

LAMPIRAN

➤ Program Pembuka Pintu

```
#include <Keypad.h>
int datasens;
#define t_o 0
#define t_c 1
const byte ROWS = 4; //four rows
const byte COLS = 3; //three columns
char keys[ROWS][COLS] = {
    {'1','2','3'},
    {'4','5','6'},
    {'7','8','9'},
    {'*','0','#'}
};
byte rowPins[ROWS] = {5, 4, 3, 2}; //connect to the row pinouts
of the keypad
byte colPins[COLS] = {8, 7, 6}; //connect to the column pinouts
of the keypad
Keypad keypad = Keypad( makeKeymap(keys), rowPins, colPins,
ROWS, COLS );
int digit;
int key1;
int key2;
int key3;
int key4;
int kode;
#define buka_ka 9
#define tutup_ka 10
#define buka_ki 11
#define tutup_ki 12
#define alarm 13
int pres;

boolean blink = false;
boolean ledPin_state;
#include <LiquidCrystal.h>

// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(A5, A4, A3, A2, A1, A0);

void setup() {
    // set up the LCD's number of columns and rows:
    lcd.begin(16, 2);

    pinMode (buka_ka,OUTPUT);
    pinMode (tutup_ka,OUTPUT);
    pinMode (buka_ki ,OUTPUT);
    pinMode (tutup_ki,OUTPUT);
    pinMode (alarm ,OUTPUT);
```

```

pinMode (t_o,INPUT);

pinMode (t_c,INPUT);

lcd.clear();

    lcd.setCursor(0,0);
    lcd.print("Silahkan Input");

    lcd.setCursor(0,1);
    lcd.print("Password");

}

int d_to,d_tc;

void loop(){

d_to=digitalRead(t_o);
d_tc=digitalRead(t_c);

if(d_to==HIGH){

    lcd.setCursor(0,1);
    lcd.print("PINTU DIBUKA  ");

digitalWrite(buka_ka,HIGH);
digitalWrite(buka_ki,HIGH);
digitalWrite(tutup_ka,LOW);
digitalWrite(tutup_ki,LOW);
delay(3000);

digitalWrite(buka_ka,LOW);
digitalWrite(buka_ki,LOW);
digitalWrite(tutup_ka,LOW);
digitalWrite(tutup_ki,LOW);
delay(5000);

}

if(d_tc==HIGH){

```

```

        lcd.setCursor(0,1);
        lcd.print("PINTU DITUTUP");

digitalWrite(buka_ka,LOW);
digitalWrite(buka_ki,LOW);
digitalWrite(tutup_ka,HIGH);
digitalWrite(tutup_ki,HIGH);
delay(3000);

digitalWrite(buka_ka,LOW);
digitalWrite(buka_ki,LOW);
digitalWrite(tutup_ka,LOW);
digitalWrite(tutup_ki,LOW);
delay(5000);

}

char key = keypad.getKey();

if (key) {

    digit=digit+1;

    lcd.setCursor(0,0);

    lcd.print(" Password      ");

    lcd.setCursor(0,1);

    lcd.print("                ");

    if(key=='0'){pres=0;}
    if(key=='1'){pres=1;}
    if(key=='2'){pres=2;}
    if(key=='3'){pres=3;}
    if(key=='4'){pres=4;}
    if(key=='5'){pres=5;}
    if(key=='6'){pres=6;}
    if(key=='7'){pres=7;}
    if(key=='8'){pres=8;}
    if(key=='9'){pres=9;}

```

```

        delay(100);

if (digit==1){
    key1=pres*1000;

    lcd.setCursor(5,1);

    lcd.print("*");
}

if (digit==2){
    key2=pres*100;

    lcd.setCursor(6,1);

    lcd.print("*");
}

if (digit==3){
    key3=pres*10;

    lcd.setCursor(7,1);

    lcd.print("*");
}

if (digit==4){
    key4=pres*1;

    lcd.setCursor(8,1);

    lcd.print("*");
    digit=5;
}

kode=key1+key2+key3+key4;
    Serial.print("digit=");
    Serial.println(digit);
    Serial.print("key1=");
    Serial.print(key1);
    Serial.print("key2=");
    Serial.print(key2);
    Serial.print("key3=");

```

```
Serial.print(key3);  
Serial.print("key4=");  
Serial.println(key4);  
Serial.println(key);  
Serial.println(kode);
```

```
if (digit==5){  
  if(kode==1004)  
  {  
  
    lcd.setCursor(0,0);  
    lcd.print("KODE BERHASIL");  
  
    lcd.setCursor(0,1);  
    lcd.print("PINTU DIBUKA");
```

```
digitalWrite(buka_ka,HIGH);  
digitalWrite(buka_ki,HIGH);  
digitalWrite(tutup_ka,LOW);  
digitalWrite(tutup_ki,LOW);  
delay(3000);
```

```
digitalWrite(buka_ka,LOW);  
digitalWrite(buka_ki,LOW);  
digitalWrite(tutup_ka,LOW);  
digitalWrite(tutup_ki,LOW);  
delay(5000);
```

```
lcd.setCursor(0,1);  
lcd.print("PINTU DITUTUP");
```

```
digitalWrite(buka_ka,LOW);  
digitalWrite(buka_ki,LOW);  
digitalWrite(tutup_ka,HIGH);  
digitalWrite(tutup_ki,HIGH);
```

```
delay(3000);
```

```
digitalWrite(buka_ka,LOW);  
digitalWrite(buka_ki,LOW);  
digitalWrite(tutup_ka,LOW);  
digitalWrite(tutup_ki,LOW);  
delay(1000);
```

```
    }
else
{

    lcd.setCursor(0,0);
    lcd.print("KODE DITOLAK");

    lcd.setCursor(0,1);
    lcd.print("ALARM AKTIV");

digitalWrite(alarm,HIGH);
delay(1000);
digitalWrite(alarm,LOW);
delay(1000);
digitalWrite(alarm,HIGH);
delay(1000);
digitalWrite(alarm,LOW);
delay(1000);
digitalWrite(alarm,HIGH);
delay(1000);
digitalWrite(alarm,LOW);

}

delay(3000);

lcd.clear();

    lcd.setCursor(0,0);
    lcd.print("Silahkan Input");






    lcd.setCursor(0,1);
    lcd.print("Password");





    digit=0;
kode=0;
}




}

}
```



- Pengukuran Ketika Pintu Terbuka







IR	TP	
R1	1	2
		
	3	
		
R2	1	2
		
	3	





		
	1	2
R3		
	3	
		
	1	2

		
R4	3	
		







- Pengukuran Ketika Pintu Tertutup

IR	TP	
	1	2
R1		
	3	







		
	1	2
R2		
	3	
		
R3	1	2
		

	3	
		
R4	1	2
		
	3	
		

- Pengukuran Pada Input dan Output Generator

TP	Input Regulator	Output Regulator
1		
2		
3		

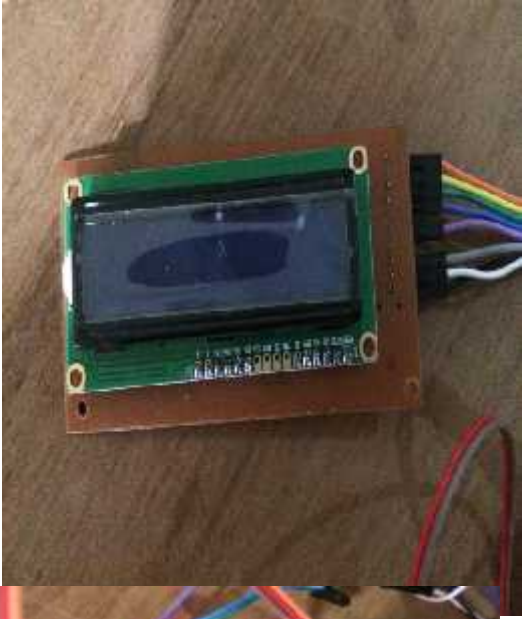
- Pengukuran Pada Input dan Output Dioda

TP	Input Dioda	Output Dioda
1		
2		
3		

- **Pada Pengukuran Vin Motor DC**

Nama Pengukuran	Titik Pengujian (Vin RFID)	Vin
Motor DC		5.00 V







- **Gambar Alat**

Alat Dalam Keadaan Pintu Tertutup



Alat Dalam Keadaan Pintu Terbuka



Alat Dalam Keadaan Standby

