



## DO Electrode (9552-20D / 9552-50D) Instruction Manual

Thank you for purchasing the HORIBA DO electrode. Read this manual carefully before using the electrode.  
 \* "DO" is an abbreviation of Dissolved Oxygen.

### Conformable standards

This equipment conforms to the following standards:



**RoHS:** EN50581  
 9. Monitoring and control instruments

### Authorised representative in EU

HORIBA UK Limited  
 Kyoto Close Moulton Park Northampton NN3 6FL UK

### Cautions during handling



#### CAUTION



##### Chemical solution

Highly concentrated potassium hydroxide (KOH) is used in the internal solution of the electrode.  
 If the internal solution in the electrode comes in contact with your hands or skin, wash immediately with water. If the internal solution comes in contact with your eyes, flush immediately with large amounts of water and seek treatment by a physician.

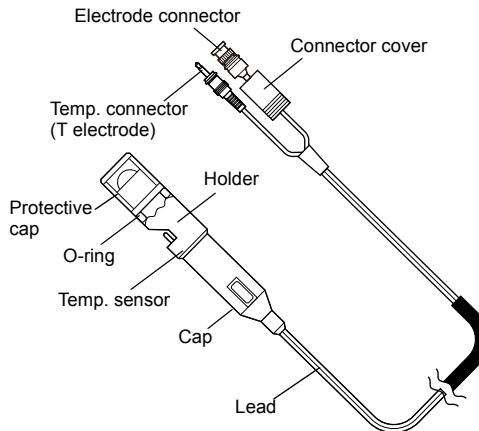
- Do not allow the electrode to be in contact with any hard surface.
- An extremely thin membrane is stretched across the DO tip and the DO responsive part. Do not allow the membrane to come in contact with any hard surface and do not exert undue force on the diaphragm.
- When attaching the DO tip to the electrode body, make sure that the O-ring is attached. Attach the DO tip securely to the electrode body.
- The electrode connector requires a high degree of insulation.  
 Do not allow the connector to be in contact with water or dirty hands.
- DO tips that are no longer usable should be disposed of as industrial waste.
- The water-resistant construction of meters can be used in construction (conforming to IP-67). When measuring, do not immerse the cap, the lead or connector in the sample.

### Packaged contents

Name	Q'ty
Holder	1 pc.
DO tip (5402)	1 pc.
Instruction Manual	1 copy

### Specifications and names of parts

#### Names of parts



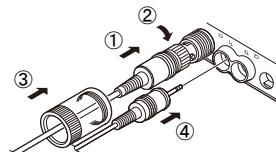
#### Specifications

Model	9552-20D, 9552-50D
Measurement principles	Membrane galvanic cell
Measurement range	0 mg/L to 20.00 mg/L
Usable temp. range	0°C to 50°C
Wetted materials	SCS-14, FEP, NBR, PC/ABS, PPS, FPM
Electrode length	165 mm (incl. cap)
Ext. diam. of wetted part	30 mm
Lead length	2 m, 5 m

### Preparations

#### Connecting to meter

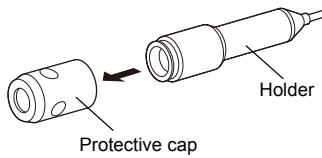
- Insert the electrode connector into the connector port sleeve on the meter, after aligning with the pin. Do not insert the connector unless it is aligned properly with the connector port.
- Press the electrode connector into the connector port on the meter, while turning the connector to the right.
- Slide the connector cover over the connector. Then, push the cover in straight until it comes in light contact with the meter case.  
 Do not turn the cover.
- Insert the temperature connector into the jack on the meter. Insert the connector firmly, until the O-ring on the connector can no longer be seen.



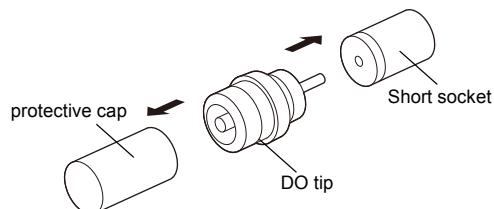


### ● Preparing electrode

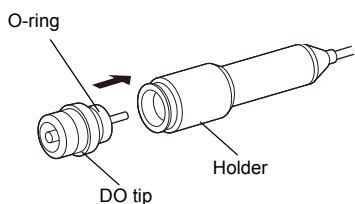
1. Remove the protective cap from the holder.



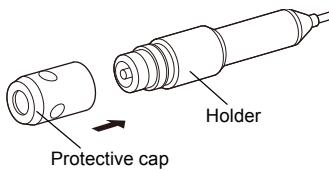
2. Remove the DO tip (5402) from the package.
3. Remove the short socket and the protective cap from the DO tip.



4. Attach the DO tip to the holder.



5. Attach the protective cap securely to the holder.



#### Note

- Do not dispose of the short socket that was removed. It is necessary when storing the electrode.
- Screw the protective cap on firmly, until it stops. When attaching the DO tip to the electrode body, make sure that the O-ring is attached to the DO tip.

### ■ Measurement

#### ● Air calibration

1. Clean the electrode with tap water and remove any drop of liquids from the membrane at the end of the DO tip, by wiping away the liquid with a soft cloth.
2. Calibrate the electrode in clean air.

#### Note

- Equalizing the temperatures of the DO electrode and the air is important for achieving a proper air calibration. If possible, allow the DO electrode to sit in the open air for a short time (approx. 20 minutes) prior to calibration.
- Avoid calibrating in places with extreme temperature fluctuations, places exposed to the wind or the rain, and places near heating equipment.
- Do not grasp the holder during or immediately before/after calibration. The body temperature affects the stability of the readings.

### ● Standard solution calibration and sample measurement

1. Clear the electrode with tap water and dry it with a soft cloth, each time prior to immersing it in the solution.
2. Measure the DO while moving the electrode up and down (at a speed of approx. 20 cm/s to 30 cm/s).



#### Note

- The electrode membrane is thin and easily torn. Place it into solution slowly.
- Do not cause any damages to the lead and the electrode when immersing the electrode in the solution.
- Do not shake the electrode holding the lead in your hand, and do not pull or tie the lead.
- When immersing the electrode in the solution, make sure that the temperature sensor is completely immersed.
- Stir the DO electrode in the solution, so that the temperature of the electrode becomes the same as that of the solution.
- Make sure the membrane has no dirt or air bubbles on it.
- Make sure the flow speed on the surface of the membrane is kept constant.

### ■ Maintenance

- After finishing measurement, wash the DO electrode well with tap water, then keep it immersed in tap water. Leave the electrode connected to the meter.
- If the electrode membrane is dirty, clean it by using a soft cloth, taking care not to scratch the membrane. Then, rinse the membrane with tap water.
- If an error occurs during the calibration, replace the DO tip.

### ■ Storage

- The electrode should remain to be connected to the meter during storage.
- To store the electrode without the meter, follow the below procedure.

1. Remove the electrode from the connector on the meter.
2. Clean the electrode well with tap water, then dry it with a soft cloth.
3. Remove the DO tip from the holder.
4. Put the short socket on the DO tip, then store it in a cool, dark location with an oxygen scavenger.

#### Note

Avoid storing the electrode in hot place or places with high humidity. Store the electrode indoors and out of direct sunlight.