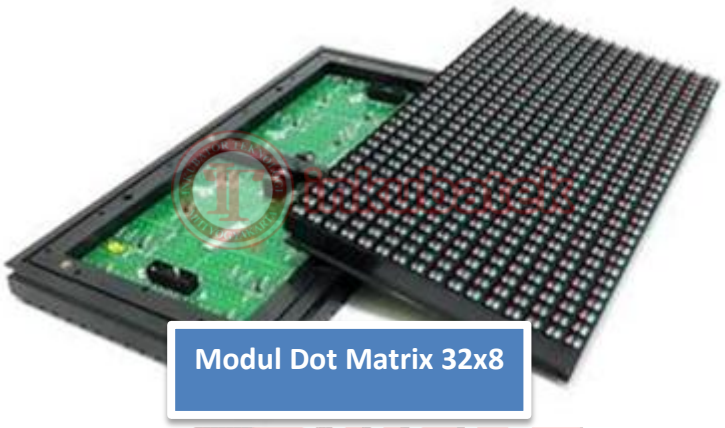
DIGITAL THERMOMETER DG PANEL MATRIX P10

Sistem Kerja Alat :

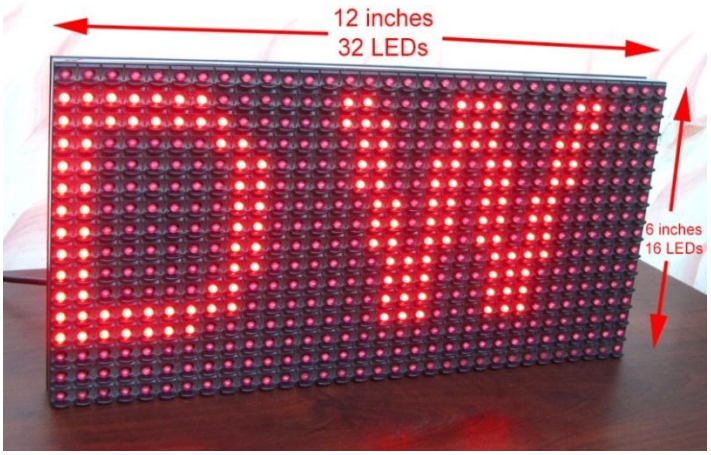
Arduino membaca data temperatur (suhu) dari sensor LM35, kemudian hasilnya ditampilkan kedalam modul panel LED Matrix P10. Tampilan bersifat statis, jika akan membuat animasi (tulisan berjalan) dapat dimodifikasi dengan proyek “Tulisan Berjalan dengan LED Matrix P10”

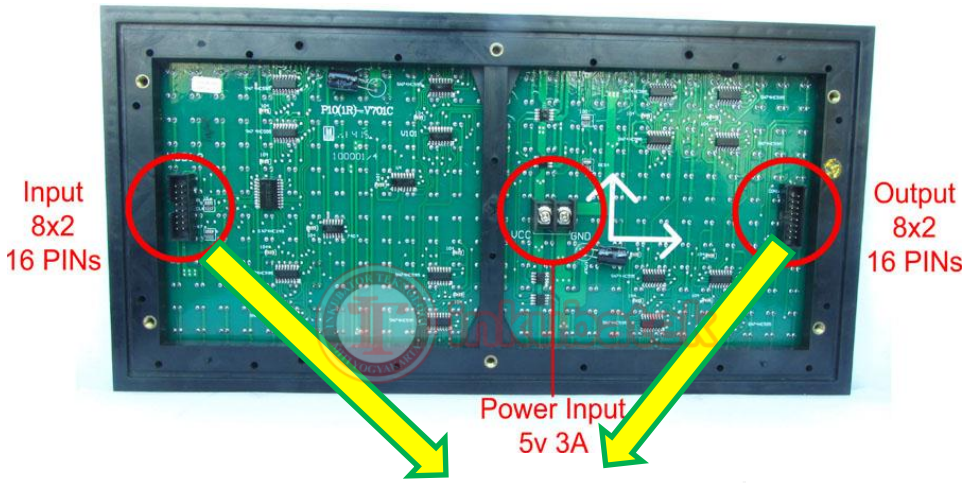
Kebutuhan Hardware :

- Arduino UNO Board
- Modul LED Dot Matrix P10.
- Modul sensor suhu LM35
- Power Supply 5V 10A untuk modul P10
- Power Supply 7-9 Vdc



Modul Dot Matrix 32x8

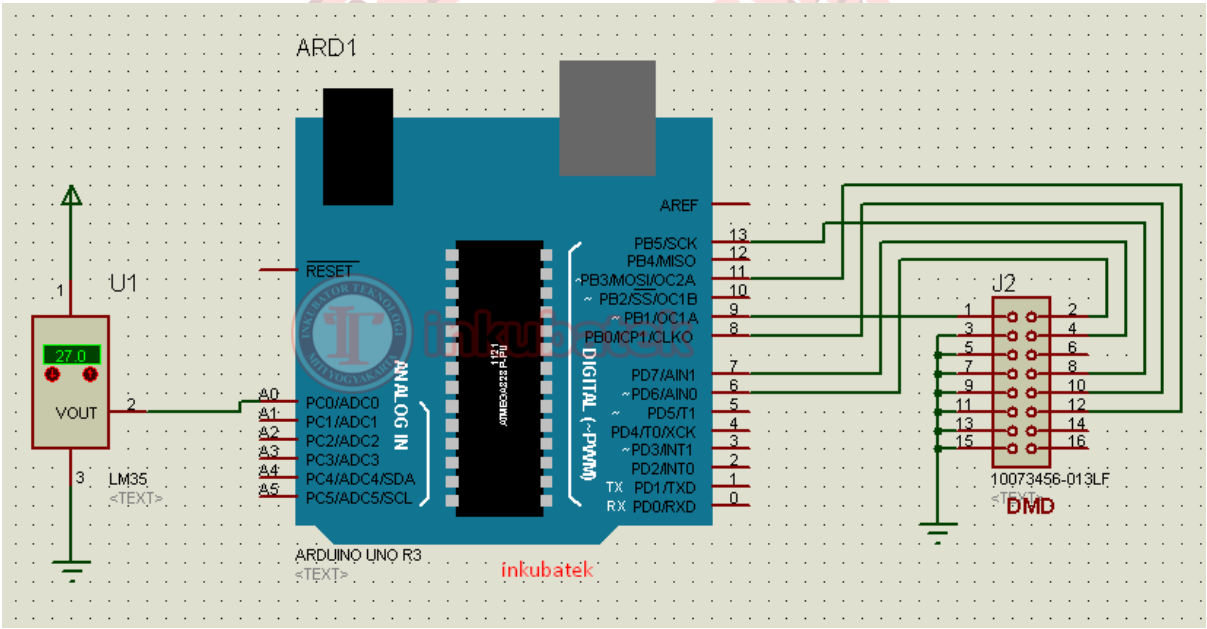




OE-D9	1	2	A-D6
GND	3	4	B-D7
	5	6	
	7	8	CLK-D13
	9	10	SCLK-D8
	11	12	DATA-D11
	13	14	
	15	16	

P.Supply 5V 10 A

Schematics



Koneksi Arduino UNO dengan modul LED P10 :

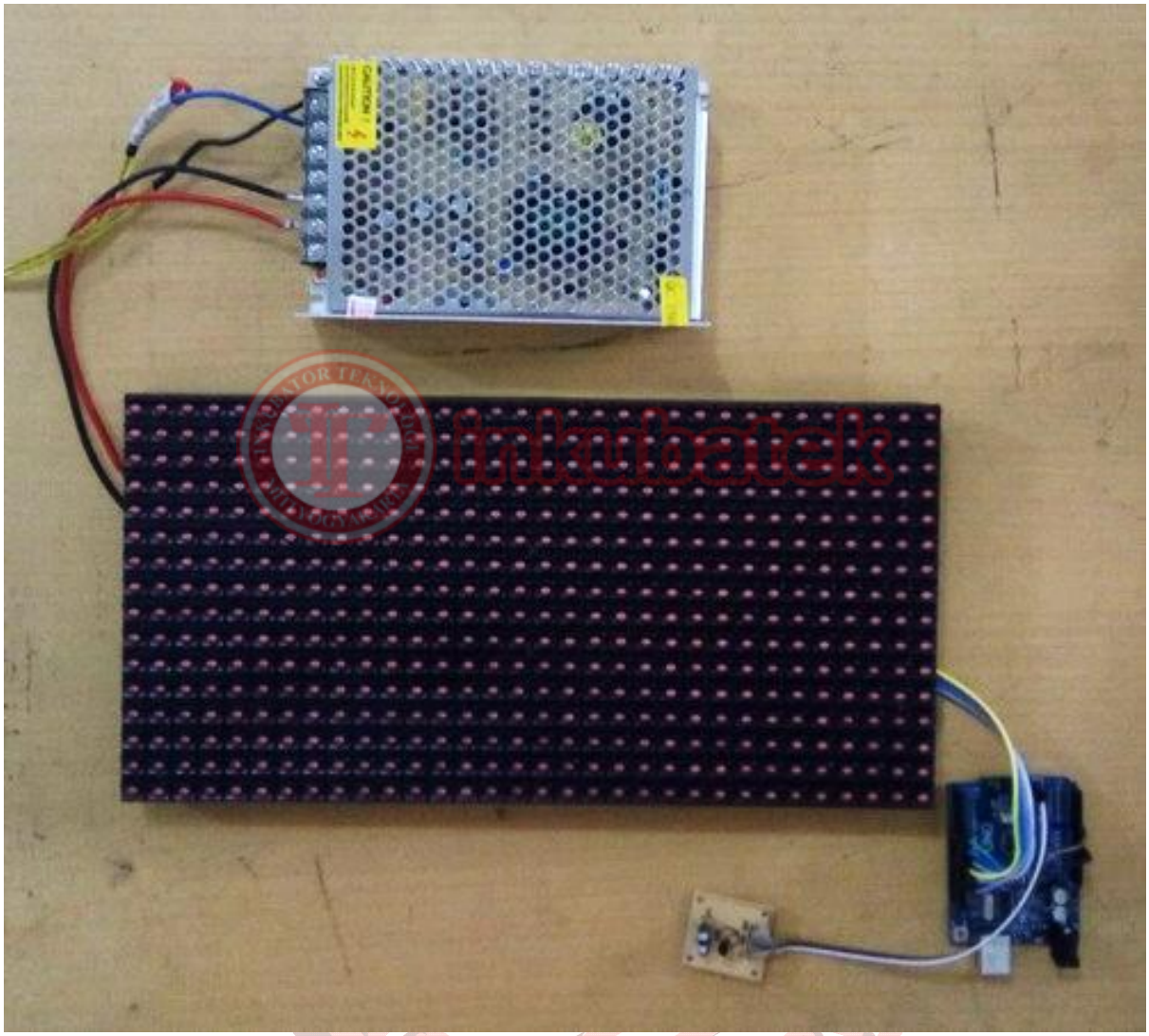
Pin ARDUINO	Pin modul LED P10 (DMD)
GND	3,5,7,9,11,13,15
6	2 (A)
7	4 (B)

8	10 (SCLK)
9	1 (PWM)
11	12 (R)
13	8 (CLK)

Koneksi Arduino UNO dengan modul sensor LM35 :

Pin ARDUINO	Sensor LM35
GND	GND
5V	VCC
A0	OUT


BRILUX
ON



Source Code/Sketch :

```
/************************************
 * Program : Project 19. Digital thermometer dengan thermocouple
 * Input   : Sensor Thermocouple
 * Output  : LCD 2x16
 * 125 Proyek Arduino Inkubatek
 * www.tokotronik.com
 * ***********************************/
#include <SPI.h>
#include <DMD.h>
```

```
#include <TimerOne.h>
#include "SystemFont5x7.h"

#define DISPLAYS_ACROSS 1
#define DISPLAYS_DOWN 1
DMD dmd(DISPLAYS_ACROSS, DISPLAYS_DOWN);
float a;
char b[5];


void ScanDMD()
{
  dmd.scanDisplayBySPI();
}


void setup(void)
{
 Timer1.initialize( 5000 );
 Timer1.attachInterrupt( ScanDMD );
 dmd.clearScreen( true );
 Serial.begin(9600);
}


void loop(void)
{
  dmd.clearScreen( true );
  a = 0;
  a = analogRead(A0);
```

```
 a = (5.0*a*100.0)/1024.0;
 Serial.println(a);
 dtostrf(a, 4, 2, b);
 dmd.selectFont(SystemFont5x7);
 dmd.drawString( 2, 3, b, 5, GRAPHICS_NORMAL );
 delay(5000);
}
```

Jalannya Alat :

Pada modul LED Dot Matrix P10 akan tampil nilai temperatur (suhu) yang dibaca oleh sensor LM35.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