

### [TP Percobaan 3 Modul 3](#)

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[\[KEMBALI KE MENU SEBELUMNYA\]](https://siska211021.blogspot.com/2024/04/modul-3.html)

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<b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><a name="home" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; transition: all 0.3s ease 0s;">DAFTAR ISI</a></b><br style="box-sizing: border-box;" /></span><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#F" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">1. Foto Hardware dan Diagram Blok</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#P" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">2. Prosedur Percobaan</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#R" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">3. Rangkaian Simulasi dan Prinsip Kerja</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#FL" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">4. Flowchart dan Listing Program</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#K" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">5. Kondisi</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#V" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;"></span></a></div></div>





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#444444; font-size: 15px; text-align: center; "><br /></div><div style="border: 0px; box-sizing:
border-box; margin: 0px; padding: 0px; "><span style="border: 0px; box-sizing: border-box;
margin: 0px; padding: 0px; "><div style="border: 0px; box-sizing: border-box; color: #444444;
font-size: 15px; margin: 0px; padding: 0px; ">Listing Program:</div><div style="border: 0px;
box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; "><br
style="box-sizing: border-box; " /></div><div style="border: 0px; box-sizing: border-box; color:
#444444; font-size: 15px; margin: 0px; padding: 0px; "><b>Master</b></div><div
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; "><div
style="background-color: #1f272a; border: 0px; box-sizing: border-box; line-height: 19px;
margin: 0px; padding: 0px; "><div style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; "><span style="color: #0ca1a6; "><span style="font-size: 14px; white-space:
pre; ">#include &lt;Keypad.h&gt;

```

```

const byte ROWS = 4; // Jumlah baris pada keypad
const byte COLS = 4; // Jumlah kolom pada keypad

```

```

// Matriks keypad
char keys[ROWS][COLS] = {
  {'7','8','9','A'},
  {'4','5','6','B'},
  {'1','2','3','C'},
  {'*','0','#','D'}
};

```

```

// Pin yang terhubung ke baris keypad
byte rowPins[ROWS] = {7, 8, 9, 10};

```

```

// Pin yang terhubung ke kolom keypad
byte colPins[COLS] = {3, 4, 5, 6};

```

```

// Membuat objek keypad
Keypad keypad = Keypad(makeKeymap(keys), rowPins, colPins, ROWS, COLS);

```

```

void setup() {
  Serial.begin(9600);
  Wire.begin(); // Mulai komunikasi I2C sebagai master
}

```

```

void loop() {
  char key = keypad.getKey(); // Membaca tombol yang ditekan pada keypad

  if (key != NO_KEY) { // Jika tombol ditekan
    Serial.println(key); // Tampilkan tombol yang ditekan di serial monitor
    Wire.beginTransmission(9); // Mulai transmisi ke slave dengan alamat 9
    Wire.write(key); // Kirim tombol yang ditekan ke slave
    Wire.endTransmission(); // Akhiri transmisi
    delay(100); // Tunda sebentar untuk menghindari bouncing pada tombol
  }
}

```



```

}
</span></span></div></div></div></span></div><p style="border: 0px; box-sizing:
border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align:
justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align:
left;"><span style="border: 0px; box-sizing: border-box; font-size: medium; margin: 0px;
padding: 0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding:
0px;"><a name="K" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px;
padding: 0px; transition: all 0.3s ease 0s;"><br /></a></span></span></b></p><div
style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px;
padding: 0px;"><b>Slave</b></div><p style="border: 0px; box-sizing: border-box; color:
#444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: justify;"><b
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><span
style="border: 0px; box-sizing: border-box; font-size: medium; margin: 0px; padding:
0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><a
name="K" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding:
0px; transition: all 0.3s ease 0s;"></a></span></span></b></p><div style="border: 0px;
box-sizing: border-box; margin: 0px; padding: 0px;"><div style="background-color: #1f272a;
border: 0px; box-sizing: border-box; line-height: 19px; margin: 0px; padding: 0px;"><div
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><span style="color:
#0ca1a6;"><span style="font-size: 14px; white-space: pre;">#include &lt;Wire.h&gt;
#include &lt;LiquidCrystal.h&gt;

```

LiquidCrystal lcd(12, 11, 5, 4, 3, 2); // Inialisasi objek LCD dengan pin yang terhubung

String message = ""; // Pesan yang akan ditampilkan di LCD

```

void setup() {
  lcd.begin(16, 2); // Inialisasi LCD dengan ukuran 16x2
  Wire.begin(9); // Mulai komunikasi I2C sebagai slave dengan alamat 9
  Wire.onReceive(receiveEvent); // Panggil fungsi receiveEvent() saat menerima data dari
  master
}

void loop() {
  // Tidak ada yang perlu dilakukan di loop()
}

void receiveEvent(int byteCount) {
  while (Wire.available()) {
    char receivedChar = Wire.read(); // Baca karakter yang diterima dari master
    message += receivedChar; // Tambahkan karakter ke pesan
    if (message.length() > 16) { // Jika panjang pesan lebih dari 16 karakter
      message = message.substring(1); // Potong karakter pertama dari pesan
    }
    displayMessage(); // Tampilkan pesan pada LCD
  }
}

```



margin: 0px; padding: 0px;"><p style="border: 0px; box-sizing: border-box; margin: 0px 0px 1px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><span style="border: 0px; box-sizing: border-box; font-size: medium; margin: 0px; padding: 0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><a name="L" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; transition: all 0.3s ease 0s;">7. Link Download&nbsp;</a></span><a href="#home" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;">[Kembali]</a></span></b></p></span></span></span></div></b></div></span></span>></span></div></span><br /></span></div></span></span></div><p style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: left;"><span style="font-family: verdana;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;">□&nbsp;</b><span style="border: 0px; box-sizing: border-box; font-weight: 400; margin: 0px; padding: 0px;">HTML→&nbsp;</span><a href="https://docs.google.com/document/d/1MuhitrFXqjshMa2z6vtsltF2IJCK7IDi102Se9OHVE/edit?usp=drive\_link" style="border: 0px; box-sizing: border-box; color: #597e00; font-weight: 400; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;">klik disini</a></b></span></p><p style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: left;"><span style="font-family: verdana;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">□ </b><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">Rangkaian</span><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">&nbsp;</b><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">→&nbsp;</span><a href="https://drive.google.com/file/d/1u\_GyP1bh9gvxyf0GsoXQh1V1TYIefnb1/view?usp=sharing" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-align: justify; text-decoration-line: none; transition: all 0.3s ease 0s;">klik disini</a></span></p><p style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: left;"><span style="font-family: verdana;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">□&nbsp;</b><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">Video Percobaan</span><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">→&nbsp;</span><a href="https://drive.google.com/file/d/1-fU6zSbgdPU87Y1abSYiN\_g6e1XmXagr/view?usp=sharing" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-align: justify; text-decoration-line: none; transition: all 0.3s ease 0s;">klik disini</a></span></p><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: left;"><p style="border: 0px; box-sizing: border-box; font-family: Arial, sans-serif; font-feature-settings: inherit; font-kerning: inherit; font-optical-sizing: inherit; font-stretch: inherit; font-variant-alternates: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; font-variant-position: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 15px; padding: 0px; vertical-align: baseline;"><b style="border: 0px; box-sizing: border-box; font-family: verdana; font-feature-settings: inherit; font-kerning: inherit; font-optical-sizing: inherit;

font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit;  
font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; text-align:  
justify; vertical-align: baseline;">&nbsp;

**Datasheet  
Arduino**

**[&nbsp;](https://drive.google.com/file/d/1dwqLaFOMvxjOz7sPOkhjircDvDSvVUn5/view?usp=drive_link)**

**klik  
disini**

**Datasheet  
LCD**

**[&nbsp;](https://drive.google.com/file/d/1GTFGrVIKEqT67PnE2HNNEOJGHLByEMCA/view?usp=drive_link)**

**klik  
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**Datasheet**

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**Datasheet Keypad**

[&nbsp;](https://drive.google.com/uc?export=download&id=13zerywRorM6kRT4ueXiQe4fc6UP2FB-r)

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**Datasheet Potensiometer**

[&nbsp;](https://drive.google.com/file/d/1_ni7b7u5w4l8JzZm51NFVkUC1bJ2IPLD/view?usp=sharing)

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