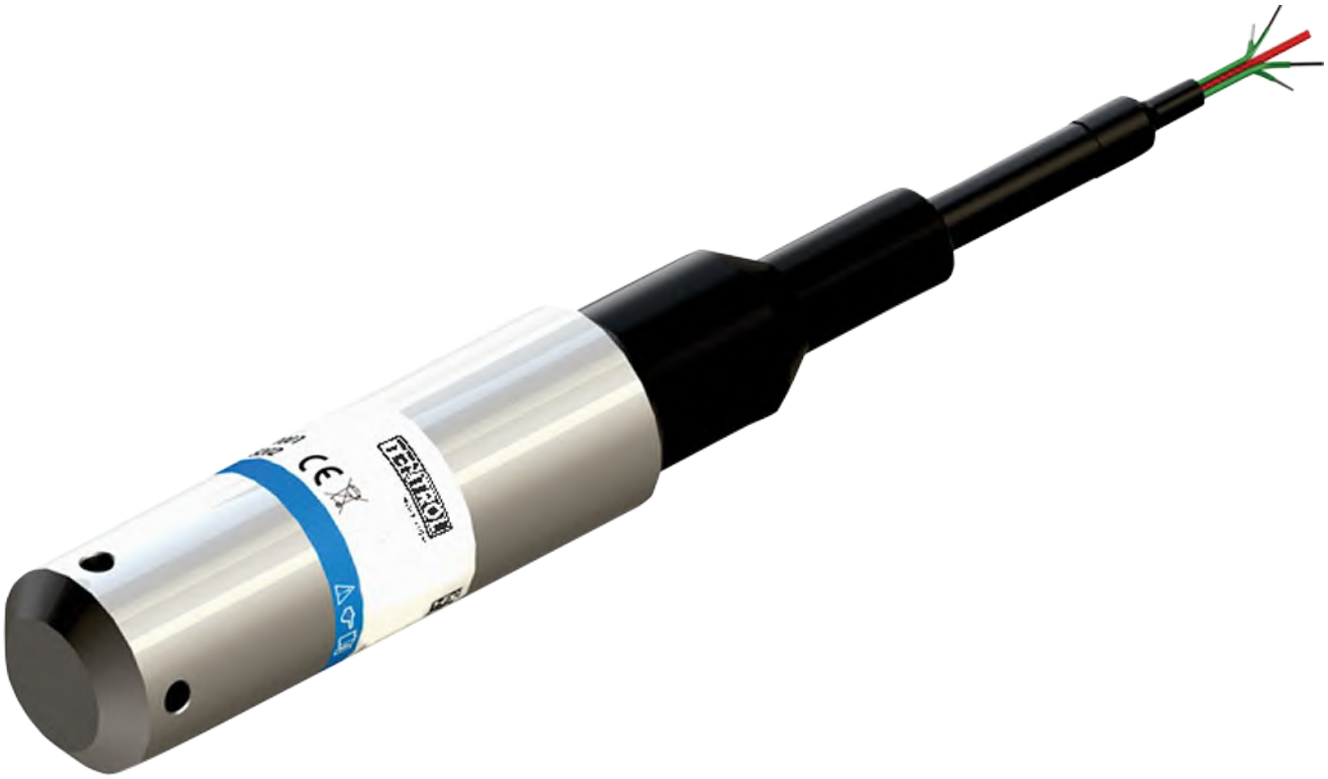
Quick Start Guide

Tek-Sub 4800E

OEM Submersible Level Transmitter



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Quick Start Guide

1. Before You Begin

This guide provides basic guidelines to assist you in quickly getting started.

Installation of the device must be carried out by trained, qualified specialists authorized to perform such work by the facility's owner operator. The specialist must have read and understood these Operating Instructions and must follow the instructions they contain.

Handle the instrument with care, both in packed and unpacked condition.

All permissible media are specified in the data sheet. In addition, it has to be ensured that this media is compatible with the wetted parts of Tek-Sub 4800E OEM Submerssible Level Transmitter.

2. Unpack

One Tek-Sub 4800E OEM Submersible Level Transmitter.

3. Dimensional Drawing

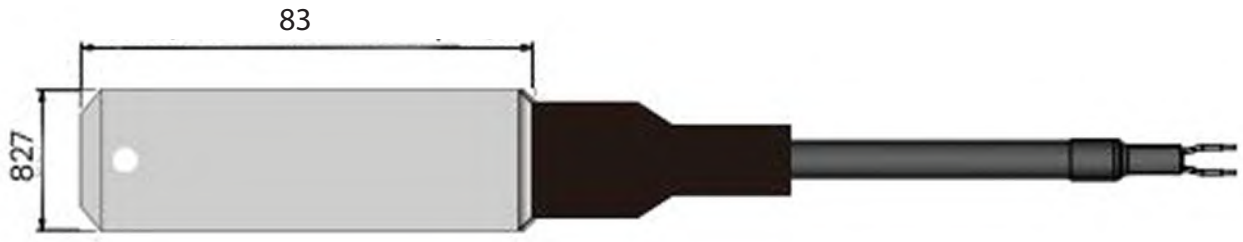
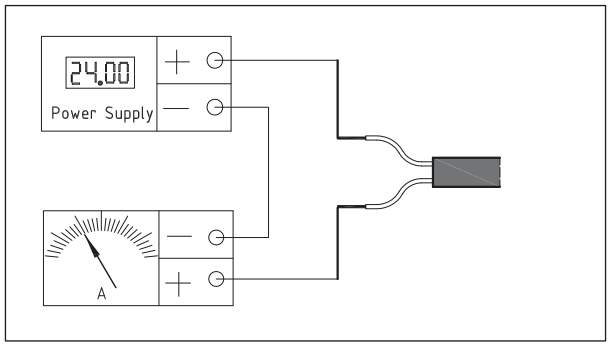


Fig. 1. Dimensional Drawing

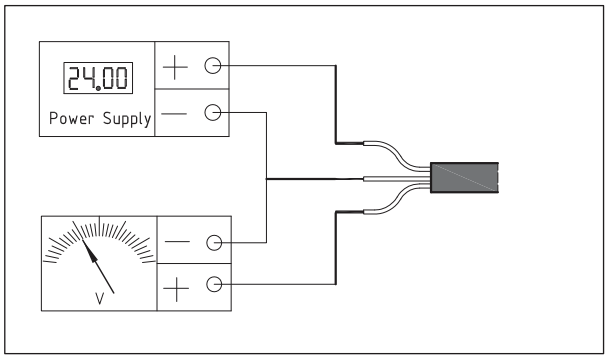
4. Power Supply Wiring

Wiring Diagram

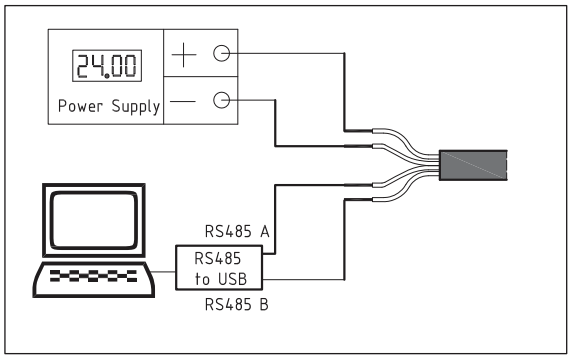
4~20mA/4~20mA+HART (2 wire)
Power+: Red
Signal+: Green



0~5voc/1~5voc/o.5~4.5V/0~10VDC3 wire)
Power+: Red
Gnd: Green
Signal+: Yellow



RS485 (4 wire)
Power+: Red
Gnd: Green
485 A: Yellow
485 B: Blue



5. Installation

This section covers instructions on installation and commissioning. Installation of the device must be carried out by trained, qualified specialist authorized to perform such work.

Installation must comply with local installation requirements and local electrical code.

Do not switch on the power supply to the transmitter while installing it. It may cause injury to the operating personnel.

Prevent mud and sand from accumulating on the sensor probe. Otherwise, the transmitter would be damaged.

Consideration would be taken before Installation

Before installation make sure that:

- The static pressure produced by the liquid at the installation site does not exceed the transmitter's FS range.
- The measuring liquid is compatible with the transmitter's construction material.
- While mounting the transmitter, avoid areas subject to electrical noise, excessive vibrations and radiant heat.

Installation Method

The Tek-Sub 4800E OEM Submersible Level Transmitter is suitable for static, as well as flowing liquid level measurement applications.

- Ensure that the measuring liquid is compatible with the transmitter's construction material.
- Insert the transmitter vertically down in the measurement container.
- Ensure that the transmitter is completely immersed in the liquid for maximum accuracy.
- Ensure the protection cap holes are not blocked due to suspended particles in the measuring liquid.

5.2.1. Installation in the Static Liquid

- Fig. 2 shows the installation method used in case of static liquid.
- While pumping the liquid, the transmitter should be uninstalled from the tank or it should be protected by a stilling well as shown in Fig. 3.

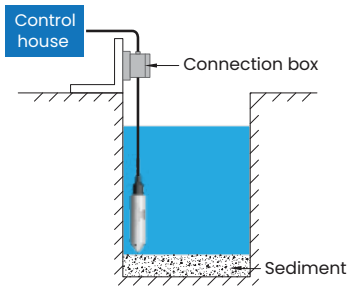


Fig. 2. Installation in static liquid

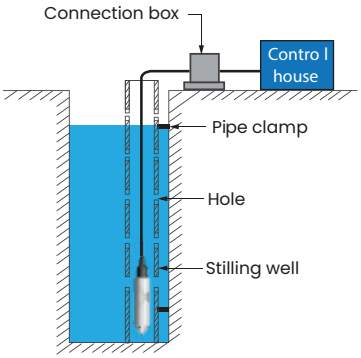


Fig. 3. Stilling well protection

5.2.2 Installation in Flowing Liquid

- **Method One: Use a stilling well in the water channel .**

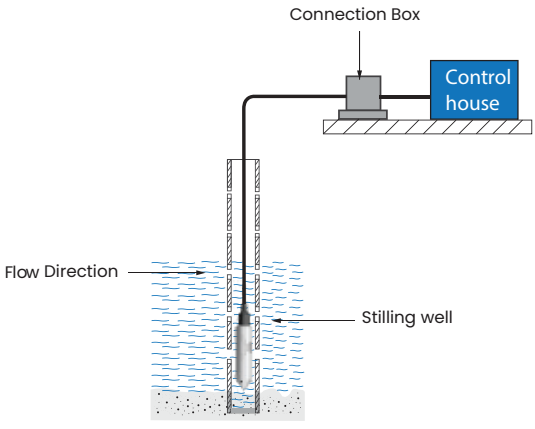


Fig. 4. Stilling well protection

Fig. 4 shows the installation method used in case of flowing liquid, for example, reservoir area or river channel. Use of a stilling well will dampen disruptions and provide a steady level for an accurate measurement.

- **Method Two: Fig. 5 shows the superficial burying is done in the sand and stone channel**

The method not only eliminates pressure of the water flow and wave influence, but also filters the sand and mud particles.

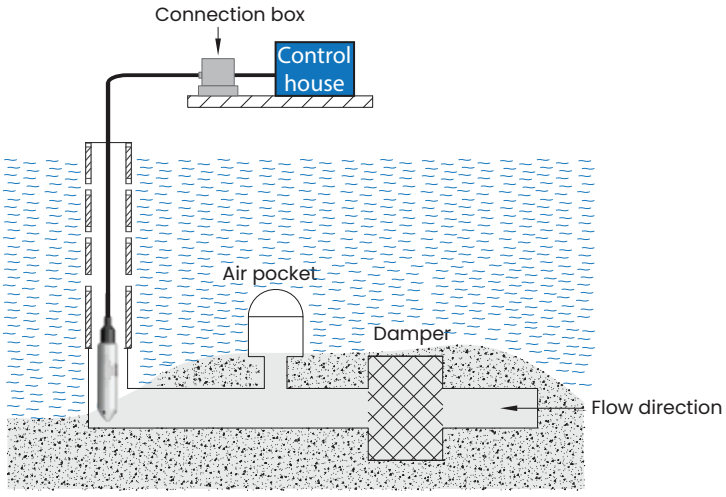


Fig. 5. Superficial burying

6. Maintenance

This section covers maintenance techniques and guidelines.

The Tek-Sub 4800E OEM Submersible Level Transmitter does not require regular maintenance; however, the following points must be observed for better operations and reliability:

- Make sure that the wire connection is reliable.
- Make sure that the cable is not damaged.
- Clean the protection cap and diaphragm space regularly.
- Do not pull the cables violently or poke the diaphragm with metal objects.

7. Error Identification

Table 1 shows the troubleshooting techniques for the most common operating problems.

Symptom	Corrective Action
No Output or Low Output	Check the polarity of the terminals. Check for intermittent shorts, open circuits and multiple grounds.
	Check that the adequate voltage is supplied to the transmitter. The transmitter requires 12 to 36 VDC
	Verify sensor positioning and consider sensor cleaning.
High Output	Check for dirty or defective terminals and interconnecting pins.
	Check that the adequate voltage is supplied to the transmitter. The transmitter requires 12 to 36 VDC.
	Check the sensor limits to ensure that input to the sensor is within the range.
Erratic Output	Check that the adequate voltage is supplied to the transmitter. The transmitter requires 12 to 36 VDC.
	Check the polarity of the terminals. Check for intermittent shorts, open circuits and multiple grounds.
	Verify sensor positioning and consider sensor cleaning.

Table 1: Troubleshooting

NOTE: If error persists, contact Tek-Trol representative immediately.

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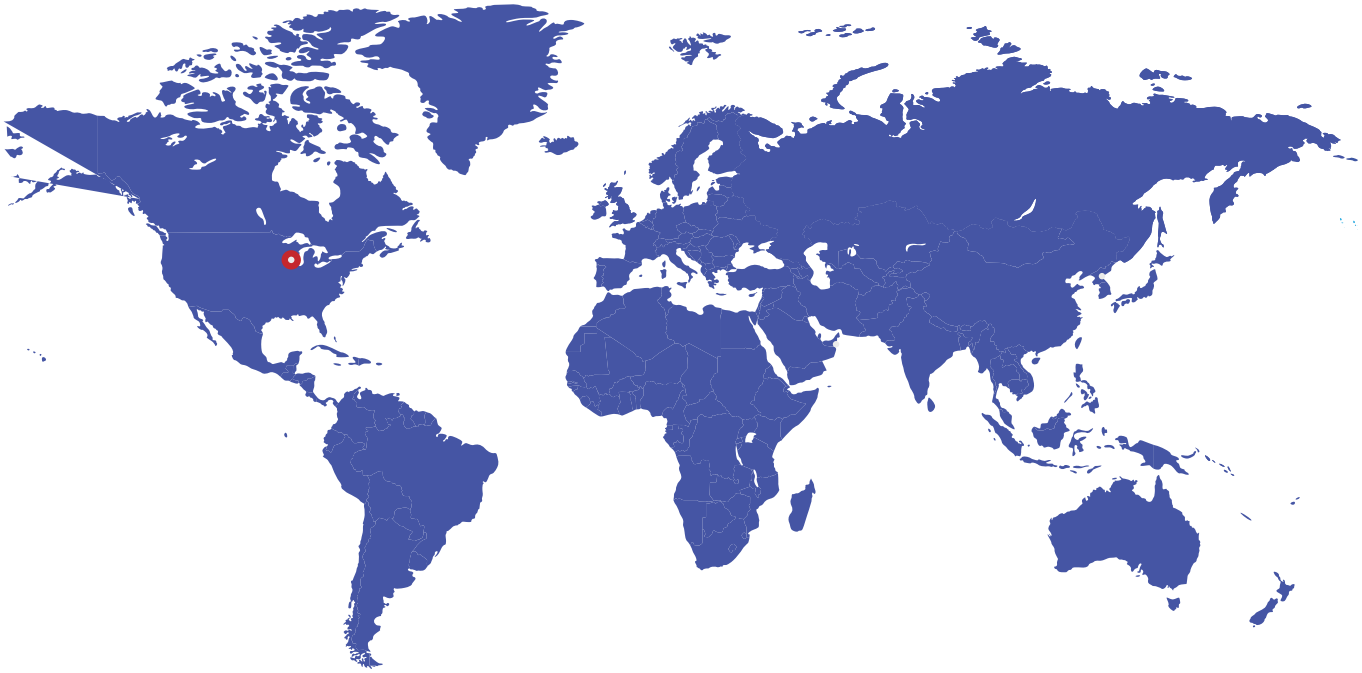

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