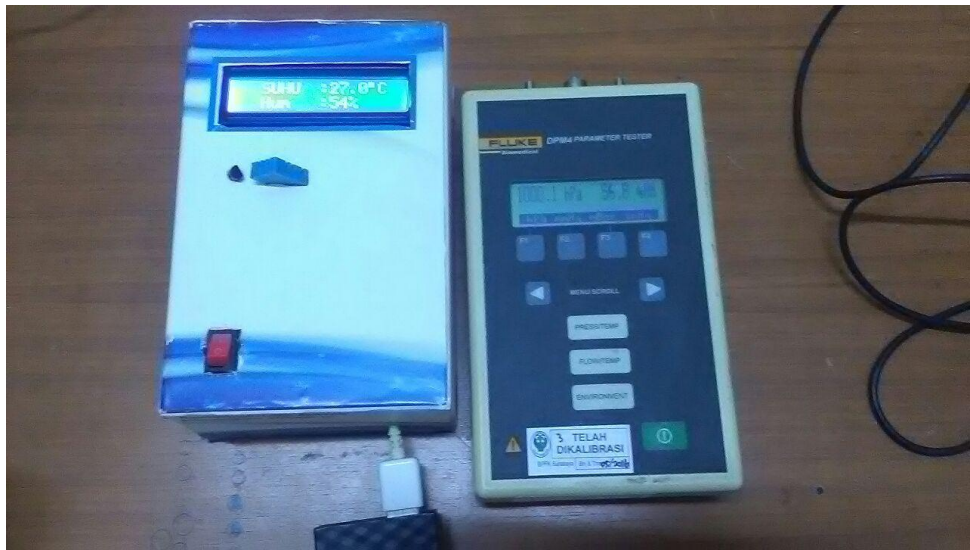
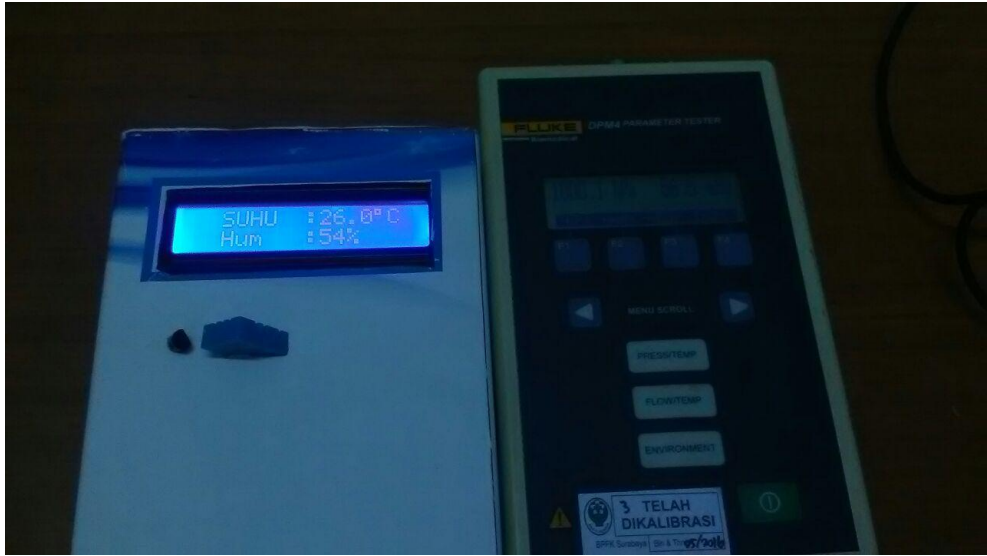
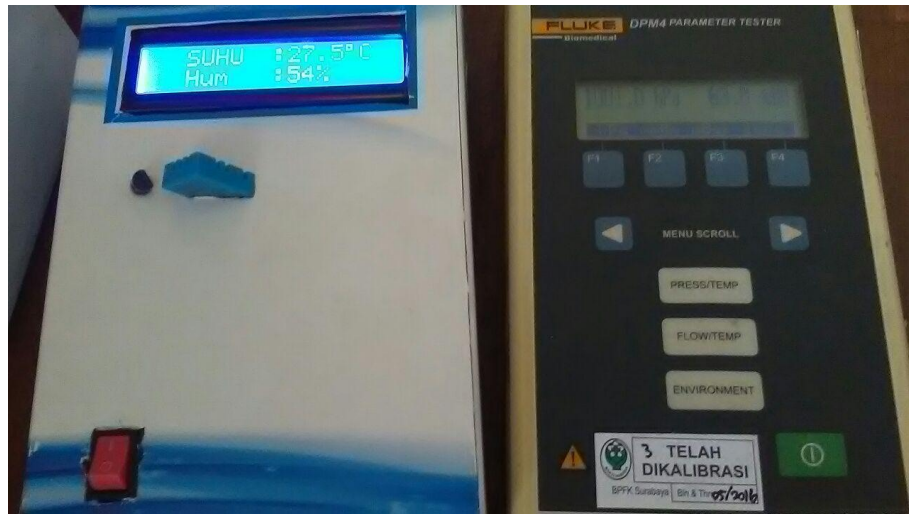


1. Proses pengkalibrasian kelembaban menggunakan DPM4.







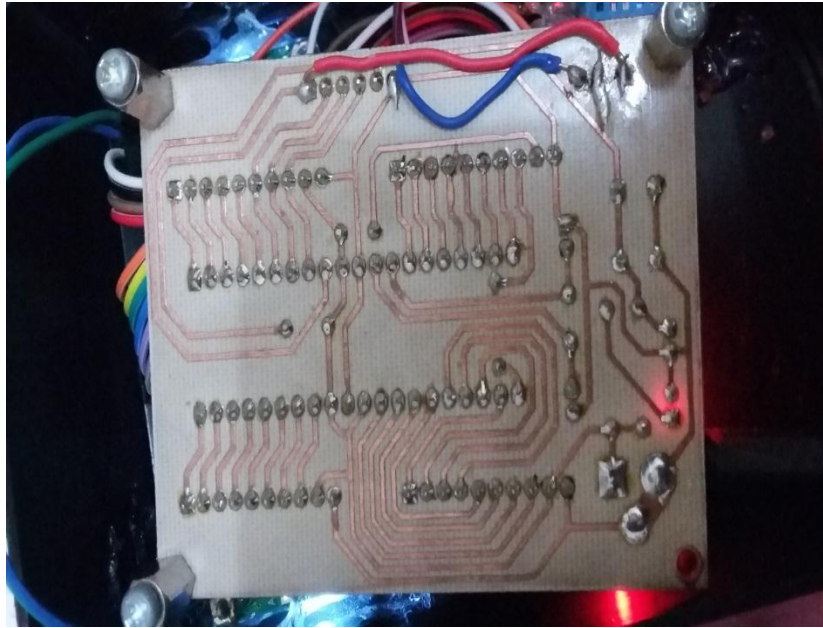
2. Proses pengkalibrasian suhu menggunakan DPM4.







3. Gambar *lay out* minimum sistem.



2) Perhitungan rata-rata kelembaban pada beberapa ruangan menggunakan modul tugas akhir *thermohygrometer*.

$$\text{a. } \bar{X} = \frac{58+58+58+58+58+58+58+58+58+58+54+54+54+54+54+54+54+54+54+54+54+54}{20}$$

$$= 54.3\%$$

$$\text{b. } \bar{X} = \frac{45+46+45+46+46+46+45+46+46+46+46+46}{12}$$

$$= 45,91\%$$

$$\text{c. } \bar{X} = \frac{48+46+46+48+46+46+54+48+48+46+46+48}{12}$$

$$= 47.5\%$$

2. Simpangan

$$\text{Simpangan} = Y - \bar{X}$$

Dimana :

Y = suhu setting

\bar{X} = rerata

1) Perhitungan simpangan suhu pada beberapa ruangan menggunakan modul tugas akhir *thermohygrometer*.

a. Rata-rata Alat Ukur = 27.615

$$\begin{aligned}\text{Simpangan} &= 27.615 - 27.725 \\ &= -0.11 \text{ }^\circ\text{C}\end{aligned}$$

b. Rata-rata Alat Ukur = 27.26

$$\begin{aligned}\text{Simpangan} &= 27.26 - 27.47 \\ &= -0.21 \text{ }^\circ\text{C}\end{aligned}$$

c. Rata-rata Alat Ukur = 28.20

$$\begin{aligned}\text{Simpangan} &= 28.05 - 28.20 \\ &= -0.15 \text{ }^\circ\text{C}\end{aligned}$$

2) Perhitungan simpangan kelembaban pada beberapa ruangan menggunakan modul tugas akhir *thermo hygrometer*.

a. Rata-rata Alat Ukur = 60.574

$$\begin{aligned}\text{Simpangan} &= 60.574 - 54.3 \\ &= 6.274 \text{ }\%\end{aligned}$$

b. Rata-rata Alat Ukur = 45.68

$$\begin{aligned}\text{Simpangan} &= 45.68 - 45.91 \\ &= 0.088 \text{ }\%\end{aligned}$$

c. Rata-rata Alat Ukur = 42.18

$$\begin{aligned}\text{Simpangan} &= 42.18 - 47.5 \\ &= -5.32 \text{ }\%\end{aligned}$$

3. Error (%)

$$\text{Error\%} = \left(\frac{\text{DataSetting} - \text{Rerata}}{\text{Datasetting}} \right) \times 100\%$$

$$\text{Error\%} = \frac{\text{SIMPANGAN}}{\text{DATA SETTING}} \times 100\%$$

1) Perhitungan *error* suhu pada beberapa ruangan

menggunakan modul tugas akhir *thermohygrometer*.

a. Rata – Rata Alat Ukur = 27.615

Simpangan = - 0.11 °C

$$\text{Error} = \frac{0.11}{27.615} \times 100\%$$

$$= 0.4035 \%$$

b. Rata – Rata Alat Ukur = 27.26

Simpangan = -0.21

$$\text{Error} = \frac{0.21}{27.26} \times 100\%$$

$$= 0.7703 \%$$

c. Rata – Rata Alat Ukur = 28.20

Simpangan = -0.15

$$\text{Error} = \frac{0.15}{28.20} \times 100\%$$

$$= 0.5319 \%$$

2) Perhitungan *error* kelembaban pada beberapa ruangan

menggunakan modul tugas akhir *thermohygrometer*.

a. Rata – Rata Alat Ukur = 60.572

Simpangan= 6.274

$$\begin{aligned} \text{Error} &= \frac{6.274}{60.572} \times 100\% \\ &= 10.35\% \end{aligned}$$

b. Rata – Rata Alat Ukur = 45,68

Simpangan= 0.088

$$\begin{aligned} \text{Error} &= \frac{0.088}{45,68} \times 100\% \\ &= 0,1926\% \end{aligned}$$

c. Rata – Rata Alat Ukur = 42.18

Simpangan= -5.32

$$\begin{aligned} \text{Error} &= \frac{5.32}{42.18} \times 100\% \\ &= 12.61\% \end{aligned}$$