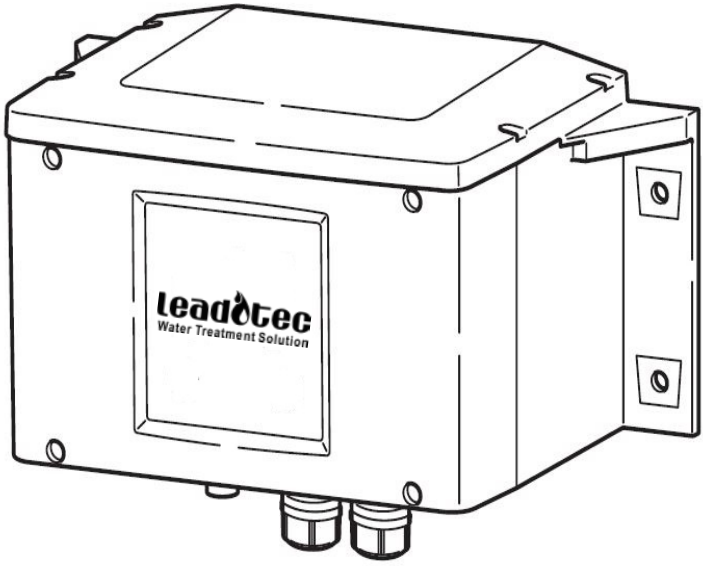
Operations Manual
P-J001 Low Turbidity Series



leadtec
Water Treatment Solution

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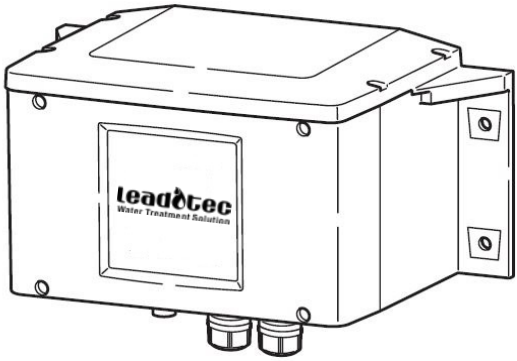
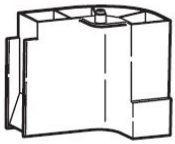
1.0 Specifications

Specifications are subjected to change without notice.

SPECIFICATIONS	DETAILS
Measuring Method	Nephelometric 90^0 scattered light
Light Source	LED
Measuring Range	0.0001 to 100.00 NTU
Accuracy	±2% of reading or 0.02 NTU, whichever is greater
Display Resolution	0.0000 – 9.9999 NTU; 0.0001 NTU 10.000 – 100.00 NTU; 0.001 NTU
Water Flow Rate	100 – 200 mL/min
Water Temperature	0 to $+40^0$C
Operating Temperature	-20 to $+50^0$C Humidity 95% RH or less
Main Materials	PPO AES SUS316L
Cable Length	3 m
Dimension	W x H x D 259 x 157 x 147 mm
Weight	2 Kg
Degree Of Protection	IP65
Power Supply Voltage	DC 24V ±10%

2.0 Contents of Packaging

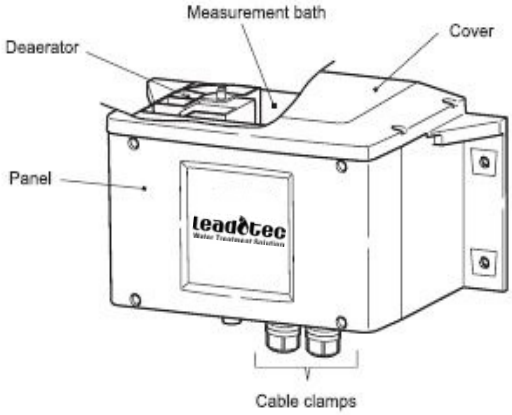


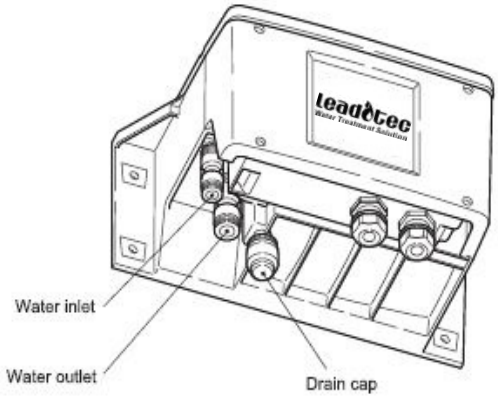


The manufacturer will not be liable and responsible for any direct, indirect, incidental, or consequential damages due to any defect or omission in the operations manual. The manufacturer reserves the right to alter the content in the operations manual as well as the products without any notification. Please contact the manufacturer to request the latest and revised editions of the operations manual.

Unpacking, setting, installing and operating of the product require comprehensive knowledge and understanding of the entire operations manual. Please take note to all danger, warning and notice signs and details. Negligence of the danger, warning and notice signs could increase the risk of serious injury to the product's operator or even inflicting damage to the products. Do not install, calibrate or operate this product in any manner other than that specified in the operations manual.

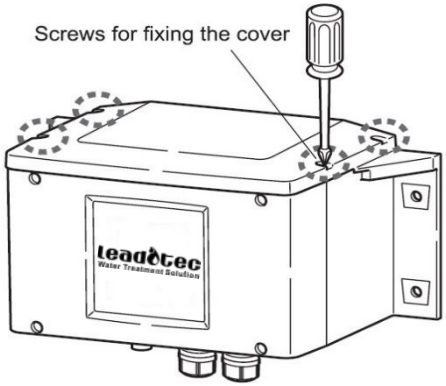
3.0 Product Overview





3.1. How to open the covers

Open/Close the cover by loosening/fastening the four cover fixing screws.



CAUTION

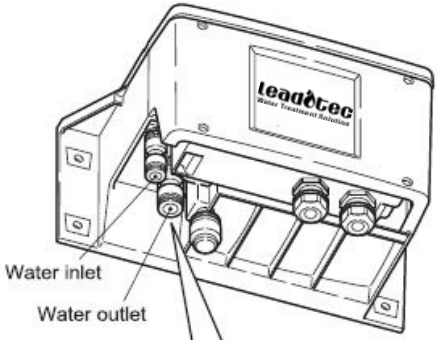
Fasten the cover fastening screws surely. If these screws are loose, turbidity might not be measured correctly due to the light entered in the measurement bath or dust mixed in the measurement water.

3.2. How to connect/disconnect the tube

CAUTION

- Do not apply strong impact or excessive force to the joint. Otherwise, it may damage the joint, as well as may cause crush, rupture, or disconnection of the tube.
- Water temperature must be between 0 and 40 °C.
- The unit must be isolated not to damage other machines or equipment in case of water leakage.
- Use insert rings if necessary. To determine whether to insert rings or not, check the specification of the tube. Selection of insert rings unmatched to the specification of the tube may cause tube coming-off and water leakage.

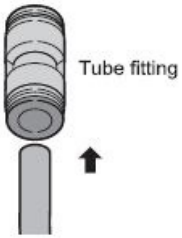
- Follow the precautions below when attaching the tube.
  - The cutting section must be right angle.
  - Outer circumference must have no damage.
  - The tube must not be shaped like an ellipse.
  - The tube must be fully inserted to the end.
  - Ensure that the tube is securely inserted and cannot come off after attached.



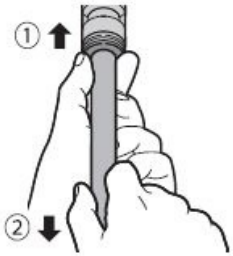
Applicable tube diameter for water inlet:
Nylon tube: 8 +/- 0.1 mm dia.
Urethane tube: 8 +/- 0.15 mm dia.

Applicable tube diameter for water outlet:
Nylon tube: 10 +/- 0.1 mm dia.
Urethane tube: 10 +/- 0.15 mm dia.

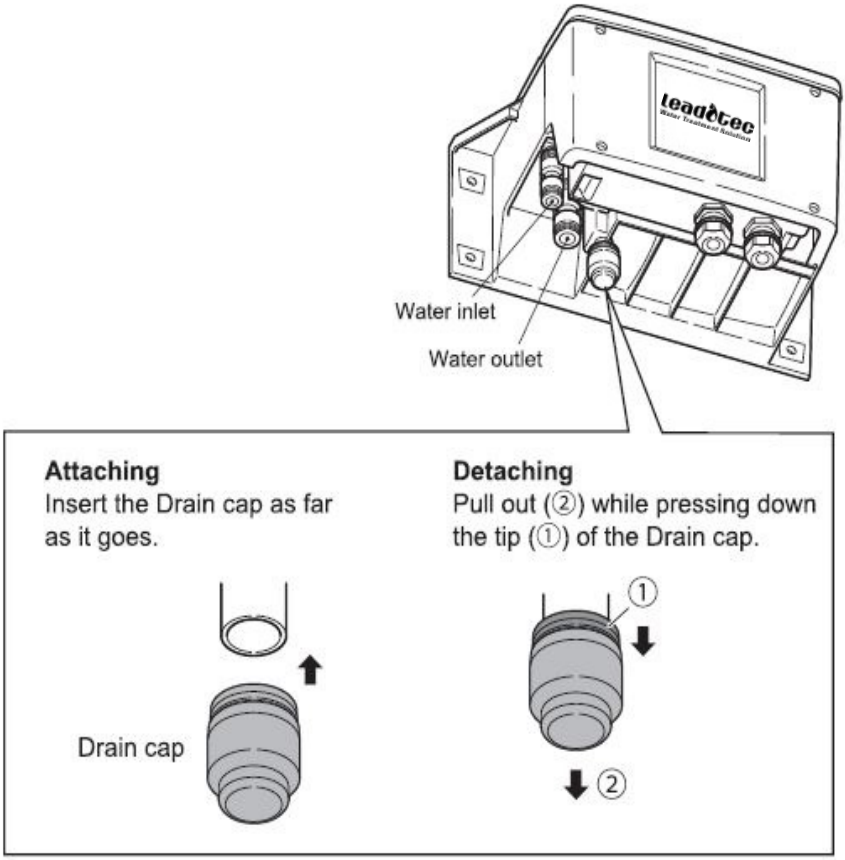
Connecting
Insert the tube to the tube fitting.



Disconnecting
Pull out the tube while push the lip of the tube fitting.

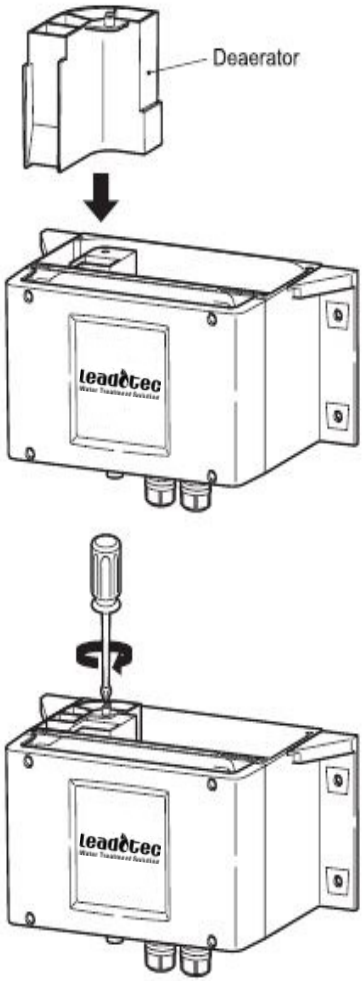


3.3. How to attach/detach the Drain cap



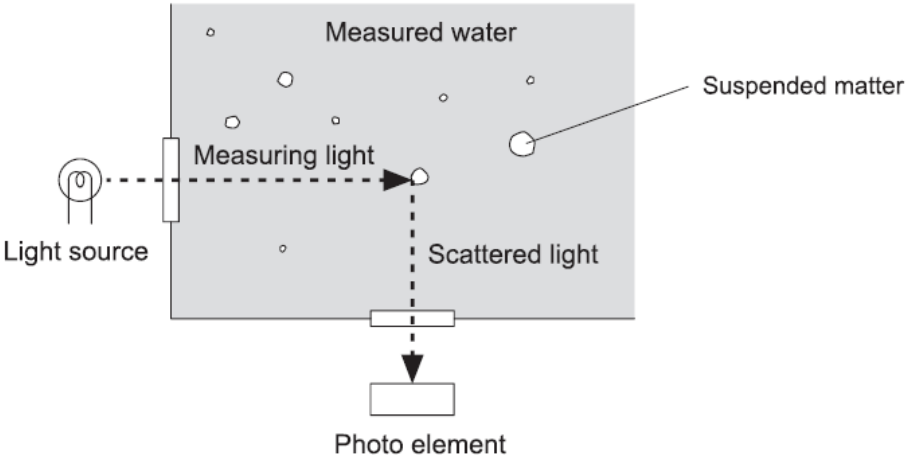
3.4. How to attach/detach the Drain cap

Attach the Deaerator and fix it by using the fixing screws.



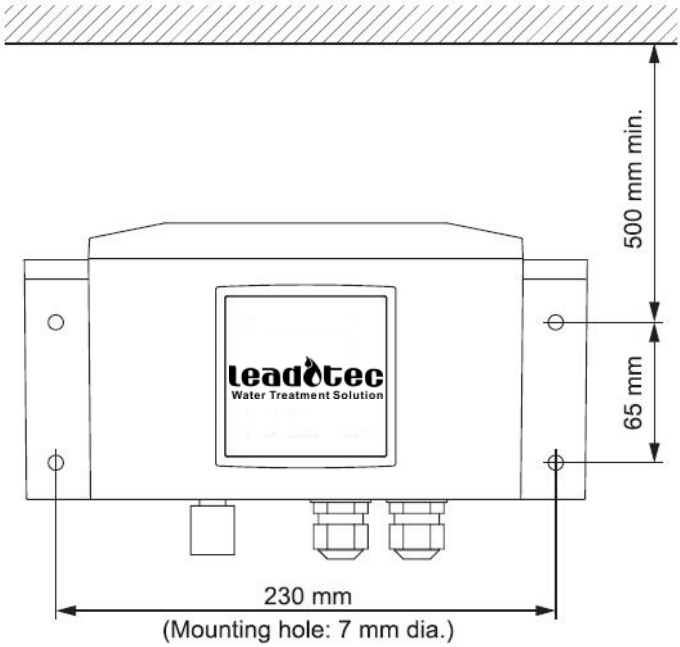
4.0 Measuring Principle

P-J001 Low Turbidity Sensor uses a method of 90 degree scattered light. In this method, a light source illuminates the surfaces of matter suspended in the water, and the light is scattered by these surfaces is detected by a photo element installed at an angle of 90 degrees from the light axis of the measured light. The turbidity is determined by the amount of the scattered light.



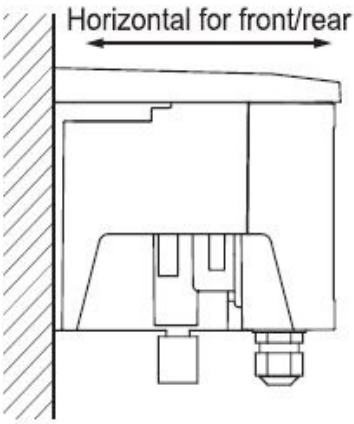
5.0 Installation

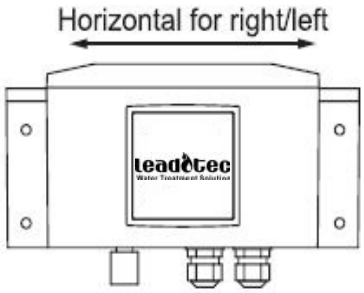
Install the P-J001 unit on the wall. For the mounting pitch, see the figure below.



CAUTION

Install the P-J001 unit horizontally for all directions (front/rear, right/left).





6.0 Operation Start

6.1. Passing Water

CAUTION

- Make sure that the unit is attached securely. High water pressure may cause water leakage, which could result in malfunction.
- Adjust the water flow rate to 100 – 200mL/min.

Start passing water through the unit.

- If leaking from the inlet passage, the outlet and the drain, check the connection of the tubes, joints and drains.
- If the tube vibrates, fix the tube.

6.2. Checking Water Level

Pass water until the water level becomes a certain.

If the water is overflowing from the measuring tank, check the measured water flow rate and the clogging of the outlet.

6.3. Attaching the Cover

Attach the cover by using screws.

CAUTION

Fasten the cover fastening screws surely. If these screws are loose, turbidity might not be measured correctly due to the light entered in the measurement bath or dust mixed in the measurement water.

6.4. Checking the Measurement Value

Check the displayed measurement value to see if the measurement water is in stable condition.

CAUTION

When passing the water for the first time, it may take time until the measurement value becomes stable. Clean the measurement tank and the deaerator as needed.

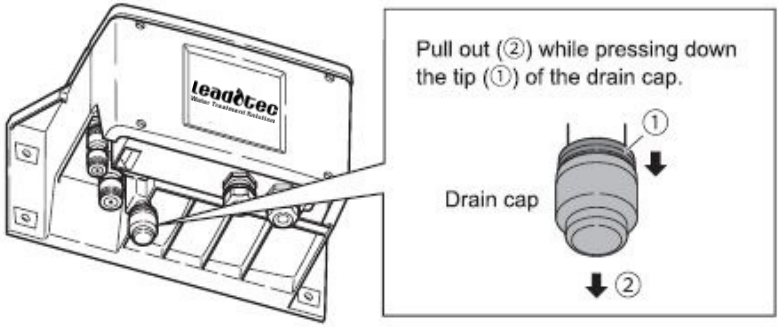
7.0 Maintenance

Cleaning is required in proper interval (the interval depends on the water quality).

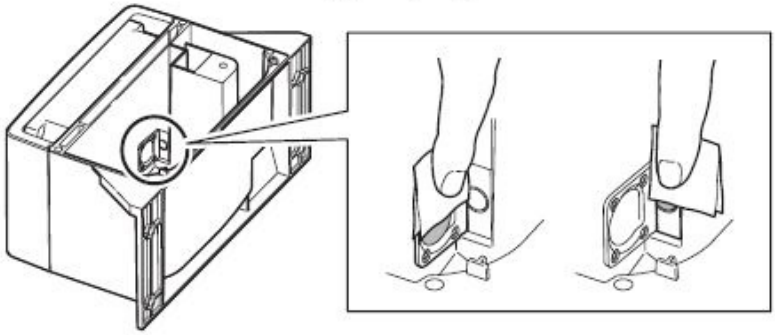
Clean the following locations:

Clean the measurement tank and Deaerator using a clean soft cloth.

If dirt accumulates at the bottom of the measurement tank, detach the drain cap and drain off the water before cleaning it.



• Clean the measurement windows (2 places) using a clean soft cloth.



• If the cover or panel is contaminated, first wipe away lightly with a clean soft cloth immersed in a diluted mild detergent solution and then wipe off the moisture by using a dry clean soft cloth.

CAUTION

- Do not use organic solvent such as benzene for cleaning this product.
- Wiping the light source window with a hard copy may cause scratches, which disables the correct measurement. Use a clean soft cloth or a cotton swab to remove dirt.

7.1. Periodic Inspection

Inspect the following items every month:

- Scratches on the cable or cable deterioration.
- Water leakage from the water inlet, water outlet, or drain.
- Check if the unit outputs a correct value when the measurement water with known concentration is used.
- If the cover or display area is contaminated, clean it by using a clean soft cloth.

Inspect the following items every 3 months:

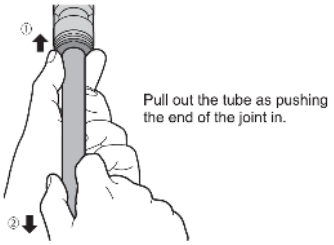
- Ensure that unit is fixed securely.
- Ensure that unit is not damaged.

7.2. Storage for a Long Time

When the unit is not used over a prolonged period, keep it as follows:

Drain off the water from the measurement tank and keep the water. Follow the procedure below.

1. Stop feeding water to this product.
2. Detach the drain cap and let the water come out of the tank and protect the water outlet.
3. Wash the drain cap and keep it in a clean plaoe.
4. Disconnect the tube at the water inlet (In order to protect the inflow port, keep the joint attached.



5. The tube does not have to be disconnected from the water outlet.
6. Open the panel and shut down the power supply switch.
7. Disconnect the power cable from the power source and attach the panel.

CAUTION

- Leaving a drain cap in place allows rain to come into the measurement tank. The drain cap must be detach and kept.
- Be careful not to damage the water inlet and outlet. Damage causes water leakage and could result in malfunction, which requires replacement of the unit.

8.0 Dimensions