperature reference electrolyte. When ordering, the detachable cable must be ordered separately with the proper pH meter connection. Unless otherwise specified, the immersion length is 150mm.

**The immersion length "A" is determined by the immersion depth "H" of the probe plus 70mm.**

## Features

1. Removable electrode cable connection.
2. Internal Ag/AgCl reference chamber fill port.
3. Electrolyte bridge fill port.
4. Internal annular ceramic reference junction.
5. Annular ceramic primary reference junction.
6. pH bulb or platinum band sensor.
7. 12mm O.D. shaft.

## Electrodes

A774713-XXX-DL Double reference chamber, GXV pH bulb, 0-14pH  
A779861-XXX-DL ORP Double reference chamber

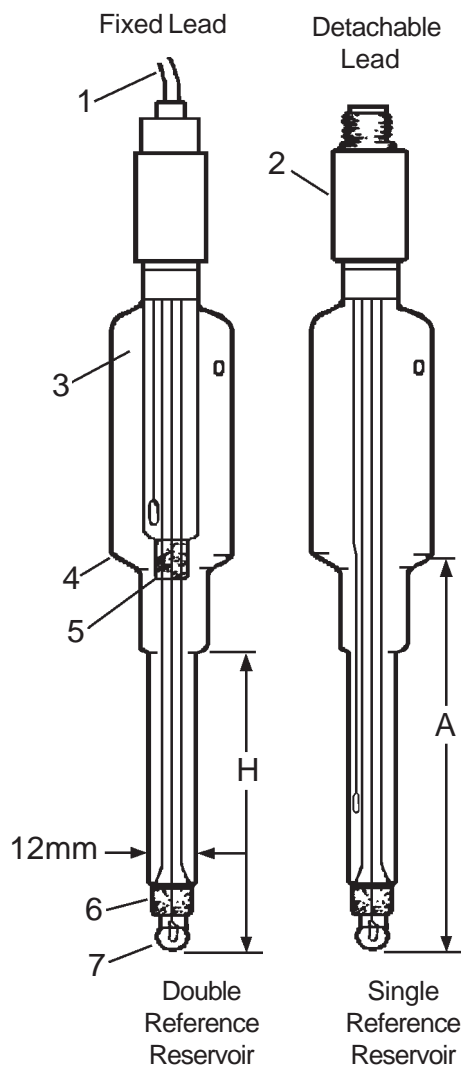
## Detachable Leads and Accessories

9001081-XXX-X	5mm O.D. low-noise DL cable.	R001026	Inner reference fill 3M KCl saturated with AgCl. 125 ml.
9001083-XXX-X	Miniature 3mm O.D. low-noise DL cable	R001027	Outer reference fill 3M KCl. 125 ml.
9001082-XXX-X	Low-noise triax DL cable	R001028	Outer reference fill 1M KNO <sub>3</sub> 125 ml.

## Refillable In-Situ pH and ORP Electrodes

### Autoclavable Pressurized Application

For Sterilizable, Pressurized Fermentors with Non-Removable Electrode



#### In-Situ pH and ORP Electrodes

This series of pH and ORP electrodes are designed for use in pressurized immersion electrode assemblies used in fermentors and reaction vessels. The sterilizable combination electrodes are designed for repeated steam sterilization cycles at 130°C. Pressure compensation should be effected during all sterilization cycles. The electrodes are constructed with an annular ceramic junction eliminating the fouling problem which normally occurs with sterilizable electrodes. Electrodes are available in both single and double junction chambers. The double junction electrode is recommended over the single junction for long-term stability and use. By the virtue of this special design, the internal reference junction is a sealed Ag/AgCl reference with a special high temperature KCl gel reference solution. An internal annular ceramic junction eliminates fouling problems. The outer junction is refillable and the electrolyte may be replaced and changed during use. Both the single and double junction styles require a special high temperature gelled reference electrolyte solution. The DL series (detachable lead) electrode is used in the pHoenix probe assemblies P/N 4051001. Order the cable separately.

Unless otherwise specified, the immersion length "A" is 120mm. The immersion length "A" is determined by the immersion depth "H" of the probe, plus 50mm.

#### Features

- |           |    |  |
|-----------|----|--|
| Single    | 1. | Standard fixed cable series.                       |
| Reference | 2. | Optional removable lead, DL series.                |
| Reservoir | 3. | Sealed gel-filled Ag/AgCl internal reference cell. |
|           | 4. | Gel-filled outer reference electrolyte.            |
|           | 5. | Internal annular ceramic reference junction.       |
|           |    | Double junction only.                              |
|           | 6. | Annular ceramic primary reference junction.        |
|           | 7. | pH bulb or platinum sensor.                        |

#### Electrodes

B773792-\_\_\_-X39  
B779861-\_\_\_-X39

Double reference chamber, GXV pH bulb, -5° to +135°C, also available with DL  
ORP double reference chamber, -5° to +135°C, also available with DL

When ordering, determine the immersion length "A" in millimeters and write as follows for 120mm (i.e. B773593-120-X39T).

<b>B773593</b>	<b>120</b>	<b>X39</b>	
(Part No.)	("A" length)	(Cable length in inches)	Connector (if any)

**FOR ADDITIONAL PRODUCT INFORMATION,**



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