## Temperature sensors

This project is made to be use with a two wired Pt1000, LM35 and DHT22 temperature sensors adjustment and testing.

Assembly

Displaying
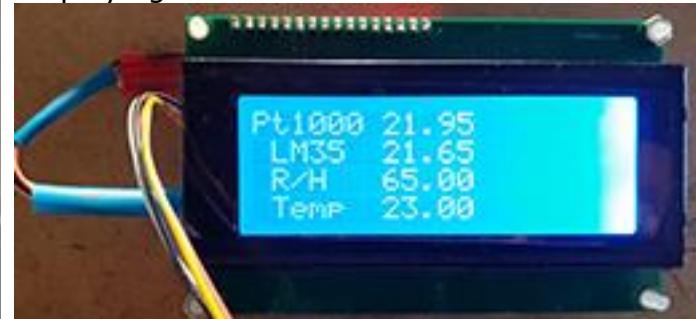
Component list
Arduino UNO R3

AD623 OpAmp_V2.brd	
20×4 LCD WITH I2C	
DHT22	
LM35	
Pt1000	
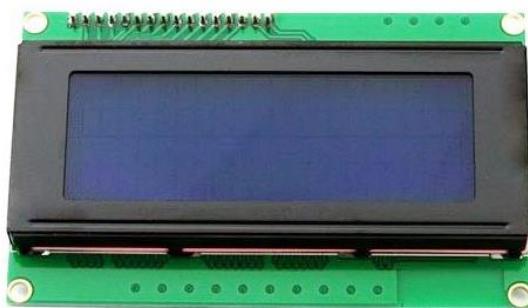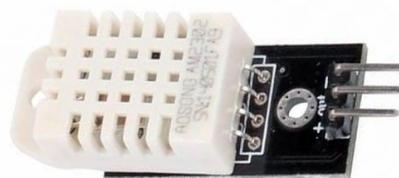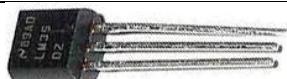
Sketch

```
// Pt1000 & AD623 & Temp/R.V. TEST
// **** declaraties ****;
#include <LiquidCrystal_I2C.h>
#include <Wire.h>
#include <DHT.h>
#include <DHT_U.h>

// LiquidCrystal_I2C  lcd(LCD_ADDR, COLS, ROWS) declare object
LiquidCrystal_I2C lcd(0x27,20,4);
#define LCD_ADDR 0x27 // Find it using an I2C Scanner program
#define SDA A4  // A4 - yellow
#define SCL A5  // A5 - white
#define COLS 20  // LCD 20 coloms
#define ROWS 4   // LCD 4 rows
```

```arduino
// DHT Temp/RH sensor
#define DHTPIN 7     // what pin we're connected to
#define DHTTYPE DHT22   // DHT 22  (AM2302)
DHT dht(DHTPIN, DHTTYPE); // Initialize DHT sensor for normal 16mhz Arduino

//Variables
float hum;  //Stores humidity value
float temp; //Stores temperature value
float Vout0; //analoge input A0, Pt1000
float Volt0; //analoge voltage input A0
float Volt1; //analoge voltage input A1
float Temp; // calculated temperature

void setup() {
Serial.begin(9600);  //  baud rate serial port (USB)
   Wire.begin();
   lcd.init();
   dht.begin();
}

void loop() {
   delay(2000);
   //Read data and store it to variables hum and temp
   hum = dht.readHumidity();
   temp= dht.readTemperature();

// Pt1000
Vout0 =((analogRead(A0)));
delay (10);
Volt0 = ((Vout0-502)/8.2);
// Temp = Volt0;
Volt1 =((analogRead(A1))/2.125);
delay (10);

// LCD()
 //lcd.clear();
   lcd.backlight();

lcd.setCursor(0,0);  // Collom/Row
lcd.print("Pt1000");
        lcd.setCursor(7,0);  // Collom/Row
        lcd.print("     ");
        lcd.setCursor(7,0);  // Collom/Row
        lcd.print(Volt0);

lcd.setCursor(1,1);  // Collom/Row
lcd.print("LM35");
        lcd.setCursor(7,1);  // Collom/Row
        lcd.print("     ");
        lcd.setCursor(7,1);  // Collom/Row
        lcd.print(Volt1);
```

```
lcd.setCursor(1,2);  // Collom/Row
lcd.print("R/H");
        lcd.setCursor(7,2);  // Collom/Row
        lcd.print("    ");
        lcd.setCursor(7,2);  // Collom/Row
        lcd.print(hum);

lcd.setCursor(1,3);  // Collom/Row
lcd.print("Temp");
        lcd.setCursor(7,3);  // Collom/Row
        lcd.print("    ");
        lcd.setCursor(7,3);  // Collom/Row
        lcd.print(temp);

delay (1980); // total 4sec. delay
}
```