



DAFTAR PUSTAKA

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Andrianto, H. & Darmawan, A. (2017). Arduino Belajar Cepat dan Pemrograman. Bandung: Informatika.

Tim Fakultas Teknik Adi Buana Surabaya (2020), Pedoman Tugas Akhir

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<https://www.nn-digital.com/blog/2019/07/10/mengenal-pzem-004t-modul-elektronik-untuk-alat-pengukuran-listrik/#:~:text=PZEM%2D004T%20adalah%20sebuah%20modul,Frekuensi%2C%20Energi%20dan%20Power%20Faktor.&text=Harap%20berhati%2Dhati%20karena%20wiring,arus%20pendek%20pada%20jaringan%20listrik.>



UNIVERSITAS PGRI ADI BUANA SURABAYA

FAKULTAS TEKNIK












Program Studi : Teknik Lingkungan – Perencanaan Wilayah Kota
Teknik Industri – Teknik Elektro - PVKK

KAMPUS II: Jl. Dukuh Menanggal XII/4 ☎ (031) 8281181 Surabaya 60234

Website: www.ft.unipasby.ac.id E-mail: ft@unipasby.ac.id

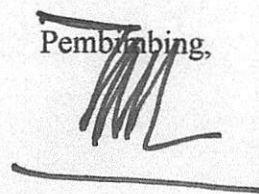
BERITA ACARA BIMBINGAN SKRIPSI

Form Skripsi-03

Nama	: Fajar Kusuma Wardana			
NIM	: 193609002			
Program Studi	: Teknik Elektro			
Pembimbing	: Drs. Widodo, ST., M.Kom			
Periode Bimbingan	: Gasal/Genap*) Tahun 2020 / 2021			
Judul Skripsi	RANCANGAN MONITOR TEGANGAN DAN ARUS PADA PANEL LISTRIK DENGAN DENGAN ARDUINO BERBASIS WEB DI UNIT JEMBER BANDAR UDARA NOTOHADINEGORO			
KEGIATAN KONSULTASI / BIMBINGAN				
No	Tanggal	Materi pembimbingan	Keterangan	Paraf
1	07 OKTOBER 2020	Latar Belakang	Ru	
2	12 OKTOBER 2020	Materi Penulisan di Bab I	dee	
3	27 NOVEMBER 2020	Pemilihan referensi Kajian Pustaka	dee	
4	9 NOVEMBER 2020	Pembahasan desain Perancangan	dee	
5	25 NOVEMBER 2020	Penulisan Bab I. Bab II. Bab III	Ru	
6	8 DESEMBER 2020	Penulisan Bab IV	dee	
7	18 DESEMBER 2020	Penulisan V dan Daftar Pustaka	dee	
8	28 DESEMBER 2021	Penambahan daftar pustaka	dee	
9	11 JANUARI 2021	Abstrak	Ru	
10	15 JANUARI 2021	Sampul Cover dan Lampiran	dee	
Dinyatakan selesai tanggal 15 Januari 2021				

Mengotahui,
Ketua Program Studi,
UNIVERSITAS PGRI ADI BUANA SURABAYA
Akbar Setiawan, S.ST., M.SI

Pembimbing,



Drs. Widodo.,ST., M.Kom

Surabaya, 25 Januari 2021
Mahasiswa,



Fajar Kusuma Wardana



UNIVERSITAS PGRI ADI BUANA SURABAYA

FAKULTAS TEKNIK

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FORM REVISI SKRIPSI

Nama Mahasiswa : Fajar Kusuma Wardana
NIM : 193609009
Fakultas / Progdil : Teknik Elektro
Judul Skripsi : Rancangan Monitor Tegangan dan Arus Pada Panel Listrik Dengan Arduino Berbasis Web di Unit Jember Bandar Udara Notohadinegoro
Ujian Tanggal : 01 Februari 2021

No Bab.	Tanggal	Materi Konsultasi	Keterangan Catatan	Tanda Tangan Penguji
I	03 Februari 2021	Latar belakang	all	
II	04 Februari 2021	Rumusan Masalah	all	
III	05 Februari 2021	Tujuan dan Manfaat	all	
IV	09 Februari 2021	Penulisan dirapikan	all	
V	10 Februari 2021	Kesimpulan dan Saran	all	
VI	11 Februari 2021	Lampiran	all	

Disetujui Dosen Penguji
Pada Tanggal, 16 Februari 2021
Penguji I,

(Dwi Hastuti, S.Kom., MT)

Penguji II,

(Ir. Winarno FB, M.Eng.)

- Penyelesaian Revisi paling lambat 2 minggu dari pelaksanaan Ujian Skripsi.
 - Pengetikan, penjilidan, penandatanganan Skripsi dan mengumpulkan Skripsi paling lambat 2 minggu dari revisi.
- Apabila sampai batas waktu tersebut (point 1,a dan b) mahasiswa belum menyelesaikan revisi dan tanda tangan, maka **Ujian dinyatakan Gugur**.
- Foto copy Form Revisi diserahkan ke Program Studi.
 - Skripsi yang sudah direvisi diserahkan ke Fakultas tiga eksemplar untuk dijilid.



Unipa Surabaya

LAMPIRAN

LAMPIRAN

Contoh API

```
<?php
defined('BASEPATH') or exit('No direct script allowed');
date_default_timezone_set("Asia/Jakarta");

/*-----
REQUIRE THIS PLUGIN-----
*/
require APPPATH . '/libraries/REST_Controller.php';
//use Restserver\Libraries\REST_Controller;

class Line_r extends REST_Controller
{
    /*-----CONSTRUCTOR---
-----*/
    function __construct($config = 'rest')
    {
        parent::__construct($config);
        $this->load->database();
    }

    /*-----GET KONTAK----
-----*/
    function index_get()
    {
        $id = $this->get('id');
        $limit = $this->get('limit');
        $order = $this->get('order');
        $customer = $this->get('customer');
        $lokasi = $this->get('lokasi');

        if ($limit != '') {
            $this->db->limit($limit);
        }
        if ($order != '') {
            $this->db->order_by('id', $order);
        }
    }
}
```

```

        if ($customer != '') {
            $this->db->where('customer', $customer);
        }
        if ($lokasi != '') {
            $this->db->where('lokasi', $lokasi);
        }

        if ($id == '') {
            $line_r = $this->db->get('line_r')->result();
        } else {
            $this->db->where('id', $id);
            $line_r = $this->db->get('line_r')->result();
        }

        $this->response($line_r, 200);
    }

function index_post()
{
    $data = array(
        'lokasi' => $this->post('lokasi'),
        'customer' => $this->post('customer'),
        'tegangan' => $this->post('tegangan'),
        'arus' => $this->post('arus'),
        'daya' => $this->post('daya'),
        'frekuensi' => $this->post('frekuensi'),
        'kwh' => $this->post('kwh'),
        'tanggal' => date("Y-m-d"),
        'waktu' => date("h:i:sa"),
    );
    $insert = $this->db->insert('line_r', $data);
    if ($insert) {
        $this->response($data, 200);
    } else {
        $this->response(array('status' => 'fail', 502));
    }
}

function index_put()
{

```



```

$id = $this->put('id');
$data = array(
    'tegangan' => $this->post('tegangan'),
    'arus' => $this->post('arus'),
    'daya' => $this->post('daya'),
    'frekuensi' => $this->post('frekuensi'),
    'tanggal' => date("Y-m-d"),
    'waktu' => date("h:i:sa"),
);

$this->db->where('id', $id);
$update = $this->db->update('line_r', $data);

if ($update) {
    $this->response($data, 200);
} else {
    $this->response(array('status' => 'fail'), 502);
}
}

function index_delete()
{
    $id = $this->delete('id');
    $auth = $this->delete('auth');

    if ($auth == "batman") {
        $delete = $this->db->empty_table('line_r');
    }else{
        $this->db->where('id', $id);
        $delete = $this->db->delete('arus_pompa_1');
    }
    if ($delete) {
        $this->
>response(array('status' => 'success'), 201);
    } else {
        $this->response(array('status' => 'fail'), 502);
    }
}
}
}

```

Contoh Controller

```
<?php
defined('BASEPATH') or exit('No direct script access allowed
');

class Monitoring extends CI_Controller
{
    public function tes()
    {
        $this->load->view('v_tes');
    }

    public function detail()
    {
        $this->load->view('header/header');
        $this->load->view('v_detail');
        $this->load->view('header/footer');
    }
}
```

Tampilan Awal

```
<script>
$(document).ready(function() {
    live_data();
})

function live_data() {
    setTimeout(function() {
        line_r();
        line_s();
        line_t();
        line_rs();
        line_st();
        line_rt();
        suhu();
        live_data();
    }, 1000);
```

```

}
</script>
<div class="content-wrapper">
  <!-- Content Header (Page header) -->
  <div class="content-header">
    <div class="container-fluid">
      <div class="row mb-2">
        <div class="col-sm-6">
          <h1 class="m-0 text-
primary">Panel 1 (Surabaya)</h1>

          <a href="<?= base_url('monitoring/reset_
kwh') ?>">
            <button type="button" class="btn btn
-warning">
              Reset KWH
            </button>
          </a>
          <button type="button" class="btn btn-
primary">
            Suhu : <div id="nilai_suhu"></div>
          </button>

          <h3 class="m-0 text-
secondary">Voltage</h3>
        </div><!-- /.col -->
      </div><!-- /.row -->
    </div><!-- /.container-fluid -->
  </div>

  <section class="content">
    <div class="container-fluid">

      <div class="row">

        <!-- fix for small devices only -->
        <div class="clearfix hidden-md-up"></div>

        <div class="col-12 col-sm-4 col-md-4">

```

```

        <div class="info-box">
            <span class="info-box-icon bg-
danger elevation-1"><i class="fas fa-bolt"></i></span>
            <div class="info-box-content">
                <span class="info-box-
text">Line 1</span>
                <span class="info-box-number">
                    <div id="line_r_tegangan"></
div>
                </span>
            </div>
        </div>
    </div>
    <!-- fix for small devices only -->
    <div class="clearfix hidden-md-up"></div>

    <div class="col-12 col-sm-4 col-md-4">
        <div class="info-box">
            <span class="info-box-icon bg-
warning elevation-1"><i class="fas fa-bolt"></i></span>
            <div class="info-box-content">
                <span class="info-box-
text">Line 2</span></span>
                <span class="info-box-number">
                    <div id="line_s_tegangan"></
div>
                </span>
            </div>
        </div>
    </div>
    <!-- fix for small devices only -->
    <div class="clearfix hidden-md-up"></div>

    <div class="col-12 col-sm-4 col-md-4">
        <div class="info-box">
            <span class="info-box-icon bg-
dark elevation-1"><i class="fas fa-bolt"></i></span>
            <div class="info-box-content">

```



```

                                <span class="info-box-
text">Line 3</span>
                                <span class="info-box-number">
                                  <div id="line_t_tegangan"></
div>
                                </span>
                                </div>
                                </div>
                                </div>
                                <div class="clearfix hidden-md-up"></div>
</section>
  <!-- Control Sidebar -->
  <aside class="control-sidebar control-sidebar-
secondary">
    <!-- Control sidebar content goes here -->
  </aside>
  <!-- /.control-sidebar -->

```

Tampilan Grafik

```

<script>
$(document).ready(function() {
  done();

  function done() {
    setTimeout(() => {
      showGraph1();
      done();
    }, 500);
  }

  function showGraph1() {
    $.ajax({
      method: "GET",
      url: "<?%= base_url() ?>line_r?limit=60&order=des
c&customer=<?%= $this->session->userdata('customer'); ?>",
      success: function(e) {
        var nama = [],
            values = [];

```

```

        for (var i in e) {
            nama.push(e[i].waktu);
            values.push(e[i].arus);
        }
        var ctx = document.getElementById("arus_line
_r").getContext('2d');
        var panzerChart = new Chart(ctx, {
            type: 'line',
            data: {
                labels: nama.reverse(),
                datasets: [{
                    label: "Arus Line 1",
                    data: values.reverse(),
                    backgroundColor: ['rgba(222, 52,
70, 0.2)'],
                    borderColor: ['rgba(222, 52, 70,
1)']
                }]
            },
            options: {
                responsive: true,
                maintainAspectRatio: false,
                legend: {
                    display: true,
                    position: 'bottom'
                },
                animation: {
                    duration: 0
                },
                hover: {
                    animationDuration: 0
                },
                responsiveAnimationDuration: 0
            }
        });
    });
}

```

```

});
</script>
<!-- Content Wrapper. Contains page content -->
<div class="content-wrapper">
  <!-- Content Header (Page header) -->
  <div class="content-header">
    <div class="container-fluid">
      <div class="row mb-2">
        <div class="col-sm-6">
          <h1 class="m-0 text-
dark">Real Time Monitor</h1>
        </div><!-- /.col -->
        <div class="col-sm-6">
          <ol class="breadcrumb float-sm-right">
            </ol>
          </div><!-- /.col -->
        </div><!-- /.row -->
      </div>
    </div>

    <section class="content">
      <div class="container-fluid">

        <div class="row">
          <div class="card card-primary card-
outline col-lg-12">
            <div class="card-header">
              <h3 class="card-title">
                <i class="far fa-chart-bar"></i>
                Arus Line 1
              </h3>
            </div>
            <div class="card-body">
              <div id="grafik">
                <canvas id="arus_line_r"

```

```

                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
            </div>
        </div>
        <!-- /.card-body-->
    </div>

    <div class="card card-primary card-
outline col-lg-12">
        <div class="card-header">
            <h3 class="card-title">
                <i class="far fa-chart-bar"></i>
                Arus Line 2
            </h3>
        </div>
        <div class="card-body">
            <div id="grafik">
                <canvas id="arus_line_s"
                    style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
            </div>
        </div>
        <!-- /.card-body-->
    </div>

    <div class="card card-primary card-
outline col-lg-12">
        <div class="card-header">
            <h3 class="card-title">
                <i class="far fa-chart-bar"></i>
                Arus Line 3
            </h3>
        </div>
        <div class="card-body">
            <div id="grafik">
                <canvas id="arus_line_t"

```



```

                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
            </div>
        </div>
    </div>
</div>

<div class="card card-primary card-
outline col-lg-12">
    <div class="card-header">
        <h3 class="card-title">
            <i class="far fa-chart-bar"></i>
            Daya Line 1
        </h3>
    </div>
    <div class="card-body">
        <div id="grafik">
            <canvas id="daya_line_r"
                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
        </div>
    </div>
</div>

<div class="card card-primary card-
outline col-lg-12">
    <div class="card-header">
        <h3 class="card-title">
            <i class="far fa-chart-bar"></i>
            Daya Line 2
        </h3>
    </div>
    <div class="card-body">
        <div id="grafik">
            <canvas id="daya_line_s"
                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>

```

```

        </div>
    </div>
</div>

<div class="card card-primary card-
outline col-lg-12">
    <div class="card-header">
        <h3 class="card-title">
            <i class="far fa-chart-bar"></i>
            Daya Line 3
        </h3>
    </div>
    <div class="card-body">
        <div id="grafik">
            <canvas id="daya_line_t"
                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
        </div>
    </div>
</div>

<div class="card card-primary card-
outline col-lg-12">
    <div class="card-header">
        <h3 class="card-title">
            <i class="far fa-chart-bar"></i>
            Kwh Line 1
        </h3>
    </div>
    <div class="card-body">
        <div id="grafik">
            <canvas id="kwh_line_r"
                style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
        </div>
    </div>
</div>

```

```

        <div class="card card-primary card-
outline col-lg-12">
            <div class="card-header">
                <h3 class="card-title">
                    <i class="far fa-chart-bar"></i>
                    Kwh line 2
                </h3>
            </div>
            <div class="card-body">
                <div id="grafik">
                    <canvas id="kwh_line_s"
                    style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
                </div>
            </div>
        </div>

```

```

        <div class="card card-primary card-
outline col-lg-12">
            <div class="card-header">
                <h3 class="card-title">
                    <i class="far fa-chart-bar"></i>
                    Kwh Line 3
                </h3>
            </div>
            <div class="card-body">
                <div id="grafik">
                    <canvas id="kwh_line_t"
                    style="min-
height: 250px; height: 250px; max-height: 250px; max-
width: 100%;"></canvas>
                </div>
            </div>
        </div>

```

```

</div>
<!-- /.row -->

```

```
        <!-- /.content -->
</div>
<!-- /.content-wrapper -->

<!-- Control Sidebar -->
<aside class="control-sidebar control-sidebar-dark">
    <!-- Control sidebar content goes here -->
</aside>
<!-- /.control-sidebar -->
```


Laporan Monitoring line_r

NO	Tegangan	Arus	Daya	Frekuensi	KWH	Waktu	Tanggal
1	229 V	4.35 A	904.9 W	50 Hz	184,187	10:00:09	2021-02-08
2	229 V	4.33 A	902.7 W	50 Hz	184,19	10:00:16	2021-02-08
3	229 V	4.32 A	898.1 W	50 Hz	184,191	10:00:22	2021-02-08
4	229 V	4.3 A	895.3 W	49.9 Hz	184,192	10:00:25	2021-02-08
5	229 V	4.35 A	907.8 W	50 Hz	184,193	10:00:28	2021-02-08
6	229 V	4.32 A	89630 W	50 Hz	184,193	10:00:31	2021-02-08
7	229 V	4.31 A	895.4 W	49.9 Hz	184,195	10:00:35	2021-02-08
8	229 V	4.33 A	895.9 W	50 Hz	184,195	10:00:38	2021-02-08
9	229 V	4.31 A	894.4 W	49.9 Hz	184,196	10:00:44	2021-02-08
10	229 V	4.3 A	895.5 W	50 Hz	184,197	10:00:46	2021-02-08
11	229 V	4.35 A	903.3 W	50 Hz	184,198	10:00:48	2021-02-08
12	229 V	4.32 A	895.8 W	49.9 Hz	184,198	10:00:50	2021-02-08
13	229 V	4.31 A	895.8 W	49.9 Hz	184,199	10:00:52	2021-02-08
14	229 V	4.3 A	895.7 W	50 Hz	184,199	10:00:55	2021-02-08
15	229 V	4.31 A	895 W	49.9 Hz	184,2	10:00:57	2021-02-08
16	229 V	4.32 A	896.2 W	49.9 Hz	184,2	10:00:59	2021-02-08
17	229 V	4.3 A	895.1 W	50 Hz	194,995	10:00:00	2021-02-08
18	229 V	4.3 A	895.4 W	50 Hz	194,995	10:00:02	2021-02-08
19	229 V	4.31 A	898.2 W	50 Hz	194,996	10:00:11	2021-02-08
20	229 V	4.3 A	894.6 W	50 Hz	194,998	10:00:13	2021-02-08
21	229 V	4.31 A	896.3 W	50 Hz	194,999	10:00:15	2021-02-08
22	229 V	4.31 A	897.1 W	50 Hz	194,999	10:00:17	2021-02-08
23	229 V	4.31 A	895.9 W	50 Hz	195	10:00:19	2021-02-08
24	229 V	4.33 A	899.9 W	50 Hz	195	10:00:21	2021-02-08
25	229 V	4.32 A	896.1 W	50 Hz	195,001	10:00:23	2021-02-08
26	229 V	4.32 A	896.6 W	49.9 Hz	195,001	10:00:25	2021-02-08
27	229 V	4.32 A	897.1 W	49.9 Hz	195,002	10:00:27	2021-02-08
28	229 V	4.3 A	895 W	0 Hz	0	10:00:30	2021-02-08
29	229 V	4.31 A	897.3 W	50 Hz	195,003	10:00:32	2021-02-08
30	229 V	4.3 A	895.1 W	49.9 Hz	195,003	10:00:34	2021-02-08
31	229 V	4.31 A	896.4 W	49.9 Hz	195,004	10:00:36	2021-02-08
32	229 V	4.31 A	896 W	49.9 Hz	195,004	10:00:38	2021-02-08
33	229 V	4.32 A	899.6 W	49.9 Hz	195,005	10:00:40	2021-02-08
34	229 V	4.31 A	896.1 W	49.9 Hz	195,005	10:00:42	2021-02-08
35	229 V	4.3 A	895.9 W	49.9 Hz	195,006	10:00:44	2021-02-08
36	229 V	4.3 A	895.5 W	49.9 Hz	195,006	10:00:46	2021-02-08
37	229 V	4.31 A	897.7 W	49.9 Hz	195,007	10:00:48	2021-02-08
38	229 V	4.3 A	896.4 W	49.9 Hz	195,007	10:00:50	2021-02-08

Laporan Monitoring line_s

NO	Tegangan	Arus	Daya	Frekuensi	KWH	Waktu	Tanggal
1	228 V	7.29 A	1438.4 W	49.9 Hz	298,148	10:00:09	2021-02-08
2	228 V	7.26 A	1433.2 W	49.9 Hz	298,153	10:00:16	2021-02-08
3	228 V	7.26 A	1433.3 W	50 Hz	298,156	10:00:23	2021-02-08
4	228 V	7.23 A	1426.4 W	50 Hz	298,157	10:00:26	2021-02-08
5	228 V	7.27 A	1436.1 W	50 Hz	298,158	10:00:28	2021-02-08
6	228 V	7.27 A	1434.3 W	49.9 Hz	298,159	10:00:31	2021-02-08
7	228 V	7.28 A	1435.4 W	49.9 Hz	298,161	10:00:35	2021-02-08
8	228 V	7.26 A	1430.6 W	50 Hz	298,162	10:00:39	2021-02-08
9	228 V	7.27 A	1433.4 W	49.9 Hz	298,163	10:00:44	2021-02-08
10	228 V	7.26 A	1432.7 W	49.9 Hz	298,165	10:00:46	2021-02-08
11	228 V	7.28 A	1439.7 W	50 Hz	298,166	10:00:48	2021-02-08
12	228 V	7.27 A	1437.2 W	50 Hz	298,167	10:00:50	2021-02-08
13	228 V	7.25 A	1430.6 W	50 Hz	298,168	10:00:53	2021-02-08
14	228 V	7.26 A	1434.9 W	49.9 Hz	298,169	10:00:55	2021-02-08
15	228 V	7.27 A	1435.7 W	50 Hz	298,169	10:00:57	2021-02-08
16	228 V	7.27 A	1436 W	50 Hz	298,17	10:00:59	2021-02-08
17	228 V	7.42 A	1488.2 W	50 Hz	316,234	10:00:00	2021-02-08
18	228 V	7.42 A	1488.1 W	50 Hz	316,235	10:00:02	2021-02-08
19	228 V	7.45 A	1498 W	50 Hz	316,236	10:00:11	2021-02-08
20	228 V	7.43 A	1490 W	50 Hz	316,24	10:00:13	2021-02-08
21	228 V	7.43 A	1490.8 W	50 Hz	316,241	10:00:15	2021-02-08
22	228 V	7.44 A	1491.5 W	50 Hz	316,241	10:00:17	2021-02-08
23	228 V	7.44 A	1489.9 W	50 Hz	316,242	10:00:19	2021-02-08
24	228 V	7.41 A	1483.3 W	50 Hz	316,243	10:00:21	2021-02-08
25	228 V	7.41 A	1484 W	50 Hz	316,244	10:00:23	2021-02-08
26	228 V	7.4 A	1481.7 W	49.9 Hz	316,245	10:00:25	2021-02-08
27	228 V	7.44 A	1490.4 W	49.9 Hz	316,246	10:00:27	2021-02-08
28	0 V	0 A	0 W	0 Hz	0	10:00:30	2021-02-08
29	228 V	7.43 A	1489.1 W	49.9 Hz	316,248	10:00:32	2021-02-08
30	228 V	7.42 A	1487.2 W	49.9 Hz	316,248	10:00:34	2021-02-08
31	228 V	7.41 A	1482.9 W	50 Hz	316,249	10:00:36	2021-02-08
32	228 V	7.42 A	1486.2 W	49.9 Hz	316,25	10:00:38	2021-02-08
33	228 V	7.42 A	1486.4 W	49.9 Hz	316,251	10:00:40	2021-02-08
34	228 V	7.44 A	1493.3 W	49.9 Hz	316,252	10:00:42	2021-02-08
35	228 V	7.41 A	1486.4 W	49.9 Hz	316,253	10:00:44	2021-02-08
36	228 V	7.41 A	1487.1 W	49.9 Hz	316,253	10:00:46	2021-02-08
37	228 V	7.43 A	1490.1 W	49.9 Hz	316,254	10:00:48	2021-02-08
38	228 V	7.42 A	1489.3 W	49.9 Hz	316,255	10:00:50	2021-02-08

Laporan Monitoring line_t

NO	Tegangan	Arus	Daya	Frekuensi	KWH	Waktu	Tanggal
1	229 V	8.33 A	1790.4 W	50 Hz	355,522	10:00:10	2021-02-08
2	229 V	8.29 A	1780.6 W	50 Hz	355,528	10:00:20	2021-02-08
3	229 V	8.3 A	1778.4 W	50 Hz	355,531	10:00:23	2021-02-08
4	229 V	8.29 A	1776.9 W	50 Hz	355,533	10:00:26	2021-02-08
5	229 V	8.29 A	1777.9 W	49.9 Hz	355,534	10:00:28	2021-02-08
6	229 V	8.31 A	1779.8 W	49.9 Hz	355,536	10:00:31	2021-02-08
7	229 V	8.27 A	1772.9 W	50 Hz	355,538	10:00:36	2021-02-08
8	229 V	8.26 A	1770.7 W	50 Hz	355,539	10:00:39	2021-02-08
9	229 V	8.31 A	1786.4 W	50 Hz	355,541	10:00:44	2021-02-08
10	229 V	8.31 A	1781.8 W	50 Hz	355,543	10:00:46	2021-02-08
11	229 V	8.28 A	1778.6 W	50 Hz	355,544	10:00:49	2021-02-08
12	229 V	8.27 A	1771.3 W	50 Hz	355,545	10:00:51	2021-02-08
13	229 V	8.28 A	1775.3 W	50 Hz	355,546	10:00:53	2021-02-08
14	229 V	8.27 A	1772.1 W	50 Hz	355,547	10:00:55	2021-02-08
15	229 V	8.25 A	1769.2 W	50 Hz	355,548	10:00:57	2021-02-08
16	229 V	8.27 A	1775.4 W	49.9 Hz	355,549	10:00:59	2021-02-08
17	229 V	8.11 A	1744.6 W	50 Hz	376,819	10:00:00	2021-02-08
18	229 V	8.15 A	1753.3 W	50 Hz	376,82	10:00:02	2021-02-08
19	229 V	8.19 A	1764.9 W	50 Hz	376,821	10:00:11	2021-02-08
20	229 V	8.13 A	1752 W	50 Hz	376,825	10:00:13	2021-02-08
21	229 V	8.13 A	1750.6 W	50 Hz	376,826	10:00:15	2021-02-08
22	229 V	8.13 A	1750.6 W	50 Hz	376,827	10:00:17	2021-02-08
23	229 V	8.13 A	1749.5 W	49.9 Hz	376,828	10:00:19	2021-02-08
24	229 V	8.13 A	1747.2 W	50 Hz	376,829	10:00:21	2021-02-08
25	229 V	8.11 A	1745.1 W	50 Hz	376,83	10:00:23	2021-02-08
26	229 V	8.16 A	1753.4 W	49.9 Hz	376,831	10:00:25	2021-02-08
27	229 V	8.1 A	1741.8 W	49.9 Hz	376,832	10:00:27	2021-02-08
28	0 V	0 A	0 W	0 Hz	0	10:00:30	2021-02-08
29	229 V	8.13 A	1746.6 W	49.9 Hz	376,834	10:00:32	2021-02-08
30	229 V	8.12 A	1745.2 W	50 Hz	376,835	10:00:34	2021-02-08
31	229 V	8.12 A	1745.9 W	49.9 Hz	376,836	10:00:36	2021-02-08
32	229 V	8.12 A	1744.3 W	49.9 Hz	376,837	10:00:38	2021-02-08
33	229 V	8.09 A	1739.4 W	49.9 Hz	376,838	10:00:40	2021-02-08
34	229 V	8.12 A	1743.9 W	49.9 Hz	376,839	10:00:42	2021-02-08
35	229 V	8.12 A	1745.8 W	49.9 Hz	376,84	10:00:44	2021-02-08
36	229 V	8.12 A	1744.8 W	49.9 Hz	376,841	10:00:46	2021-02-08
37	229 V	8.11 A	1742.8 W	49.9 Hz	376,842	10:00:48	2021-02-08
38	229 V	8.11 A	1743.1 W	49.9 Hz	376,843	10:00:50	2021-02-08