Model A1003v1

Warning. Do not make wrong connections resulting to permanent failure of the unit.

Red wire : +5v to +12v
Blue wire: GND
White wire: Output
Power: 5vdc from Arduino or 12v .
Power LED will indicate power on.
Output: 0-5vdc or 0-3.3v. User adjustable.
Range : . 0-5000 microS/cm or 0-3200ppm
Unit has error range of +/- 2% from full scale .
Sensor:Inline or submersible
Cable: 3 wire 24" cable to connect to Arduino

Calibration

Model A1003v1 designed for continuous monitoring. Calibration can be done with known conductivity solutions or if you know what water EC should be .Insert sensor into the water and give few minutes to adjust itself to the temperature. Turn calibration trim pot with small flat screw driver to desired value.

For best performance calibrate close to control point (Example. If you are trying to control range of 2000 microS/cm , Use calibration solution of 2000 microS/cm or 1410 microS/cm) .

Output

Model A1003v1 provides 0-5vdc for micro controllers or PLCs. .
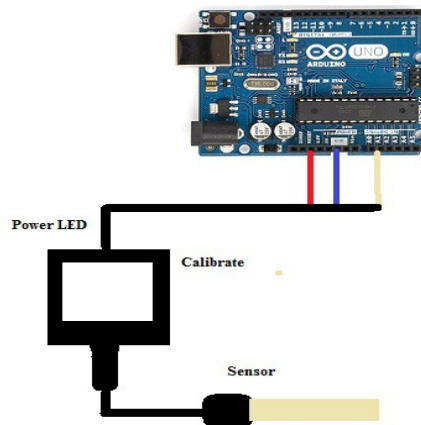Verify output readings with voltmeter. Example for 0-5000microS/cm
output voltage
EC1----1000microS/cm – 1.0v
EC2----2000microS/cm – 2.0vdc
EC3----3000microS/cm – 3.0vdc
EC4----4000microS/cm – 4.0vdc
EC5----5000microS/cm- 4.5vdc . Will read full 5000micros if power is above 5vdc.

Arduino Uno Sample Sketch

Monitor readings in EC

```
 */
// These constants won't change.  They're used to give names
// to the pins used:
const int analogInPin = A1;  // Analog input pin that the sensor output is attached to
const int analogOutPin = 9; // Analog output pin
int sensorValue = 0;        // value read from the sensor
int outputValue = 0;        // value output to the PWM (analog out)

void setup() {
  // initialize serial communications at 9600 bps:
  Serial.begin(9600);
}

void loop() {
  // read the analog in value:
  sensorValue = analogRead(analogInPin);
  // map it to the range of the analog out:
  outputValue = map(sensorValue, 0, 1023, 0, 5000);
  // change the analog out value:
  analogWrite(analogOutPin, outputValue);

  // print the results to the serial monitor:
  Serial.print("sensor = " );
  Serial.print(sensorValue);
  Serial.print("\t output = ");
  Serial.println(analogRead(1)* 5.00 / 1024, 2);

  // wait 10 milliseconds before the next loop
  // for the analog-to-digital converter to settle
  // after the last reading:
  delay(500);
}
```

To read microS, replace 5.00 with 5000.
To read ppm, replace highlighted numbers with 3200 to read ppm and calibrate to ppm.