

Conductivity electrode (9371-10D)

Instruction Manual

Thank you for purchasing the HORIBA electrode. Read this manual carefully before using the electrode.

Conformable standards

This equipment conforms to the following standards:



RoHS: EN IEC 63000
9. Monitoring and control instruments including industrial monitoring and control instruments



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Authorised representative in EU and UK

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Cautions during handling

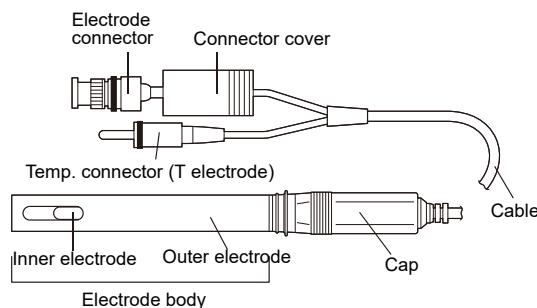
- This electrode is heavy and is composed of hard materials. Be careful not to damage peripheral devices or equipment by dropping the electrode or hitting them with the electrode.
- The electrode connector requires high insulation. Do not allow the connector to be in contact with water or dirty hands.
- Do not rub the electrode body with a brush or polish it with a polishing agent.
- Do not immerse in more than 5% hydrochloric acid. The electrode body may corrode.
- The water resistant construction of meters can be used in combination with this electrode to provide water resistant construction (conforming to IP-67). When measuring, do not immerse the connector in the sample.

Packaged contents

Name	Q'ty
Electrode	1 pc
Instruction Manual	1 copy

Specifications and names of parts

Names of parts

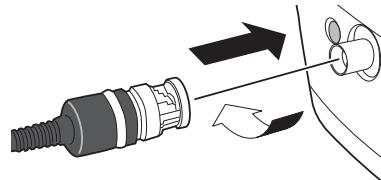


Specifications

Model	9371-10D
Cell constant	$1.000 \times 0.1 \text{ cm}^{-1} \pm 10\%$ ($1.000 \times 10 \text{ m}^{-1} \pm 10\%$)
Measurement range	$0.01 \mu\text{S}/\text{cm}$ to $500 \mu\text{S}/\text{cm}$ ($1 \mu\text{S}/\text{m}$ to $50 \text{ mS}/\text{m}$)
Usable temp. range	0°C to 100°C
Storage temp. range	0°C to 40°C Condition In the air in a dry state
Material	Electrode body: SUS316, epoxy resin Cap: PSF, epoxy resin
Electrode length	180 mm (with cap) 113.5 mm (Electrode body)
Ext. diam. of electrode body	$\varnothing 16 \text{ mm}$
Weight	190 g (with cable) 140 g (without cable)
Lead length	1 m

Connecting to meter

1. Slide the connector cover to the cable side from the electrode connector.
2. Insert the electrode connector into the connector port sleeve on the meter, after aligning with the pin.
3. Press the electrode connector into the connector port on the meter, while turning the connector to the right.



4. Slide the connector cover over the connector. Then, push the cover in straight until it comes in light contact with the meter case.
5. 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.

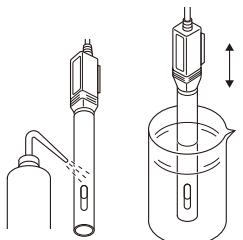


■ Preparation of measurement

After cleaning the electrode body, calibrate with a standard solution or enter the cell constant written in the label on a side of the electrode cap before use.

● Cleaning method

Either wash the electrode body using a bottle that contains pure (ion exchanged) water, or immerse the electrode in a beaker containing pure water and lift the electrode up and down a few times to rinse it, the wipe it dry using soft cloth.



● Setting cell constant

The cell constant for this electrode is displayed on a side of the electrode cap.

Enter the cell constant (shown as $0.954 \times 0.1 \text{ cm}^{-1}$ in this example) of the electrode, by following the instructions in the Operation Manual for the meter.

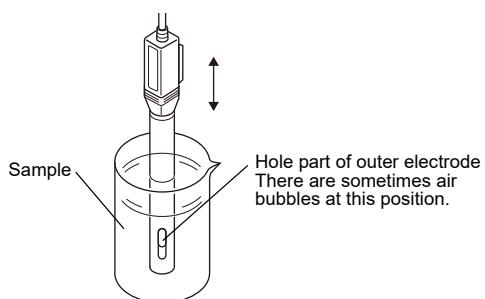
Example: **9371-10D** LOT.
 $0.954 \times 0.1 \text{ cm}^{-1}$

● Calibration

Calibrate with a standard solution which electrical conductivity is close to the measurement sample. Follow the instructions in the Operation Manual for the meter.

■ Measurement method

1. Immerse the electrode in the sample, so that the hole part of the outer electrode is completely immersed (Liquid level height is 35 mm or more.).
2. After immersing the electrode in the sample, lightly stir the electrode around to optimize the contact area with the sample and remove any air bubbles at the hole part of the outer electrode. The air bubbles cause the shift of the measured value.



Note

- When measuring pure water or other water having low conductivity ($100 \mu\text{S}/\text{cm}$ or less), the absorption of Carbon Dioxide from the air or other external interference may affect results. In such case, measurement should take place under air-tight conditions; or using a flow cell* (Code: 3200844642) is recommended.
- *Please refer to the flow cell column.
- After measuring samples with high conductivity, rinse carefully residues on the electrode body with pure water before measuring samples with low conductivity.
- For more accurate measurements, wash the electrode body with the sample.

■ Maintenance

- Wash the electrode carefully using pure water, to remove any sample still clinging to the electrode.
- If the electrode is very dirty and cannot be washed correctly using pure water, clean with soft cloth and rinse the electrode well using pure water.
- If inorganic compounds are stuck to the electrode, immerse the electrode in 5% nitric acid for appropriately 30 minutes.

■ Storage

Store in a dry state after wash the electrode carefully using pure water.

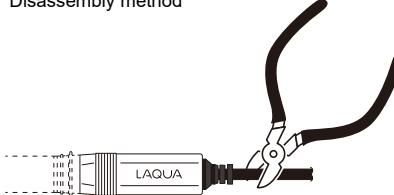
■ Disposal method

When disposing of the electrode, follow the related laws and/or regulations of your country/region. It is possible to separate the cable part and the electrode part by cutting the cable (Figure bellow). The cable part is classified as plastic*. The electrode part is mainly composed of metal, but contains hard plastic.

Name (See Specifications and names of parts)	Disposal classification
Cable part	Plastics
Electrode part (Electrode body, cap)	Metals (Containing hard plastics)
Instruction Manual, Package	Papers

*Disposal classifications depend on each country or region.

Disassembly method



■ Flow cell

Flow measurement is possible by attaching the flow cell to the electrode body. It is recommended when measuring low electrical conductivity ($100 \mu\text{S}/\text{cm}$ or less) samples.

- Insert the electrode body to the bottom of the flow cell.
- Flow the sample from the bottom of the flow cell to the side.
- Water pressure is up to 50 kPa.
- Use a soft tube with an inner diameter of 5 to 6 mm.

