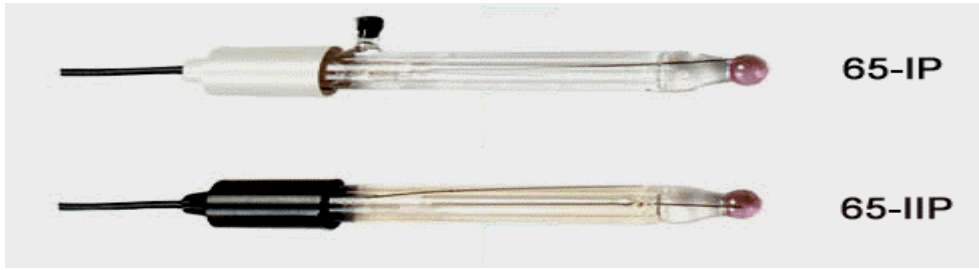


## **PH Electrode**

Model	Application
<b>PH Combined Electrode with Glass Body</b>	
<u>65-IP</u>	General lab and field use
<u>65-IIP</u>	
<u>65-IA</u>	For viscous solutions and lab use
<u>65-IIA</u>	For viscous solutions
<b>PH Combined Electrode with Plastic Body</b>	
84-IP	General lab and field use
84-IIP	for use with pH meter P-IA and PX-IA
87-IP	for use with pH meter PH-I
87-IIP	for use with pH meter PH-II or lab
87-IIIP	for use with pH meter PH-III or lab
88-IP	General lab and field use
88-IIP	
88-IA	
89-I	
99-I	with double layer. aquarium and fish farming use
99-IA	
PS-02	skin, fruit, sheet, piece goods and etc.
PE-200	General lab and field use with temperature sensor
<b>ORP Combined Electrode with Plastic Body</b>	
99Pt-A	For lab application, especially useful for solution that is corrosive to PC plastic and circumstances where higher temperature is consecutiely measured. Normally used with reductive media.
99Pt-B	
<b>Conductivity Electrode with Glass Body</b>	
DJS-1	Used for determination of electricity conductivity or conductivity titration of solution
DJS-2	
<b>DO Electrode with Plastic Body</b>	
<u>ZDO-1</u>	Dissolved Oxygen electrode



**PH Combined Electrode with Glass Body**



<i>Model</i>	<b>65-IP</b>	<b>65-IIP</b>
<i>Measuring Range</i>	0 - 14 pH	
<i>Temperature Range</i>	0 - 60 °C	
<i>Zero point value</i>	7 +/- 1 pH	
<i>Junction</i>	Ceramic	
<i>Reference Cell</i>	Ag/Agcl, KCL solution refillable	Ag/Agcl, KCL gel
<i>Size</i>	dia.12 x length 140 mm	
<i>Plug</i>	BNC + 1 m cable	

**Note:** Difference between the two models is the reference cell electrolyte. 65-IP is with solution form and can be refilled. 65-IIP is in gel form which last life time, not need to refill.



<i>Model</i>	<b>65-IA</b>	<b>65-IIA</b>
<i>Measuring Range</i>	0 - 14 pH	
<i>Temperature Range</i>	0 - 60 °C	
<i>Zero point value</i>	7 +/- 1 pH	
<i>Junction</i>	Ceramic	
<i>Reference Cell</i>	Ag/Agcl, KCL solution refillable	
<i>Size</i>	dia.9 x length 140 mm	
<i>Plug</i>	BNC + 1 m cable	

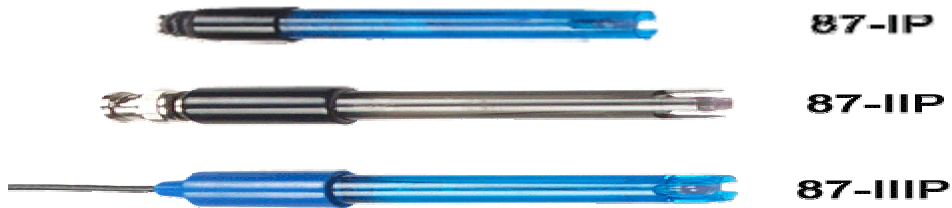
**Note:** Difference between the two models is the shape of the tip. 65-IA is sharper and 65-IIA is a little round.

**PH Combined Electrode with Plastic Body**



<i>Model</i>	84-IP	84-IIP
<i>Measuring Range</i>	0 - 14 pH	
<i>Temperature Range</i>	0 - 60 °C	
<i>Zero point value</i>	7 +/- 1 pH	
<i>Junction</i>	Ceramic	
<i>Reference Cell</i>	Ag/Agcl, KCL gel	
<i>Size</i>	dia.10 x length 120 mm	
<i>Plug</i>	BNC + 1 m cable	BNC

**Note:** 84-IP can be generally used in lab. 84-IIP is the accessory electrode for pH meter model P-IA and PX-IA. It has a special direct BNC plug to be connected to pH meter.



<i>Model</i>	87-IP	87-IIP	87-IIIP
<i>Measuring Range</i>	0 - 14 pH		
<i>Temperature Range</i>	0 - 60 °C		
<i>Zero point value</i>	7 +/- 1 pH		
<i>Junction</i>	Ceramic		
<i>Reference Cell</i>	Ag/Agcl, KCL gel		
<i>Size</i>	dia.12 x length 85mm	dia.12 x length 120 mm	dia.12 x length 90 mm
<i>Plug</i>	Special direct plug	BNC	BNC + 1 m cable

**Note:** These three models are accessories for Pocket pH meter PH series.

- 87-IP is for PH-I. It has a special direct plug for connection. It is smaller in size so that it can be temporarily stored in the body of PH-I
- 87-IIP is for PH-II, can also be generally used in lab.
- 87-IIIP is for PH-III, can also be generally used in lab.



**88-IP**



**88-IIP**



**88-IA**

General lab and field use

<i>Model</i>	<b>88-IP</b>	<b>88-IIP</b>	<b>88-IA</b>
<i>Measuring Range</i>	<b>0 - 14 pH</b>		
<i>Temperature Range</i>	<b>0 - 60 °C</b>		
<i>Zero point value</i>	<b>7 +/- 1 pH</b>		
<i>Junction</i>	<b>Ceramic</b>		
<i>Reference Cell</i>	<b>Ag/Agcl, KCL gel</b>		<b>Ag/Agcl, KCL gel (tine vesicle)</b>
<i>Size</i>	<b>dia.12 x length 160 mm</b>		
<i>Plug</i>	<b>BNC + 1 m cable</b>		

**Note:** General lab and field use pH electrodes.

- Difference between 88-IP is 88-IIP is only the color.
- 88-IA has sharp tip.



**89-I**

<i>Model</i>	<b>89-I</b>
<i>Measuring Range</i>	<b>0 - 14 pH</b>
<i>Temperature Range</i>	<b>0 - 60 °C</b>
<i>Zero point value</i>	<b>7 +/- 1 pH</b>
<i>Junction</i>	<b>Ceramic</b>
<i>Reference Cell</i>	<b>Ag/Agcl, KCL gel</b>
<i>Size</i>	<b>dia.12 x length 170 mm</b>
<i>Plug</i>	<b>BNC</b>

**Note:** With direct BNC plug for general lab and field use



99-I



99-IA

with double layer. aquarium and fish farming use

<i>Model</i>	<b>99-I</b>	<b>99-IA</b>
<i>Measuring Range</i>	<b>0 - 14 pH</b>	
<i>Temperature Range</i>	<b>0 - 60 °C</b>	
<i>Zero point value</i>	<b>7 +/- 1 pH</b>	
<i>Junction</i>	<b>Fiber</b>	
<i>Reference Cell</i>	<b>Ag/Agcl, KCL gel</b>	<b>Ag/Agcl, KCL gel (tine vesicle)</b>
<i>Size</i>	<b>dia.12 x length 160 mm</b>	
<i>Plug</i>	<b>BNC + 1 m cable</b>	

**Note:** Double layer electrodes. Suitable for continuous measurement. 99-IA is with sharp tip.



PS-02

skin, fruit, sheet, piece goods and etc.

<i>Model</i>	<b>PS-02</b>
<i>Measuring Range</i>	<b>0 - 14 pH</b>
<i>Temperature Range</i>	<b>0 - 60 °C</b>
<i>Zero point value</i>	<b>7 +/- 1 pH</b>
<i>Junction</i>	<b>Ceramic</b>
<i>Reference Cell</i>	<b>Ag/Agcl, KCL gel</b>
<i>Size</i>	<b>dia.12 x length 90 mm</b>
<i>Plug</i>	<b>BNC + 1 m cable</b>

**Note:** Can be used for measuring skin, sheet, wood and etc.



General lab and field use with temperature sensor

<b>Model</b>	<b>PE-200</b>
<b>Measuring Range</b>	<b>0 - 14 pH</b>
<b>Temperature Range</b>	<b>0 - 60 °C ATC</b>
<b>Zero point value</b>	<b>7 +/- 1 pH</b>
<b>Junction</b>	<b>Ceramic</b>
<b>Reference Cell</b>	<b>Ag/AgCl, KCL gel</b>
<b>Size</b>	<b>dia.12 x length 160 mm</b>
<b>Plug</b>	<b>BNC + 1 m cable + temp. sensor plug</b>

**Note:** With temperature sensor, can be used with pH meters with ATC (Automatic Temperature Compensation) function.

### **ORP Combined Electrode with Plastic Body**

For lab application, especially useful for solution that is corrosive to PC plastic and circumstances where higher temperature is consecutively measured. Normally used with reductive media.



<b>Model</b>	<b>99Pt-A</b>	<b>99Pt-B</b>
<b>Measuring Range</b>	<b>+/- 1500 mV</b>	
<b>Junction</b>	<b>Ceramic</b>	
<b>Reference Cell</b>	<b>Ag/Agcl, KCL gel</b>	
<b>Sensitive Component</b>	<b>dia.1 x 6mm Platinum needle</b>	<b>dia.6 x 2.5mm Platinum ring</b>
<b>Size</b>	<b>dia.12 x length 160 mm</b>	
<b>Plug</b>	<b>BNC + 1 m cable</b>	

**Note:** Difference between the two models is the shape of the sensitive component. A is needle and B is ring.

### **Conductivity Electrode with Glass Body**

Used for determination of electricity conductivity or conductivity titration of solution



<b>Model</b>	<b>DJS-1</b>	<b>DJS-2</b>
<b>Sensitive Component</b>	5 x 5 mm platinum plate (coated black)	5 x 7 mm platinum plate (coated black)
<b>Size</b>	dia.12 x length 140 mm	dia.12 x length 150 mm
<b>Cell Constant</b>	1	
<b>Plug</b>	BNC + 1 m cable	



**DO Electrode with Plastic Body**  
**Dissolved Oxygen electrode**



ZDO-1

<b><i>Model</i></b>	<b>ZDO-1</b>
<b><i>Residue current</i></b>	<b>=&lt; 0.005 uA</b>
<b><i>Response time</i></b>	<b>30 seconds for 90%</b>
<b><i>Measuring range</i></b>	<b>0 - 20 ppm</b>
<b><i>Stability</i></b>	<b>+/- 0.2 ppm when ambient temperature varies +/- 10 °C</b>

**Note:** Dissolved Oxygen electrode. Self-stirring oxygen sensor simultaneous stir and measure

## **Laboratory Electrode—Plastic pH Combination Electrode**

### **Model 201-C Plastic pH Combination Electrode**

**Range:** 0~14pH

**Temperature range:** 0~80°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Characteristic:** PC housing, anti-collision. The protecting cap can be taken down, it's convenient for cleaning. It needn't renew gelatinous KCL.

**Application range:** For laboratory application especially suitable for outdoors using and online. It is unsuitable for the following circumstances:

- When the measure solutions is alkaline, (pH>12)
- When the solution causes erosion to the body.
- The consecutively measured temperature is higher (>60°C)



### **Model 200-C Plastic pH Combination Electrode**

**Range:** 0~14pH

**Temperature range:** 0~80°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Characteristic and application range:** same as the 201-C basically, the difference is that it can be refilled KCL solution. So its accuracy is higher while the consecutively measured.

### **201-A Plastic pH Combination Electrode**

**Range:** 0~14pH

**Temperature range:** 0~80°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 170mm

**Connector:** BNC without cable

**Characteristic and application range:** same as the 201-C the difference is that it is adopted a connector without cable, suitable for use of pH meter for hand type, it can also use with a extent cable.

### 206-C Plastic Mini pH Combination Electrode

**Range:** 0~14pH

**Temperature range:** 0~80°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 126mm

**Connector:** BNC

**Characteristic and application range:** same as the 201-C basically, but the outside diameter is shorter, except for routine measurement, it's better to be suitable for use of test tube and a small quantity of sample.



Laboratory Electrode-Glass pH Combination Electrode

### Model 2501-C Glass pH Combination Electrode

**Range:** 0~14pH

**Temperature range:** 0~90°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 155mm

**Connector:** BNC

**Characteristic:** For accurate pH measurement, it's routine combination electrode which is high quality. Especially suitable for solution that is corrosive to plastic body of electrode and circumstances where higher temperature is consecutively measured. Unsuitable for sticky solution which is caused a jam for ceramic junction, and strong base solution.



### Model 2511-C Glass pH Combination Electrode

**Range:** 0~14pH

**Temperature range:** 0~80°C

**Junction:** ceramic

**Type reference:** Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 155mm

**Connector:** BNC

**Characteristic:** glass body, gel KCL, non-refillable.

**Application range:** same as 2501-C, it's convenient for using, but the operating temperature is lower.

### **Model 2503-C Glass pH Combination Electrode**

**Range:** 0~14pH

**Temperature range:** 0~90°C

**Junction:** ground glass sleeve

**Type reference:** capillary Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Characteristic:** glass body, KCL reference solution can be refilled. Junction is ground glass sleeve.

**Application range:** Be suitable for use of solution which is weaker ionic strength, high viscosity and feculent and colloidal solution.



Laboratory Electrode-pH Electrode for Special Purpose

### **Model 2503S-C Glass pH Combination Electrode**

**Range:** 0~10pH

**Temperature range:** 20~100°C

**Junction:** ground glass sleeve

**Type reference:** capillary Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Characteristic and application range:** special sensitive glass film is used, suitable for measuring in high temperature and strong acid.

### **Model 2503D-C Glass pH Combination Electrode**

**Range:** 2~12pH

**Temperature range:** 0~60°C

**Junction:** ground glass sleeve

**Type reference:** capillary Ag/ AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Characteristic and application range:** low impedance sensitive glass membrane( $\leq 15M \Omega$ ) is used, suitable for low temperature and pure water.



#### **Model 2015P-C Flat pH Combination Electrode**

**Range:** 0~14pH

**Temperature range:** 5~80°C

**Junction:** ceramic teflon

**Type reference:** Ag/AgCl

**Dimensions:**  $\Phi 15 \times 106\text{mm}$

**Connector:** BNC

**Characteristic and Application range:** PVC body, gelatinous KCL, flat sensitive membrane, suitable for flat surface object (such as skin, paper etc.) and minimum solution.



### **Laboratory Electrode-ORP Electrode, Conductivity Electrode**

#### **Model 301Pt-C Plastic ORP Combination Electrode**

**Range:** +/-1500mV

**Junction:** ceramic

**Type reference:** Ag/AgCl

**Dimensions:**  $\Phi 12 \times 160\text{mm}$

**Connector:** BNC

**Sensitive component:**  $\Phi 6 \times 2.5$  Pt ring

**Characteristic:** PC body, gel KCL, non-refillable.

**Application range:** for lab and field applications, measuring oxidation reduction potential for solution. Generally, it is suitable for use of oxidation system.

**Model 3501Pt-C Glass ORP Combination Electrode**

**Range:** +/-1500mV

**Junction:** ceramic

**Type reference:** Ag/AgCl

**Dimensions:**  $\Phi$  12 x 160mm

**Connector:** BNC

**Sensitive component:**  $\Phi$  6 x 2.5 Pt ring

**Characteristic:** Glass body, KCL, reference solution can be refilled.

**Application range:** Typical for lab applications, especially suitable for solution that is corrosive to PC plastic body and circumstances where higher temperature and consecutively measuring. Generally, it is suitable for use of oxidation system.

