Gravity: Analog Electrical Conductivity Sensor / Meter(K=10)

SKU:DFR0300-H

INTRODUCTION

DFRobot Gravity: analog electrical conductivity sensor/meter(K=10) is particularly used to measure the high electrical conductivity liquid, such as seawater, concentrated brine, etc. The measurement range is up to 100ms/cm. This product is suitable for the water quality application of mariculture, for example, marine fisheries, marine aquariums.

It supports 3~5v wide voltage input, and is compatible with 5V and 3.3V main control board, such as Arduino and Raspberry Pi. The excitation source adopts AC signal, which effectively reduces the polarization effect, improves the precision and prolongs the life of the probe; The software library uses single-point calibration method, and can automatically identify standard buffer solution, so simple and convenient.

With this product, main control board (such as Arduino) and the software library, you can quickly build an electrical conductivity meter, plug and play, no solding required, which providing a set of plug-and-play conductivity measurement solution for makers.

DFRobot provides a variety of water quality sensor products, uniform size and interface, not only meet the needs of various water quality testing, but also suitable for the DIY of multi-parameter water quality tester.

Tips:
This product does not contain a temperature sensor. In order to ensure the measurement accuracy, it is strongly recommended to add a temperature sensor to measure the temperature, and achieve automatic temperature compensation. DS18B20 waterproof temperature sensor can be used.
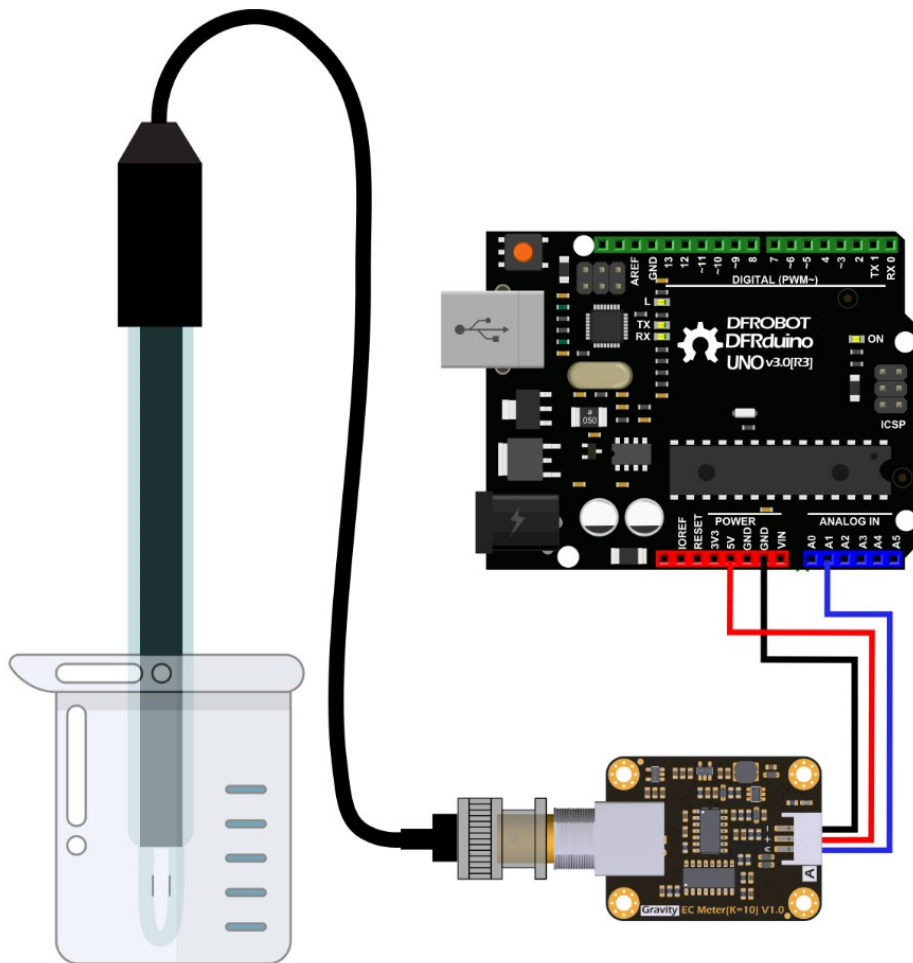
Arduino Connection Diagram

Attention:
1.The probe is a laboratory-grade probe. Do not immerse in liquid for a long time. Otherwise this will shorten the life of the probe.
2.Platinum black layer is attached to the surface of the sheet metal in the probe. It should avoid any object touching it. It can only be washed with distilled water, otherwise the platinum black layer will be damaged, resulting in inaccurate measurement.

FEATURES

- 3.0~5.0V wide voltage input，0~3.2V output voltage, which is compatible with 5V and 3.3V main board
- AC excitation source, effectively reduce polarization
- Gravity connector and BNC connector, plug and play, no welding
- Software library supports single-point calibration, and automatically identifies standard buffer solution, integrates temperature compensation algorithm
- Uniform size and connector , convenient for the design of mechanical structures
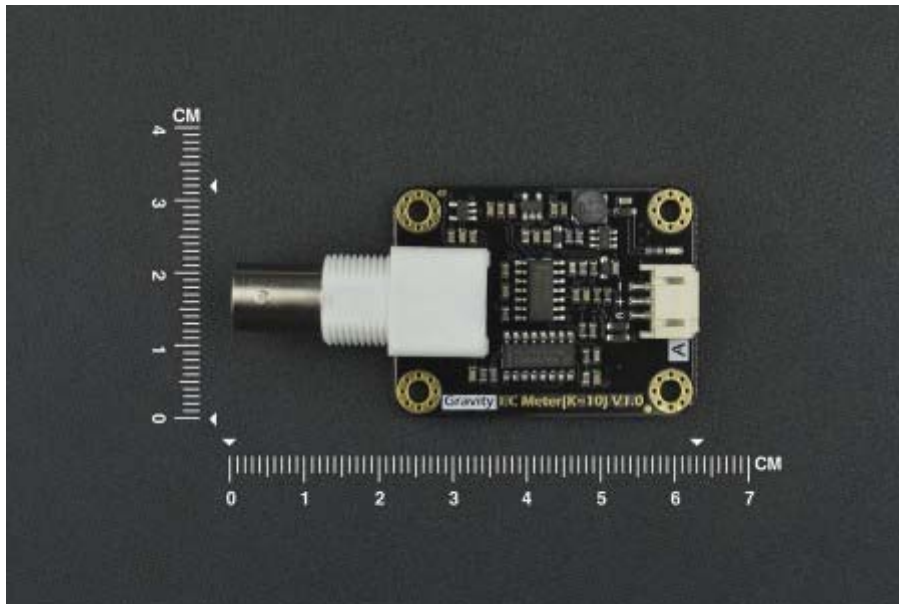
SPECIFICATION

Signal Conversion Board

- Supply Voltage: 3.0~5.0V
- Output Voltage: 0~3.2V
- Probe Connector: BNC
- Signal Connector: PH2.0-3Pin
- Measurement Accuracy: ±5% F.S.
- Board size: 42mm*32mm/1.65in*1.26in

Electrical Conductivity Probe

- Probe Type: Laboratory Grade
- Cell Constant: 10±2
- Support Detection Range: 10~100ms/cm
- Temperature Range: 0~40°C
- Probe Life: >0.5 year (Actual life is related to frequency of use and scene)
- Cable Length: 100±2cm

SHIPPING LIST

- Electrical Conductivity Probe（K=10, Laboratory Grade）   x1
- Signal Conversion Board   x1
- Standard Buffer Solution 12.88ms/cm   x4
- Gravity Analog Sensor Cable   x1
- Waterproof Gasket   x2
- Screw Cap for BNC Connector   x1
- M3 * 10 nylon pillar   x4
- M3 * 5 screw   x8