

| Rating | Value | Unit |
|-----------------------------|----------|------|
| Maximum Input Voltage | 30 | Vdc |
| Minimum Input Voltage | 7 | vuc |
| Nominal Current | 3 | |
| Short circuit current | 6 | А |
| Potency | 18 | W |
| Operating Temperature Range | 0 to +60 | °C |

Type of Electrical System

| Electrical System | Туре |
|-------------------|------|
| Monophasic (P+N) | 0 |
| Biphasic (2P) | 0 |
| Biphasic (2P+N) | 1 |
| Triphasic (3P+N) | 2 |

Observation

After selecting the ideal resistor for your application, according to the table, remember to modify the value of the variable "SYSTEM_TYPE" in the microcomputer code according to what's in the table

github.com/lucasrguerra/power_vision linkedin.com/in/lucasrguerra

Lucas Rayan Guerra da Silva

Lucas Rayan Guerra

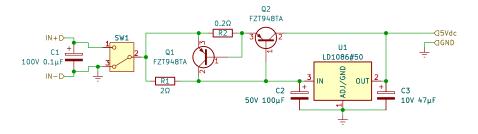
Sheet: /

File: board.kicad sch

| | | Title: | Power | Vision | V5.0 | Schematic |
|--|--|--------|-------|--------|------|-----------|
|--|--|--------|-------|--------|------|-----------|

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| | | | | |

| Rating | Value | Unit |
|---------------------------------|-------------|------|
| Maximum Input Voltage | 30 | |
| Minimum Input Voltage | 7 | Vdc |
| Output Voltage | 5 | |
| Nominal Current | 3 | |
| Short circuit current | 7 | |
| Operating Temperature Range | -55 to +125 | |
| FZT948TA Operation Temperature | -55 to +150 | °C |
| LD1086 Operation Temperature | -65 to +150 | |
| Capacitor Operation Temperature | -55 to +125 | |



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linkedin.com/in/lucasrguerra

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Sheet: /Power/ File: Power.kicad_sch

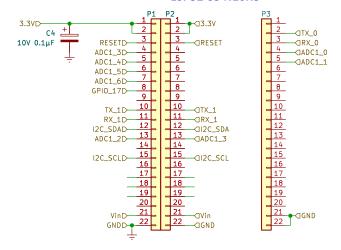
Title: Power Schematic

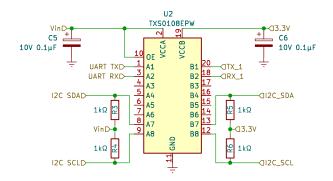
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ESP32-S3 N16R8





Specifications

| Rating | Value | Unit |
|--|-------------|------|
| Input Voltage - Vin | 5 | Vdc |
| Nominal Current | 0.2 | Α |
| Operating Temperature Range | -40 to +65 | |
| ESP32-S3 Operation Temperature | -40 to +65 | °C |
| XS0108E Operation Temperature -40 to +85 | | |
| Capacitor Operation Temperature | -55 to +125 | |

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linkedin.com/in/lucasrguerra

Lucas Rayan Guerra da Silva

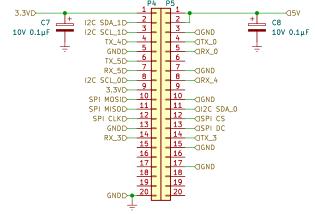
Sheet: /Microcontroller/ File: Microcontroller.kicad_sch

Title: Microcontroller

 Size: A4
 Date: 27/09/2024
 Rev: 1.0

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Specifications Rating Value Unit 5 Input Voltage Vdc **Nominal Current** 2 to 3 Α **Operating Temperature Range** 0 to +70 Orange Pi Zero 2W Operation Temperature 0 to +70 °C -55 to +125 **Capacitor Operation Temperature Orange Pi Zero 2W**



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Sheet: /Microcomputer/ File: Microcomputer.kicad_sch

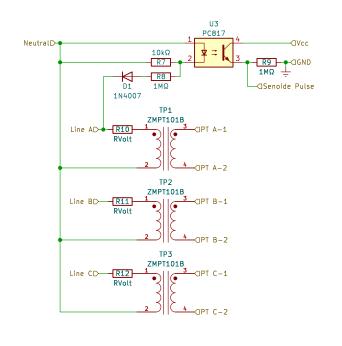
Title: Microcomputer

 Size: A4
 Date: 2024-09-27
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| Rating | Value | Unit |
|--------------------------------|-------------|------|
| Input Voltage Range | 0 to 1000 | Vac |
| ZMPT101B Nominal Current Range | 1 to 2 | mA |
| Operating Temperature Range | -30 to +60 | |
| ZMPT101B Operation Temperature | -40 to +60 | °C |
| PC817 Operation Temperature | -30 to +100 | |

Resistor to Voltage

| System Voltage (RMS) | RVolt | Туре |
|----------------------|-------|------|
| 440Vac | 510kΩ | 0 |
| 380Vac | 470kΩ | 1 |
| 220Vac | 300kΩ | 2 |
| 127Vac | 180kΩ | 3 |

Observation

After selecting the ideal resistor for your application, according to the table, remember to modify the value of the variable "VOLTAGE_TYPE" in the microcomputer according to what's in the table

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linkedin.com/in/lucasrguerra

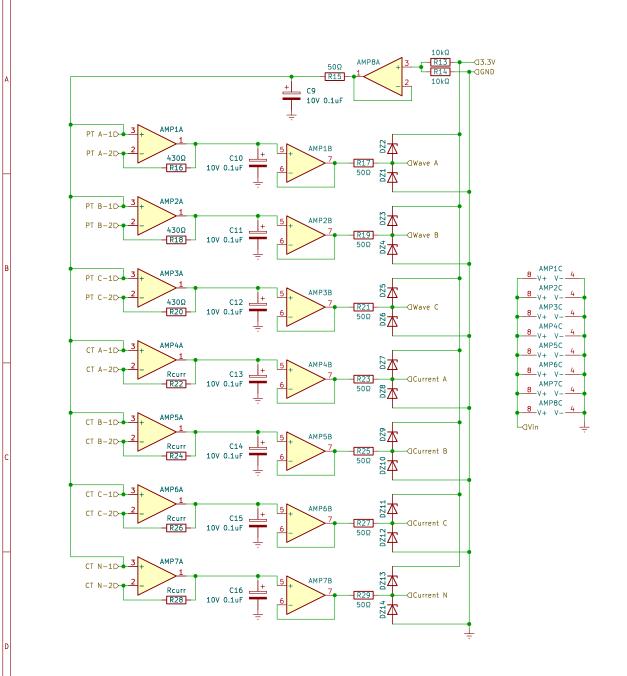
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Sheet: /Signals Acquisition/ File: Signals Acquisition.kicad_sch

Title: Signals Acquisition

 Size: A4
 Date: 2024-09-27
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 Id: 5/6



| Rating | Value | Unit |
|---------------------------------|-------------|------|
| Maximum Input Voltage | 30 . | |
| Minimum Input Voltage | 5 | Vdc |
| Nominal Current | 150 m | |
| Operating Temperature Range | 0 to +70 | |
| TL082 Operation Temperature | 0 to +70 | °C |
| Capacitor Operation Temperature | -55 to +125 | |

Resistor to Current

| Nominal Current (RMS) | RCurr | CT Ratio | Туре |
|-----------------------|-------|----------|------|
| 1000A | 2Ω | 3000:1 | 0 |
| 750A | 2.7Ω | 3000:1 | 1 |
| 500A | 4.3Ω | 3000:1 | 2 |
| 300A | 6.8Ω | 3000:1 | 3 |
| 200A | 10Ω | 3000:1 | 4 |
| 120A | 18Ω | 3000:1 | 5 |
| 100A | 12Ω | 2000:1 | 6 |
| 80A | 27Ω | 3000:1 | 7 |
| 20A | 68Ω | 2000:1 | 8 |

Observation

After selecting the ideal resistor for your application, according to the tables, remember to modify the value of the variable "CURRENT_TYPE" in the microcomputer code according to what's in the table

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linkedin.com/in/lucasrguerra

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Sheet: /Signals Conditioning/ File: Signals Conditioning.kicad_sch

 Size: A4
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