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LAMPIRAN

Lampiran 1 Data Hasil Pengukuran

Lampiran 1.1 Data Kalibrasi *Pulse Heart Sensor*

Kalibrasi <i>Pulse Heart Sensor</i>					
No	Waktu (s)	<i>Pulse Heart Sensor</i> (bpm)	Oksimeter (bpm)	Koreksi (bpm)	Persentase Kesalahan Relatif (%)
1	3	71,00	71,00	0,00	0,00
2	6	71,00	71,00	0,00	0,00
3	9	70,00	71,00	1,00	1,41
4	12	70,00	71,00	1,00	1,41
5	15	71,00	72,00	1,00	1,39
6	18	72,00	72,00	0,00	0,00
7	21	71,00	72,00	1,00	1,39
8	24	72,00	73,00	1,00	1,37
9	27	72,00	72,00	0,00	0,00
10	30	71,00	71,00	0,00	0,00
11	33	71,00	71,00	0,00	0,00
12	36	71,00	71,00	0,00	0,00
13	39	70,00	70,00	0,00	0,00
14	42	70,00	70,00	0,00	0,00
15	45	71,00	71,00	0,00	0,00
16	48	71,00	71,00	0,00	0,00
17	51	71,00	71,00	0,00	0,00
18	54	70,00	71,00	1,00	1,41
19	57	71,00	71,00	0,00	0,00
20	60	72,00	72,00	0,00	0,00
21	63	72,00	72,00	0,00	0,00
22	66	71,00	72,00	1,00	1,39
23	69	71,00	72,00	1,00	1,39
24	72	71,00	72,00	1,00	1,39
25	75	72,00	72,00	0,00	0,00
26	78	73,00	73,00	0,00	0,00
27	81	73,00	73,00	0,00	0,00
28	84	73,00	73,00	0,00	0,00
29	87	73,00	72,00	-1,00	1,39
30	90	72,00	71,00	-1,00	1,41
31	93	71,00	71,00	0,00	0,00
32	96	71,00	71,00	0,00	0,00
33	99	71,00	72,00	1,00	1,39

No	Waktu (s)	<i>Pulse Heart Sensor</i> (bpm)	Oksimeter (bpm)	Koreksi (bpm)	Persentase Kesalahan Relatif (%)
34	102	71,00	72,00	1,00	1,39
35	105	71,00	71,00	0,00	0,00
36	108	71,00	72,00	1,00	1,39
37	111	72,00	72,00	0,00	0,00
38	114	73,00	73,00	0,00	0,00
39	117	73,00	73,00	0,00	0,00
40	120	73,00	73,00	0,00	0,00
41	123	73,00	73,00	0,00	0,00
42	126	73,00	73,00	0,00	0,00
43	129	73,00	73,00	0,00	0,00
44	132	72,00	73,00	1,00	1,37
45	135	72,00	72,00	0,00	0,00
46	138	72,00	72,00	0,00	0,00
47	141	72,00	72,00	0,00	0,00
48	144	73,00	73,00	0,00	0,00
49	147	73,00	73,00	0,00	0,00
50	150	73,00	73,00	0,00	0,00
51	153	73,00	73,00	0,00	0,00
52	156	73,00	73,00	0,00	0,00
53	159	73,00	73,00	0,00	0,00
54	162	73,00	73,00	0,00	0,00
55	165	73,00	74,00	1,00	1,35
56	168	72,00	73,00	1,00	1,37
57	171	72,00	72,00	0,00	0,00
58	174	71,00	72,00	1,00	1,39
59	177	70,00	71,00	1,00	1,41
60	180	71,00	71,00	0,00	0,00
61	183	71,00	71,00	0,00	0,00
62	186	72,00	72,00	0,00	0,00
63	189	73,00	72,00	-1,00	1,39
64	192	73,00	73,00	0,00	0,00
65	195	73,00	74,00	1,00	1,35
66	198	73,00	74,00	1,00	1,35
67	201	73,00	73,00	0,00	0,00
68	204	73,00	73,00	0,00	0,00
69	207	73,00	73,00	0,00	0,00
70	210	73,00	73,00	0,00	0,00
71	213	73,00	73,00	0,00	0,00
72	216	73,00	73,00	0,00	0,00

No	Waktu (s)	<i>Pulse Heart Sensor</i> (bpm)	Oksimeter (bpm)	Koreksi (bpm)	Persentase Kesalahan Relatif (%)
73	219	72,00	73,00	1,00	1,37
74	222	72,00	73,00	1,00	1,37
75	225	72,00	72,00	0,00	0,00
76	228	72,00	72,00	0,00	0,00
77	231	72,00	72,00	0,00	0,00
78	234	72,00	72,00	0,00	0,00
79	237	72,00	72,00	0,00	0,00
80	240	72,00	72,00	0,00	0,00
81	243	71,00	72,00	1,00	1,39
82	246	71,00	72,00	1,00	1,39
83	249	71,00	72,00	1,00	1,39
84	252	72,00	72,00	0,00	0,00
85	255	72,00	72,00	0,00	0,00
86	258	73,00	73,00	0,00	0,00
87	261	73,00	73,00	0,00	0,00
88	264	73,00	73,00	0,00	0,00
89	267	73,00	73,00	0,00	0,00
90	270	73,00	73,00	0,00	0,00
91	273	72,00	73,00	1,00	1,37
92	276	72,00	73,00	1,00	1,37
93	279	72,00	73,00	1,00	1,37
94	282	72,00	72,00	0,00	0,00
95	285	72,00	72,00	0,00	0,00
96	288	72,00	72,00	0,00	0,00
97	291	71,00	71,00	0,00	0,00
98	294	71,00	71,00	0,00	0,00
99	297	71,00	71,00	0,00	0,00
100	300	71,00	71,00	0,00	0,00
Rata-Rata		71,91	72,15	0,24	0,41

Lampiran 1.2 Data Kalibrasi Sensor Suhu Tubuh DS18B20

No	Termometer Digital (°C)	DS18B20 Sensor (°C)	Persentase Kesalahan Relatif (%)
1	0,00	0,44	
2	1,00	0,94	6,00
3	2,00	1,88	6,00
4	3,00	2,81	6,33
5	4,00	3,75	6,25
6	5,00	4,81	3,80
7	6,00	5,75	4,17
8	7,00	6,44	8,00
9	8,00	7,56	5,50
10	9,00	8,69	3,44
11	10,00	9,94	0,60
12	11,00	10,81	1,73
13	12,00	11,94	0,50
14	13,00	12,75	1,92
15	14,00	13,63	2,64
16	15,00	14,75	1,67
17	16,00	15,63	2,31
18	17,00	16,37	3,71
19	18,00	17,31	3,83
20	19,00	18,94	0,32
21	20,00	19,81	0,95
22	21,00	20,44	2,67
23	22,00	21,37	2,86
24	23,00	22,63	1,61
25	24,00	23,88	0,50
26	25,00	24,75	1,00
27	26,00	25,94	0,23
28	27,00	26,56	1,63
29	28,00	27,75	0,89
30	29,00	28,94	0,21
31	30,00	29,81	0,63
32	31,00	30,56	1,42
33	32,00	31,87	0,41
34	33,00	32,44	1,70
35	34,00	33,75	0,74
36	35,00	34,88	0,34
37	36,00	35,94	0,17
38	37,00	36,94	0,16

No	Termometer Digital (°C)	DS18B20 Sensor (°C)	Persentase Kesalahan Relatif (%)
39	38,00	37,94	0,16
40	39,00	38,88	0,31
41	40,00	39,81	0,47
42	41,00	40,75	0,61
43	42,00	41,56	1,05
44	43,00	42,69	0,72
45	44,00	43,69	0,70
46	45,00	44,50	1,11
47	46,00	45,56	0,96
48	47,00	46,44	1,19
49	48,00	47,63	0,77
50	49,00	48,88	0,24
51	50,00	49,81	0,38
52	51,00	50,56	0,86
53	52,00	51,63	0,71
54	53,00	52,69	0,58
55	54,00	53,56	0,81
56	55,00	54,81	0,35
57	56,00	55,75	0,45
58	57,00	56,94	0,11
59	58,00	57,94	0,10
60	59,00	58,88	0,20
61	60,00	59,94	0,10
62	61,00	60,88	0,20
63	62,00	61,75	0,40
64	63,00	62,75	0,40
65	64,00	63,81	0,30
66	65,00	64,81	0,29
67	66,00	65,87	0,20
68	67,00	66,87	0,19
69	68,00	67,94	0,09
70	69,00	68,87	0,19
71	70,00	69,87	0,19
72	71,00	70,94	0,08
73	72,00	71,81	0,26
74	73,00	72,81	0,26
75	74,00	73,75	0,34
76	75,00	74,87	0,17
77	76,00	75,94	0,08

No	Termometer Digital (°C)	DS18B20 Sensor (°C)	Persentase Kesalahan Relatif (%)
78	77,00	76,81	0,25
79	78,00	77,87	0,17
80	79,00	78,87	0,16
81	80,00	79,94	0,08
82	81,00	80,94	0,07
83	82,00	81,87	0,16
84	83,00	82,94	0,07
85	84,00	83,81	0,23
86	85,00	84,75	0,29
87	86,00	85,81	0,22
88	87,00	86,87	0,15
89	88,00	87,87	0,15
90	89,00	88,75	0,28
91	90,00	89,81	0,21
92	91,00	90,81	0,21
93	92,00	91,94	0,07
94	93,00	92,56	0,47
95	94,00	93,50	0,53
96	95,00	94,69	0,33
97	96,00	95,75	0,26
98	97,00	96,69	0,32
99	98,00	97,50	0,51
100	99,00	98,62	0,38
101	100,00	99,81	0,19
102	101,00	100,50	0,50
Rata-Rata			1,09

**Lampiran 1.3. Data Pengukuran Sensor Pernapasan Normal Pada Variasi
Jumlah Lilitan Serat Optik**

Waktu (s)	Tegangan Keluaran (V)		
	2 Lilitan	3 Lilitan	4 Lilitan
0,0	2,004	1,716	1,530
0,5	2,004	1,716	1,530
1,0	1,999	1,711	1,510
1,5	1,989	1,701	1,452
2,0	1,984	1,676	1,437
2,5	1,989	1,652	1,496
3,0	2,004	1,642	1,515
3,5	2,009	1,706	1,515
4,0	2,009	1,716	1,520
4,5	2,009	1,716	1,520
5,0	1,999	1,711	1,481
5,5	1,989	1,686	1,437
6,0	1,984	1,647	1,466
6,5	2,004	1,662	1,505
7,0	2,004	1,711	1,510
7,5	2,009	1,716	1,515
8,0	2,009	1,716	1,515
8,5	1,999	1,701	1,510
9,0	1,984	1,662	1,452
9,5	1,979	1,647	1,432
10,0	1,994	1,706	1,471
10,5	2,004	1,716	1,505
11,0	2,009	1,716	1,510
11,5	2,009	1,706	1,510
12,0	1,994	1,667	1,515
12,5	1,984	1,647	1,496
13,0	1,984	1,676	1,447
13,5	2,004	1,716	1,437
14,0	2,009	1,716	1,476
14,5	2,009	1,716	1,505
15,0	2,009	1,672	1,510
15,5	1,994	1,642	1,510
16,0	1,984	1,676	1,510
16,5	1,979	1,711	1,500
17,0	1,999	1,716	1,447
17,5	2,004	1,716	1,437

Waktu (s)	Tegangan Keluaran (V)		
	2 Lilitan	3 Lilitan	4 Lilitan
18,0	2,004	1,676	1,481
18,5	2,004	1,642	1,505
19,0	2,004	1,676	1,510
19,5	1,989	1,716	1,515
20,0	1,979	1,716	1,515
20,5	1,989	1,711	1,500
21,0	2,004	1,686	1,452
21,5	2,009	1,652	1,432
22,0	2,009	1,647	1,481
22,5	2,009	1,701	1,505
23,0	2,004	1,712	1,510
23,5	1,989	1,716	1,510
24,0	1,979	1,716	1,505
24,5	1,979	1,681	1,447
25,0	2,004	1,657	1,427
25,5	2,004	1,662	1,476
26,0	2,004	1,706	1,496
26,5	2,004	1,716	1,496
27,0	2,004	1,716	1,496
27,5	1,994	1,711	1,500
28,0	1,984	1,681	1,476
28,5	1,979	1,652	1,437
29,0	1,994	1,647	1,447
29,5	2,004	1,696	1,491
30,0	2,009	1,716	1,500
30,5	2,009	1,716	1,500
31,0	2,009	1,716	1,500
31,5	2,004	1,696	1,496
32,0	1,989	1,657	1,461
32,5	1,979	1,637	1,427
33,0	1,979	1,652	1,442
33,5	1,994	1,696	1,491
34,0	2,004	1,701	1,500
34,5	2,004	1,711	1,505
35,0	2,004	1,711	1,505
35,5	2,004	1,676	1,486
36,0	1,994	1,652	1,437
36,5	1,984	1,637	1,442
37,0	1,979	1,657	1,481

Waktu (s)	Tegangan Keluaran (V)		
	2 Lilitan	3 Lilitan	4 Lilitan
37,5	1,989	1,701	1,496
38,0	1,999	1,701	1,496
38,5	2,004	1,696	1,496
39,0	2,009	1,681	1,486
39,5	2,004	1,647	1,437
40,0	2,004	1,637	1,457
40,5	1,994	1,681	1,491
41,0	1,984	1,691	1,496
41,5	1,975	1,696	1,500
42,0	1,989	1,706	1,496
42,5	1,999	1,696	1,457
43,0	1,999	1,667	1,432
43,5	2,004	1,657	1,461
44,0	2,004	1,672	1,486
44,5	2,004	1,701	1,496
45,0	1,999	1,706	1,496
45,5	1,994	1,701	1,491
46,0	1,984	1,701	1,447
46,5	1,984	1,686	1,427
47,0	1,994	1,681	1,447
47,5	2,004	1,656	1,481
48,0	2,004	1,647	1,486
48,5	2,004	1,696	1,491
49,0	2,004	1,706	1,496
49,5	2,004	1,706	1,491
50,0	1,994	1,706	1,442
50,5	1,984	1,696	1,422
51,0	1,979	1,652	1,461
51,5	1,984	1,642	1,486
52,0	1,999	1,647	1,491
52,5	2,004	1,681	1,496
53,0	2,004	1,711	1,481
53,5	2,004	1,711	1,432
54,0	1,999	1,711	1,432
54,5	1,984	1,711	1,476
55,0	1,979	1,676	1,486
55,5	1,999	1,652	1,486
56,0	2,004	1,652	1,486
56,5	1,999	1,657	1,457

Waktu (s)	Tegangan Keluaran (V)		
	2 Lilitan	3 Lilitan	4 Lilitan
57,0	1,989	1,681	1,417
57,5	1,979	1,696	1,447
58,0	2,004	1,701	1,476
58,5	2,004	1,701	1,481
59,0	2,004	1,711	1,481
59,5	2,004	1,716	1,481
60,0	2,004	1,716	1,481
Δ (V)	0,034	0,078	0,112
S (V/s)	0,064	0,147	0,211
R (s)	0,016	0,007	0,005

**Lampiran 1.4 Pengolahan Data Hasil Analisis Karakteristik Sensor Serat Optik
Plastik Variasi Jumlah Lilitan**

Variasi 2 lilitan:

Diketahui: $V_{maks} = 2,009 \text{ V}$
 $V_{min} = 1,975 \text{ V}$
 $N = 0,001$
 $f = 16 \text{ kali per menit}$
 $t = 60 \text{ s}$

Ditanyakan: $\Delta V = \dots ?$
 $S = \dots ?$
 $R = \dots ?$

Penyelesaian: $\Delta t = \frac{2 \times f}{t}$
 $\Delta t = \frac{2 \times 16}{60} = 0,533 \text{ t}$
 $\Delta V = V_{maks} - V_{min}$
 $\Delta V = 2,009 - 1,975$
 $\Delta V = 0,034 \text{ V}$
 $S = \frac{\Delta v}{\Delta t}$
 $S = \frac{0,034}{0,533} = 0,064 \text{ V/s}$

$$R = \frac{N}{s}$$

$$R = \frac{0,001}{0,064} = 0,016 s$$

**Lampiran 1.5 Data Pengukuran Sensor Pernapasan Normal Pada Variasi Jarak
Lekukan 0,4 cm, 0,7 cm dan 1 cm**

Waktu (s)	Tegangan Keluaran (V)		
	0,4 cm	0,7 cm	1 cm
0,0	1,149	1,369	1,530
0,5	1,149	1,369	1,530
1,0	1,144	1,339	1,510
1,5	1,134	1,315	1,452
2,0	1,124	1,329	1,437
2,5	1,134	1,359	1,496
3,0	1,149	1,369	1,515
3,5	1,149	1,369	1,515
4,0	1,149	1,364	1,520
4,5	1,149	1,339	1,520
5,0	1,149	1,315	1,481
5,5	1,134	1,344	1,437
6,0	1,124	1,364	1,466
6,5	1,129	1,369	1,505
7,0	1,149	1,369	1,510
7,5	1,149	1,349	1,515
8,0	1,149	1,329	1,515
8,5	1,149	1,315	1,510
9,0	1,149	1,359	1,452
9,5	1,134	1,369	1,432
10,0	1,124	1,369	1,471
10,5	1,124	1,369	1,505
11,0	1,139	1,359	1,510
11,5	1,144	1,339	1,510
12,0	1,149	1,315	1,515
12,5	1,149	1,339	1,496
13,0	1,144	1,364	1,447
13,5	1,129	1,369	1,437
14,0	1,119	1,369	1,476
14,5	1,124	1,359	1,505
15,0	1,139	1,334	1,510

Waktu (s)	Tegangan Keluaran (V)		
	0,4 cm	0,7 cm	1 cm
15,5	1,144	1,315	1,510
16,0	1,144	1,339	1,510
16,5	1,149	1,359	1,500
17,0	1,149	1,364	1,447
17,5	1,129	1,364	1,437
18,0	1,124	1,349	1,481
18,5	1,129	1,329	1,505
19,0	1,144	1,315	1,510
19,5	1,149	1,339	1,515
20,0	1,149	1,364	1,515
20,5	1,149	1,369	1,500
21,0	1,134	1,369	1,452
21,5	1,124	1,364	1,432
22,0	1,124	1,339	1,481
22,5	1,139	1,319	1,505
23,0	1,144	1,334	1,510
23,5	1,149	1,349	1,510
24,0	1,149	1,369	1,505
24,5	1,149	1,364	1,447
25,0	1,134	1,364	1,427
25,5	1,119	1,354	1,476
26,0	1,119	1,334	1,496
26,5	1,139	1,315	1,496
27,0	1,144	1,334	1,496
27,5	1,149	1,359	1,500
28,0	1,149	1,364	1,476
28,5	1,139	1,369	1,437
29,0	1,124	1,364	1,447
29,5	1,119	1,349	1,491
30,0	1,139	1,325	1,500
30,5	1,144	1,315	1,500
31,0	1,149	1,349	1,500
31,5	1,149	1,364	1,496
32,0	1,139	1,364	1,461
32,5	1,124	1,364	1,427
33,0	1,124	1,354	1,442
33,5	1,144	1,329	1,491
34,0	1,144	1,315	1,500
34,5	1,149	1,344	1,505

Waktu (s)	Tegangan Keluaran (V)		
	0,4 cm	0,7 cm	1 cm
35,0	1,144	1,364	1,505
35,5	1,134	1,364	1,486
36,0	1,119	1,364	1,437
36,5	1,119	1,359	1,442
37,0	1,144	1,334	1,481
37,5	1,144	1,315	1,496
38,0	1,144	1,329	1,496
38,5	1,144	1,359	1,496
39,0	1,134	1,369	1,486
39,5	1,124	1,369	1,437
40,0	1,124	1,364	1,457
40,5	1,144	1,339	1,491
41,0	1,144	1,315	1,496
41,5	1,149	1,334	1,500
42,0	1,149	1,359	1,496
42,5	1,139	1,364	1,457
43,0	1,124	1,364	1,432
43,5	1,119	1,354	1,461
44,0	1,139	1,329	1,486
44,5	1,144	1,315	1,496
45,0	1,144	1,349	1,496
45,5	1,144	1,364	1,491
46,0	1,139	1,359	1,447
46,5	1,124	1,359	1,427
47,0	1,124	1,349	1,447
47,5	1,144	1,329	1,481
48,0	1,149	1,315	1,486
48,5	1,149	1,359	1,491
49,0	1,149	1,364	1,496
49,5	1,129	1,364	1,491
50,0	1,124	1,364	1,442
50,5	1,134	1,339	1,422
51,0	1,149	1,315	1,461
51,5	1,149	1,339	1,486
52,0	1,149	1,364	1,491
52,5	1,144	1,364	1,496
53,0	1,124	1,359	1,481
53,5	1,119	1,359	1,432
54,0	1,134	1,344	1,432

Waktu (s)	Tegangan Keluaran (V)		
	0,4 cm	0,7 cm	1 cm
54,5	1,149	1,315	1,476
55,0	1,149	1,329	1,486
55,5	1,144	1,349	1,486
56,0	1,139	1,354	1,486
56,5	1,124	1,364	1,457
57,0	1,124	1,369	1,417
57,5	1,149	1,369	1,447
58,0	1,149	1,369	1,476
58,5	1,149	1,369	1,481
59,0	1,149	1,369	1,481
59,5	1,149	1,369	1,481
60,0	1,149	1,363	1,481
Δ (V)	0,029	0,054	0,112
S (V/s)	0,055	0,101	0,211
R (s)	0,018	0,010	0,005

Lampiran 1.6 Pengolahan Data Hasil Analisis Karakteristik Sensor Serat Optik Plastik Variasi Jarak

Variasi jarak 0,4 cm:

Diketahui: $V_{maks} = 1,149 V$

$$V_{min} = 1,119 V$$

$$N = 0,001$$

$$f = 16 \text{ kali per menit}$$

$$t = 60 s$$

Ditanyakan: $\Delta V = \dots ?$

$$S = \dots ?$$

$$R = \dots ?$$

Penyelesaian: $\Delta t = \frac{2 \times f}{t}$

$$\Delta t = \frac{2 \times 16}{60} = 0,533 t$$

$$\Delta V = V_{maks} - V_{min}$$

$$\Delta V = 1,149 - 1,119$$

$$\Delta V = 0,029 V$$

$$S = \frac{\Delta v}{\Delta t}$$

$$S = \frac{0,029}{0,533} = 0,055 V/s$$

$$R = \frac{N}{S}$$

$$R = \frac{0,001}{0,055} = 0,018 s$$

Lampiran 1.7 Data Pengukuran Sensor Pernapasan Normal Pada Variasi Cacatan Serat Optik

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
0,0	1,530	1,432	1,258	0,929
0,5	1,530	1,432	1,238	0,929
1,0	1,510	1,413	1,228	0,894
1,5	1,452	1,339	1,184	0,767
2,0	1,437	1,305	1,105	0,748
2,5	1,496	1,408	1,096	0,792
3,0	1,515	1,432	1,198	0,894
3,5	1,515	1,437	1,223	0,924
4,0	1,520	1,437	1,238	0,938
4,5	1,520	1,422	1,252	0,929
5,0	1,481	1,349	1,228	0,826
5,5	1,437	1,295	1,198	0,743
6,0	1,466	1,398	1,110	0,753
6,5	1,505	1,432	1,096	0,860
7,0	1,510	1,437	1,223	0,914
7,5	1,515	1,432	1,233	0,929
8,0	1,515	1,427	1,252	0,938
8,5	1,510	1,349	1,238	0,850
9,0	1,452	1,305	1,228	0,748
9,5	1,432	1,413	1,208	0,738
10,0	1,471	1,432	1,140	0,777
10,5	1,505	1,432	1,091	0,870
11,0	1,510	1,437	1,184	0,929
11,5	1,510	1,427	1,233	0,943
12,0	1,515	1,334	1,258	0,899

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
12,5	1,496	1,300	1,258	0,802
13,0	1,447	1,413	1,238	0,738
13,5	1,437	1,432	1,218	0,743
14,0	1,476	1,432	1,140	0,816
14,5	1,505	1,432	1,091	0,899
15,0	1,510	1,403	1,164	0,934
15,5	1,510	1,305	1,228	0,938
16,0	1,510	1,344	1,248	0,909
16,5	1,500	1,422	1,252	0,777
17,0	1,447	1,432	1,232	0,728
17,5	1,437	1,432	1,208	0,748
18,0	1,481	1,432	1,120	0,865
18,5	1,505	1,393	1,096	0,919
19,0	1,510	1,305	1,198	0,934
19,5	1,515	1,369	1,228	0,929
20,0	1,515	1,422	1,252	0,836
20,5	1,500	1,432	1,232	0,743
21,0	1,452	1,432	1,218	0,728
21,5	1,432	1,422	1,135	0,782
22,0	1,481	1,349	1,091	0,885
22,5	1,505	1,315	1,184	0,934
23,0	1,510	1,398	1,228	0,943
23,5	1,510	1,432	1,242	0,904
24,0	1,505	1,432	1,252	0,762
24,5	1,447	1,432	1,232	0,738
25,0	1,427	1,427	1,198	0,777
25,5	1,476	1,334	1,100	0,904
26,0	1,496	1,285	1,125	0,929
26,5	1,496	1,398	1,213	0,938
27,0	1,496	1,427	1,233	0,880
27,5	1,500	1,432	1,253	0,758
28,0	1,476	1,427	1,239	0,723
28,5	1,437	1,378	1,223	0,777
29,0	1,447	1,305	1,140	0,880
29,5	1,491	1,378	1,096	0,924
30,0	1,500	1,422	1,184	0,934
30,5	1,500	1,427	1,218	0,934
31,0	1,500	1,427	1,238	0,806
31,5	1,496	1,422	1,243	0,733

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
32,0	1,461	1,339	1,253	0,758
32,5	1,427	1,295	1,218	0,870
33,0	1,442	1,408	1,120	0,909
33,5	1,491	1,427	1,096	0,924
34,0	1,500	1,427	1,198	0,885
34,5	1,505	1,427	1,223	0,758
35,0	1,505	1,413	1,258	0,723
35,5	1,486	1,325	1,228	0,782
36,0	1,437	1,339	1,213	0,894
36,5	1,442	1,417	1,115	0,929
37,0	1,481	1,427	1,081	0,934
37,5	1,496	1,427	1,208	0,904
38,0	1,496	1,422	1,228	0,758
38,5	1,496	1,339	1,252	0,738
39,0	1,486	1,295	1,232	0,855
39,5	1,437	1,393	1,188	0,919
40,0	1,457	1,417	1,096	0,934
40,5	1,491	1,422	1,115	0,938
41,0	1,496	1,422	1,218	0,802
41,5	1,500	1,393	1,238	0,738
42,0	1,496	1,300	1,252	0,797
42,5	1,457	1,339	1,228	0,914
43,0	1,432	1,413	1,169	0,934
43,5	1,461	1,422	1,091	0,934
44,0	1,486	1,422	1,118	0,836
44,5	1,496	1,417	1,228	0,738
45,0	1,496	1,329	1,238	0,758
45,5	1,491	1,281	1,252	0,894
46,0	1,447	1,398	1,233	0,929
46,5	1,427	1,422	1,218	0,934
47,0	1,447	1,427	1,096	0,909
47,5	1,481	1,422	1,116	0,772
48,0	1,486	1,388	1,238	0,733
48,5	1,491	1,305	1,258	0,743
49,0	1,496	1,359	1,238	0,894
49,5	1,491	1,417	1,228	0,929
50,0	1,442	1,422	1,149	0,929
50,5	1,422	1,427	1,086	0,934
51,0	1,461	1,422	1,164	0,929

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
51,5	1,486	1,393	1,223	0,826
52,0	1,491	1,295	1,238	0,733
52,5	1,496	1,320	1,258	0,743
53,0	1,481	1,403	1,228	0,885
53,5	1,432	1,422	1,174	0,919
54,0	1,432	1,422	1,096	0,924
54,5	1,476	1,422	1,208	0,924
55,0	1,486	1,378	1,228	0,890
55,5	1,486	1,295	1,232	0,758
56,0	1,486	1,369	1,252	0,723
56,5	1,457	1,422	1,228	0,850
57,0	1,417	1,422	1,149	0,909
57,5	1,447	1,422	1,081	0,919
58,0	1,476	1,422	1,213	0,914
58,5	1,481	1,422	1,228	0,909
59,0	1,481	1,417	1,232	0,890
59,5	1,481	1,417	1,242	0,855
60,0	1,481	1,422	1,252	0,758
Δ (V)	0,112	0,156	0,177	0,220
S (V/s)	0,211	0,276	0,331	0,412
R (s)	0,005	0,004	0,003	0,002

Lampiran 1.8 Data Pengukuran Sensor Pernapasan Cepat Pada Variasi Cacatan Serat Optik

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
0,0	1,491	1,388	1,195	0,909
0,5	1,491	1,388	1,195	0,899
1,0	1,487	1,339	1,181	0,894
1,5	1,475	1,261	1,117	0,787
2,0	1,413	1,359	1,033	0,738
2,5	1,393	1,383	1,166	0,894
3,0	1,476	1,383	1,191	0,909
3,5	1,486	1,285	1,196	0,904
4,0	1,471	1,237	1,191	0,772
4,5	1,393	1,369	1,147	0,739
5,0	1,403	1,383	1,038	0,909
5,5	1,476	1,383	1,147	0,914
6,0	1,486	1,300	1,186	0,885
6,5	1,466	1,256	1,191	0,748
7,0	1,388	1,369	1,166	0,816
7,5	1,447	1,383	1,043	0,914
8,0	1,476	1,383	1,033	0,919
8,5	1,481	1,310	1,181	0,860
9,0	1,461	1,246	1,186	0,733
9,5	1,378	1,373	1,176	0,831
10,0	1,427	1,383	1,033	0,899
10,5	1,476	1,383	1,113	0,894
11,0	1,481	1,315	1,171	0,836
11,5	1,476	1,241	1,186	0,728
12,0	1,383	1,354	1,186	0,899
12,5	1,413	1,378	1,137	0,914
13,0	1,471	1,383	1,032	0,924
13,5	1,481	1,369	1,152	0,802
14,0	1,476	1,251	1,181	0,738
14,5	1,383	1,325	1,191	0,899
15,0	1,417	1,378	1,161	0,914
15,5	1,471	1,383	1,033	0,914
16,0	1,481	1,354	1,137	0,762
16,5	1,461	1,237	1,176	0,718
17,0	1,373	1,344	1,186	0,894
17,5	1,442	1,378	1,181	0,914

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
18,0	1,471	1,378	1,032	0,904
18,5	1,476	1,325	1,027	0,733
19,0	1,408	1,251	1,176	0,728
19,5	1,378	1,373	1,191	0,904
20,0	1,457	1,383	1,191	0,914
20,5	1,476	1,364	1,137	0,855
21,0	1,471	1,246	1,033	0,729
21,5	1,378	1,359	1,157	0,899
22,0	1,403	1,378	1,181	0,914
22,5	1,466	1,378	1,186	0,919
23,0	1,476	1,325	1,037	0,728
23,5	1,466	1,241	1,127	0,787
24,0	1,388	1,364	1,181	0,914
24,5	1,442	1,378	1,186	0,919
25,0	1,471	1,378	1,166	0,899
25,5	1,476	1,325	1,038	0,728
26,0	1,457	1,246	1,132	0,831
26,5	1,373	1,373	1,181	0,914
27,0	1,427	1,383	1,186	0,919
27,5	1,471	1,378	1,157	0,894
28,0	1,481	1,325	1,038	0,738
28,5	1,466	1,246	1,147	0,816
29,0	1,378	1,369	1,181	0,909
29,5	1,437	1,378	1,186	0,909
30,0	1,476	1,378	1,161	0,802
30,5	1,481	1,271	1,043	0,728
31,0	1,442	1,339	1,137	0,914
31,5	1,378	1,378	1,181	0,919
32,0	1,461	1,383	1,186	0,894
32,5	1,476	1,305	1,171	0,732
33,0	1,481	1,261	1,036	0,836
33,5	1,398	1,373	1,142	0,909
34,0	1,388	1,378	1,181	0,914
34,5	1,466	1,349	1,191	0,811
35,0	1,476	1,237	1,176	0,762
35,5	1,476	1,349	1,037	0,904
36,0	1,388	1,373	1,142	0,909
36,5	1,457	1,378	1,181	0,904
37,0	1,481	1,285	1,186	0,728

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
37,5	1,486	1,276	1,166	0,792
38,0	1,432	1,373	1,043	0,899
38,5	1,393	1,378	1,142	0,909
39,0	1,471	1,359	1,176	0,855
39,5	1,481	1,251	1,186	0,728
40,0	1,476	1,354	1,166	0,890
40,5	1,393	1,378	1,037	0,904
41,0	1,427	1,378	1,157	0,904
41,5	1,476	1,281	1,186	0,727
42,0	1,481	1,271	1,186	0,811
42,5	1,427	1,369	1,152	0,909
43,0	1,383	1,378	1,033	0,914
43,5	1,461	1,354	1,073	0,870
44,0	1,476	1,232	1,191	0,728
44,5	1,471	1,325	1,186	0,870
45,0	1,388	1,373	1,032	0,904
45,5	1,427	1,373	1,137	0,909
46,0	1,471	1,300	1,181	0,811
46,5	1,476	1,237	1,191	0,738
47,0	1,413	1,364	1,161	0,894
47,5	1,373	1,373	1,033	0,904
48,0	1,457	1,373	1,166	0,904
48,5	1,476	1,266	1,186	0,802
49,0	1,481	1,310	1,181	0,732
49,5	1,393	1,373	1,037	0,904
50,0	1,427	1,378	1,137	0,909
50,5	1,476	1,256	1,181	0,904
51,0	1,481	1,310	1,186	0,772
51,5	1,398	1,373	1,176	0,732
52,0	1,422	1,373	1,037	0,904
52,5	1,476	1,295	1,152	0,909
53,0	1,481	1,251	1,181	0,909
53,5	1,393	1,369	1,186	0,802
54,0	1,437	1,373	1,037	0,728
54,5	1,476	1,329	1,127	0,904
55,0	1,481	1,232	1,176	0,909
55,5	1,452	1,364	1,181	0,904
56,0	1,388	1,373	1,037	0,728
56,5	1,466	1,373	1,037	0,821

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
57,0	1,476	1,266	1,176	0,904
57,5	1,442	1,232	1,186	0,909
58,0	1,373	1,369	1,038	0,782
58,5	1,413	1,373	1,152	0,728
59,0	1,476	1,373	1,176	0,865
59,5	1,476	1,373	1,181	0,904
60,0	1,476	1,373	1,181	0,890
Δ (V)	0,117	0,156	0,168	0,205
S (V/s)	0,141	0,188	0,210	0,246
R (s)	0,007	0,005	0,005	0,004

Lampiran 1.9 Data Pengukuran Sensor Pernapasan Lambat Pada Variasi Cacatan Serat Optik

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
0,0	1,505	1,344	1,139	0,880
0,5	1,510	1,344	1,139	0,880
1,0	1,505	1,344	1,115	0,880
1,5	1,476	1,325	1,095	0,885
2,0	1,437	1,281	1,066	0,875
2,5	1,398	1,232	0,991	0,846
3,0	1,393	1,222	0,991	0,787
3,5	1,422	1,256	1,061	0,723
4,0	1,471	1,300	1,090	0,709
4,5	1,491	1,325	1,115	0,709
5,0	1,500	1,339	1,125	0,714
5,5	1,505	1,344	1,125	0,728
6,0	1,505	1,344	1,129	0,739
6,5	1,505	1,344	1,120	0,762
7,0	1,505	1,344	1,110	0,838
7,5	1,505	1,349	1,095	0,855
8,0	1,496	1,344	1,066	0,860
8,5	1,476	1,334	0,997	0,870
9,0	1,442	1,305	1,011	0,870
9,5	1,413	1,246	1,061	0,871
10,0	1,388	1,232	1,110	0,868
10,5	1,398	1,237	1,125	0,860
11,0	1,432	1,276	1,129	0,860

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
11,5	1,466	1,300	1,129	0,855
12,0	1,486	1,329	1,129	0,831
12,5	1,500	1,339	1,125	0,792
13,0	1,500	1,344	1,115	0,748
13,5	1,500	1,344	1,090	0,728
14,0	1,500	1,344	1,056	0,723
14,5	1,500	1,349	0,998	0,753
15,0	1,500	1,349	0,998	0,782
15,5	1,496	1,339	1,071	0,831
16,0	1,461	1,320	1,105	0,855
16,5	1,417	1,266	1,120	0,865
17,0	1,393	1,232	1,125	0,870
17,5	1,388	1,246	1,129	0,870
18,0	1,393	1,266	1,129	0,870
18,5	1,413	1,300	1,129	0,875
19,0	1,447	1,325	1,129	0,875
19,5	1,481	1,344	1,105	0,870
20,0	1,496	1,349	1,066	0,850
20,5	1,500	1,344	1,032	0,806
21,0	1,505	1,349	0,997	0,753
21,5	1,505	1,349	0,997	0,728
22,0	1,505	1,344	1,046	0,714
22,5	1,505	1,329	1,076	0,709
23,0	1,505	1,305	1,110	0,758
23,5	1,476	1,251	1,125	0,811
24,0	1,422	1,227	1,125	0,855
24,5	1,393	1,232	1,129	0,875
25,0	1,388	1,256	1,129	0,880
25,5	1,403	1,295	1,125	0,880
26,0	1,452	1,320	1,110	0,880
26,5	1,486	1,339	1,085	0,885
27,0	1,500	1,349	1,056	0,875
27,5	1,505	1,349	0,999	0,846
28,0	1,505	1,349	0,997	0,787
28,5	1,505	1,354	1,051	0,723
29,0	1,505	1,359	1,081	0,709
29,5	1,500	1,354	1,105	0,709
30,0	1,457	1,354	1,125	0,723
30,5	1,403	1,339	1,129	0,787

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
31,0	1,388	1,310	1,129	0,841
31,5	1,398	1,237	1,129	0,860
32,0	1,413	1,237	1,125	0,875
32,5	1,437	1,271	1,115	0,880
33,0	1,471	1,295	1,100	0,885
33,5	1,491	1,329	1,066	0,885
34,0	1,500	1,339	1,037	0,890
34,5	1,500	1,349	0,998	0,885
35,0	1,505	1,349	1,032	0,846
35,5	1,505	1,349	1,061	0,777
36,0	1,505	1,349	1,095	0,728
36,5	1,496	1,349	1,110	0,709
37,0	1,457	1,349	1,115	0,714
37,5	1,408	1,329	1,120	0,748
38,0	1,388	1,285	1,125	0,806
38,5	1,403	1,241	1,125	0,841
39,0	1,422	1,237	1,115	0,875
39,5	1,452	1,251	1,095	0,885
40,0	1,471	1,290	1,066	0,890
40,5	1,486	1,320	1,037	0,890
41,0	1,500	1,334	0,992	0,890
41,5	1,505	1,339	0,999	0,860
42,0	1,510	1,349	1,051	0,806
42,5	1,505	1,349	1,085	0,762
43,0	1,505	1,354	1,110	0,728
43,5	1,500	1,349	1,120	0,718
44,0	1,471	1,349	1,125	0,714
44,5	1,422	1,339	1,129	0,723
45,0	1,393	1,305	1,125	0,758
45,5	1,393	1,256	1,125	0,806
46,0	1,408	1,232	1,115	0,860
46,5	1,447	1,241	1,095	0,880
47,0	1,476	1,276	1,066	0,890
47,5	1,496	1,305	1,017	0,890
48,0	1,500	1,334	0,998	0,890
48,5	1,500	1,344	0,998	0,890
49,0	1,505	1,349	1,046	0,870
49,5	1,505	1,349	1,076	0,806
50,0	1,505	1,354	1,100	0,743

Waktu (s)	Tegangan Keluaran (V)			
	0 Cacatan	1 Cacatan	2 Cacatan	3 Cacatan
50,5	1,496	1,349	1,115	0,723
51,0	1,481	1,349	1,120	0,718
51,5	1,422	1,349	1,125	0,718
52,0	1,388	1,334	1,129	0,743
52,5	1,403	1,310	1,129	0,782
53,0	1,447	1,256	1,129	0,841
53,5	1,471	1,217	1,129	0,875
54,0	1,491	1,227	1,129	0,885
54,5	1,500	1,276	1,125	0,890
55,0	1,500	1,300	1,105	0,894
55,5	1,505	1,325	1,076	0,894
56,0	1,505	1,339	1,041	0,846
56,5	1,510	1,344	0,999	0,738
57,0	1,505	1,349	0,972	0,709
57,5	1,481	1,349	1,037	0,714
58,0	1,427	1,349	1,056	0,738
58,5	1,398	1,354	1,076	0,797
59,0	1,413	1,349	1,105	0,831
59,5	1,471	1,349	1,125	0,841
60,0	1,515	1,354	1,125	0,865
Δ (V)	0,127	0,142	0,168	0,186
S (V/s)	0,424	0,532	0,559	0,619
R (s)	0,002	0,002	0,002	0,002

Lampiran 1.10 Pengolahan Data Hasil Analisis Karakteristik Sensor Serat Optik Plastik Variasi Cacatan

Variasi 1 cacatan pada kondisi pernapasan normal:

Diketahui: $V_{maks} = 1,437 V$
 $V_{min} = 1,281 V$
 $N = 0,001$
 $f = 17 \text{ kali per menit}$
 $t = 60 s$

Ditanyakan: $\Delta V = \dots ?$
 $S = \dots ?$

$$R = \dots ?$$

Penyelesaian: $\Delta t = \frac{2 \times f}{t}$

$$\Delta t = \frac{2 \times 17}{60} = 0,567 \text{ t}$$

$$\Delta V = V_{maks} - V_{min}$$

$$\Delta V = 1,437 - 1,281$$

$$\Delta V = 0,156 \text{ V}$$

$$S = \frac{\Delta v}{\Delta t}$$

$$S = \frac{0,156}{0,567} = 0,276 \text{ V/s}$$

$$R = \frac{N}{S}$$

$$R = \frac{0,001}{0,276} = 0,004 \text{ s}$$

Variasi 1 cacatan pada kondisi pernapasan cepat:

Diketahui: $V_{maks} = 1,388 \text{ V}$

$$V_{min} = 1,232 \text{ V}$$

$$N = 0,001$$

$$f = 25 \text{ kali per menit}$$

$$t = 60 \text{ s}$$

Ditanyakan: $\Delta V = \dots ?$

$$S = \dots ?$$

$$R = \dots ?$$

Penyelesaian: $\Delta t = \frac{2 \times f}{t}$

$$\Delta t = \frac{2 \times 25}{60} = 0,833 \text{ t}$$

$$\Delta V = V_{maks} - V_{min}$$

$$\Delta V = 1,388 - 1,232$$

$$\Delta V = 0,156 \text{ V}$$

$$S = \frac{\Delta v}{\Delta t}$$

$$S = \frac{0,156}{0,833} = 0,188 \text{ V/s}$$

$$R = \frac{N}{S}$$

$$R = \frac{0,001}{0,188} = 0,005 \text{ s}$$

Variasi 1 cacatan pada kondisi pernapasan cepat:

Diketahui: $V_{maks} = 1,359 \text{ V}$

$$V_{min} = 1,217 \text{ V}$$

$$N = 0,001$$

$$f = 8 \text{ kali per menit}$$

$$t = 60 \text{ s}$$

Ditanyakan: $\Delta V = \dots ?$

$$S = \dots ?$$

$$R = \dots ?$$

Penyelesaian: $\Delta t = \frac{2 \times f}{t}$

$$\Delta t = \frac{2 \times 8}{60} = 0,267 \text{ t}$$

$$\Delta V = V_{maks} - V_{min}$$

$$\Delta V = 1,359 - 1,217$$

$$\Delta V = 0,142 \text{ V}$$

$$S = \frac{\Delta v}{\Delta t}$$

$$S = \frac{0,142}{0,267} = 0,532 \text{ V/s}$$

$$R = \frac{N}{S}$$

$$R = \frac{0,001}{0,532} = 0,002 \text{ s}$$

Lampiran 1.11 Data Kalibrasi Sensor Tekanan MPX5050GP

Tekanan (mmHg)	Nilai Analog Sensor			Rata-Rata Nilai Analog Sensor
	1	2	3	
0	33	32	33	33
20	77	74	76	76
30	100	98	98	99
40	123	121	124	123
50	146	142	145	144
60	167	166	166	166
70	191	186	191	189
80	208	208	212	209
90	232	230	234	232
100	255	253	256	255
110	277	272	278	276
120	304	298	295	299
130	323	321	317	320
140	345	337	342	341
150	372	371	368	370
160	393	390	388	390
170	413	415	407	412
180	437	439	430	435
190	458	459	451	456
200	480	482	472	478
210	504	501	499	501
220	522	522	521	522
230	544	550	541	545
240	566	573	560	566
250	591	594	586	590
260	611	616	610	612
270	633	633	634	633
280	658	656	653	656

Lampiran 1.12 Data Contoh Pengukuran Tekanan Darah pada 1 Responden

Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)
1	159	33	121	65	97
2	157	34	120	66	96
3	156	35	119	67	95
4	154	36	118	68	96
5	153	37	117	69	97
6	151	38	118	70	96
7	149	39	117	71	95
8	148	40	116	72	94
9	145	41	115	73	93
10	144	42	114	74	92
11	143	43	113	75	91
12	142	44	112	76	90
13	141	45	111	77	91
14	140	46	112	78	92
15	139	47	111	79	93
16	138	48	110	80	92
17	137	49	109	81	91
18	136	50	108	82	90
19	135	51	107	83	89
20	134	52	106	84	88
21	133	53	105	85	87
22	132	54	106	86	86
23	131	55	105	87	85
24	130	56	104	88	86
25	129	57	103	89	87
26	128	58	102	90	86
27	127	59	101	91	85
28	126	60	100	92	84
29	125	61	101	93	83
30	124	62	100	94	82
31	123	63	99	95	81
32	122	64	98	96	82

Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)
97	83	129	67	161	53
98	82	130	66	162	52
99	81	131	67	163	53
100	80	132	66	164	52
101	79	133	65	165	51
102	78	134	64	166	50
103	77	135	65	167	51
104	78	136	64	168	50
105	79	137	63	169	49
106	78	138	62	170	50
107	77	139	61	171	49
108	76	140	60	172	48
109	75	141	61	173	47
110	74	142	62	174	48
111	75	143	61	175	47
112	76	144	60	176	48
113	75	145	59	177	47
114	74	146	58	178	46
115	73	147	57	179	45
116	72	148	58	180	44
117	71	149	57	181	45
118	72	150	58	182	44
119	73	151	57	183	43
120	72	152	58	184	44
121	71	153	57	185	43
122	70	154	56	186	44
123	69	155	55	187	43
124	68	156	56	188	42
125	69	157	55	189	40
126	70	158	54		
127	69	159	53		
128	68	160	52		

Lampiran 1.13 Data Pengukuran Detak Jantung Pada Satu Responden Waktu Pagi Hari, Siang Hari Dan Sore Hari

Waktu (min)	Detak Jantung (bpm)		
	Pagi	Siang	Sore
1	77,00	80,00	74,00
2	76,00	81,00	75,00
3	80,00	82,00	81,00
4	75,00	82,00	78,00
5	76,00	75,00	82,00
6	76,00	77,00	85,00
7	79,00	76,00	78,00
8	76,00	81,00	79,00
9	81,00	78,00	81,00
10	77,00	83,00	79,00
11	79,00	78,00	82,00
12	77,00	79,00	78,00
13	78,00	82,00	81,00
14	78,00	87,00	83,00
15	80,00	85,00	79,00
16	81,00	84,00	85,00
17	82,00	84,00	85,00
18	80,00	83,00	76,00
19	76,00	78,00	82,00
20	77,00	76,00	71,00
21	79,00	83,00	81,00
22	73,00	84,00	81,00
23	79,00	81,00	76,00
24	78,00	84,00	74,00
25	69,00	86,00	74,00
26	76,00	84,00	81,00
27	71,00	85,00	77,00
28	77,00	87,00	78,00
29	78,00	80,00	81,00
30	75,00	80,00	83,00
Rata-Rata	77,20	81,50	79,33

Lampiran 1.14 Data Pengukuran Detak Jantung Pada Tiga Responden Waktu Pagi Hari

Waktu (min)	Detak Jantung (bpm)		
	Respondent 1	Respondent 2	Respondent 3
1	82,00	84,00	80,00
2	82,00	89,00	76,00
3	80,00	92,00	80,00
4	82,00	92,00	75,00
5	79,00	88,00	76,00
6	87,00	93,00	76,00
7	86,00	91,00	79,00
8	83,00	89,00	76,00
9	83,00	90,00	81,00
10	86,00	93,00	77,00
11	82,00	87,00	79,00
12	85,00	95,00	77,00
13	84,00	93,00	78,00
14	81,00	91,00	78,00
15	84,00	89,00	80,00
16	84,00	88,00	81,00
17	82,00	95,00	82,00
18	83,00	91,00	80,00
19	84,00	86,00	76,00
20	87,00	90,00	77,00
21	90,00	91,00	79,00
22	80,00	85,00	73,00
23	85,00	86,00	79,00
24	82,00	91,00	78,00
25	87,00	94,00	69,00
26	84,00	91,00	76,00
27	84,00	89,00	71,00
28	82,00	89,00	77,00
29	84,00	96,00	78,00
30	86,00	89,00	75,00
Rata-Rata	83,67	90,23	77,30

Lampiran 1.15 Data Pengukuran Suhu Tubuh Pada Satu Responden Waktu Pagi Hari, Siang Hari dan Sore Hari

Waktu (min)	Suhu Tubuh (°C)		
	Pagi	Siang	Sore
1	35,88	36,53	36,11
2	36,13	36,63	36,38
3	36,25	36,63	36,46
4	36,31	36,75	36,55
5	36,38	36,81	36,69
6	36,38	36,81	36,69
7	36,44	36,81	36,69
8	36,38	36,88	36,69
9	36,38	36,88	36,69
10	36,44	36,88	36,69
11	36,38	36,88	36,69
12	36,38	36,94	36,69
13	36,38	36,94	36,69
14	36,44	36,94	36,69
15	36,44	36,94	36,69
16	36,44	37,00	36,69
17	36,44	36,94	36,69
18	36,44	37,00	36,69
19	36,44	37,00	36,69
20	36,44	37,00	36,69
21	36,38	37,00	36,69
22	36,38	37,00	36,69
23	36,25	37,00	36,69
24	36,19	37,00	36,69
25	36,20	37,00	36,69
26	36,25	37,00	36,69
27	36,25	37,00	36,69
28	36,31	36,94	36,69
29	36,31	36,94	36,69
30	36,31	36,94	36,71
Suhu Rata-rata	36,33	36,90	36,65

Lampiran 1.16 Data Pengukuran Suhu Tubuh Pada Tiga Responden Waktu Pagi Hari

Waktu (min)	Suhu Tubuh (°C)		
	Respondent 1	Respondent 2	Respondent 3
1	35,07	35,75	36,63
2	35,19	35,88	36,63
3	35,44	36,00	36,69
4	35,63	36,06	36,69
5	35,75	36,19	36,69
6	35,88	36,25	36,69
7	36,00	36,25	36,69
8	36,06	36,38	36,69
9	36,13	36,38	36,69
10	36,19	36,44	36,69
11	36,25	36,44	36,69
12	36,31	36,50	36,69
13	36,31	36,50	36,69
14	36,38	36,56	36,69
15	36,38	36,56	36,69
16	36,38	36,63	36,69
17	36,38	36,63	36,69
18	36,44	36,63	36,69
19	36,44	36,63	36,69
20	36,44	36,69	36,69
21	36,44	36,69	36,69
22	36,44	36,69	36,69
23	36,44	36,75	36,69
24	36,44	36,69	36,69
25	36,44	36,75	36,69
26	36,44	36,75	36,69
27	36,44	36,75	36,69
28	36,44	36,75	36,69
29	36,44	36,75	36,69
30	36,44	36,75	36,71
Suhu Rata-rata	36,18	36,49	36,69

Lampiran 1.17 Data Pengukuran Pernapasan pada Satu Responden

Waktu	Tegangan Keluaran (V)
14:24:00	1,647
14:24:01	1,720
14:24:02	1,779
14:24:04	1,591
14:24:06	1,725
14:24:06	1,783
14:24:07	1,793
14:24:09	1,612
14:24:10	1,774
14:24:11	1,788
14:24:12	1,588
14:24:14	1,769
14:24:15	1,779
14:24:16	1,583
14:24:17	1,754
14:24:19	1,774
14:24:20	1,588
14:24:21	1,730
14:24:22	1,764
14:24:24	1,695
14:24:25	1,593
14:24:26	1,759
14:24:28	1,774
14:24:29	1,598
14:24:30	1,744
14:24:31	1,769
14:24:33	1,720
14:24:34	1,642
14:24:35	1,769
14:24:36	1,774

Waktu	Tegangan Keluaran (V)
14:24:38	1,598
14:24:39	1,720
14:24:40	1,744
14:24:41	1,759
14:24:43	1,578
14:24:44	1,705
14:24:45	1,754
14:24:46	1,769
14:24:48	1,583
14:24:49	1,744
14:24:50	1,769
14:24:51	1,578
14:24:53	1,754
14:24:54	1,779
14:24:55	1,554
14:24:56	1,759
14:24:58	1,691
14:24:59	1,695

Lampiran 1.18 Data Pengukuran Tekanan Darah pada *Web Server*

Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)
1	159	33	121	65	101
2	158	34	120	66	100
3	157	35	122	67	99
4	155	36	121	68	98
5	154	37	120	69	97
6	152	38	119	70	96
7	150	39	118	71	97
8	148	40	117	72	98
9	146	41	116	73	97
10	144	42	115	74	96
11	143	43	116	75	95
12	142	44	115	76	94
13	141	45	114	77	93
14	140	46	113	78	94
15	139	47	112	79	95
16	138	48	111	80	94
17	137	49	110	81	93
18	136	50	109	82	92
19	135	51	108	83	91
20	134	52	110	84	90
21	133	53	109	85	89
22	132	54	108	86	90
23	131	55	107	87	91
24	130	56	106	88	90
25	129	57	105	89	89
26	128	58	104	90	88
27	127	59	103	91	87
28	126	60	102	92	86
29	125	61	101	93	87
30	124	62	100	94	88
31	123	63	101	95	87
32	122	64	102	96	86

Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)	Jumlah Data Pengukuran (Kali)	Tekanan Darah (mmHg)
97	85	129	66	161	51
98	84	130	67	162	50
99	83	131	66	163	49
100	84	132	65	164	48
101	85	133	64	165	47
102	84	134	63	166	46
103	83	135	62	167	45
104	82	136	62	168	44
105	81	137	63	169	43
106	82	138	62	170	44
107	83	139	63	171	43
108	82	140	62	172	42
109	81	141	61	173	41
110	80	142	60	174	40
111	79	143	61	175	41
112	78	144	60	176	40
113	77	145	59	177	41
114	76	146	58	178	40
115	75	147	57		
116	76	148	56		
117	75	149	57		
118	74	150	56		
119	75	151	55		
120	74	152	56		
121	73	153	55		
122	72	154	56		
123	71	155	55		
124	70	156	54		
125	68	157	53		
126	69	158	54		
127	68	159	53		
128	67	160	52		

Lampiran 2 Dokumentasi Rangkaian



Lampiran 3 Dokumentasi Pengambilan Data

