

| Connectors Table | | | |
|------------------|--------------------|-----|----------------------------|
| J2 | Emitter Ballast A | J15 | Emitter Ballast A |
| J3 | Emitter Ballast B | J16 | Aux Winding high |
| J4 | Base control | J17 | Aux Winding low |
| J5 | Base Ballast AB | J18 | Aux Winding middle |
| J6 | Charge Pump 12V | J19 | Charge Pump GND |
| J7 | Output | J20 | Cap & Collector Ballast AB |
| J8 | Current Pot Cursor | J21 | Cap & Output GND |
| J9 | Current Pot Low | J22 | Transformer Tap 1 |
| J10 | Current LED | J23 | Transformer Tap 2 |
| J11 | Voltage LED | J24 | ##### |
| J12 | Voltage Pot Cursor | J25 | ##### |
| J13 | ##### | J26 | Transformer Tap 3 |
| J14 | | J27 | Transformer Tap 4 |

| Transformer | |
|------------------|---------------------------------|
| Primary 230v --- | Secondary --- 18v (Aux winding) |
| | --- 0v |
| | --- -18v |
| | --- 39v tap 1 (green) |
| | --- 31v tap 2 (yellow) |
| | --- 16v tap 3 (orange) |
| 0v --- | --- 0v tap 4 (red) |

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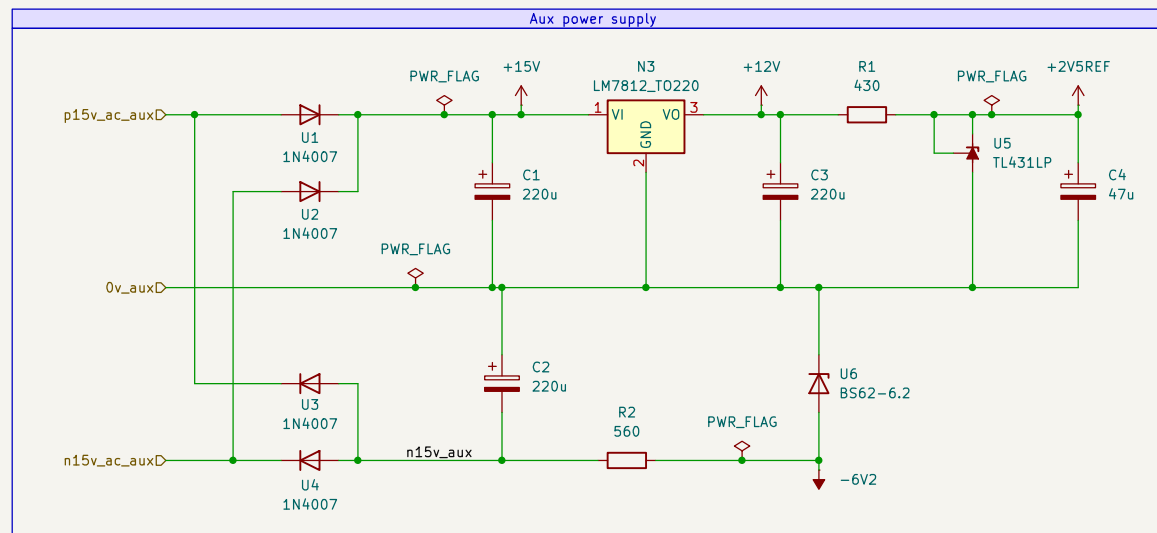
Compliant with Velleman's layout

Sheet: /
File: master.kicad_sch

Title: PS23023 Master

Size: A4 Date: 2025-12-29 Rev: 1.0.0
KiCad E.D.A. 9.0.6 Author: AntoninPvr Id: 1/5





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Sheet: /auxiliary/
File: auxiliary.kicad_sch

Title: PS23023 Master

Size: A4

Date: 2025-12-29

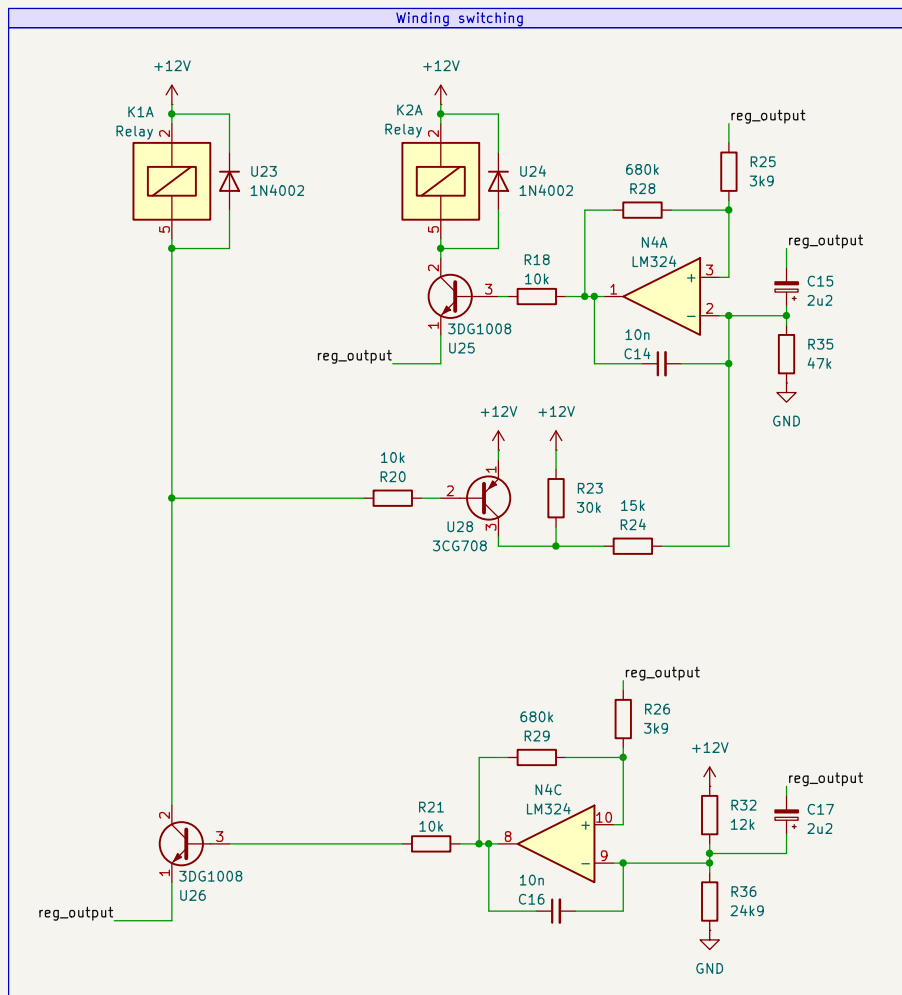
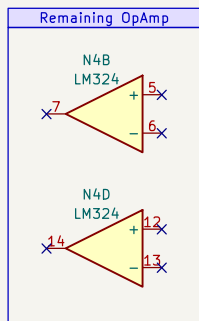
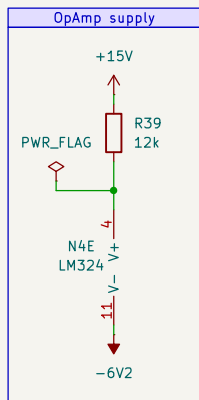
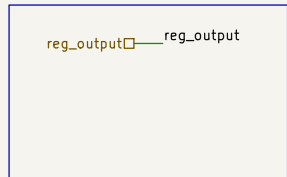
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Id: 2/5





Here is the switching diagram of the transformer:
All voltages are measured without load.

| Taps | Colors | Pins | Voltages |
|------|---------------|---------|----------|
| 2-4 | Yellow-Orange | 23 - 27 | 14.6V |
| 1-4 | Green-Orange | 22 - 27 | 22.7V |
| 2-3 | Yellow-Red | 23 - 26 | 30.9V |
| 1-3 | Green-Red | 22 - 26 | 39.0V |

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Sheet: /winding_switching/
File: winding_switching.kicad_sch

Title: PS23023 Master

Size: A4

Date: 2025-12-29

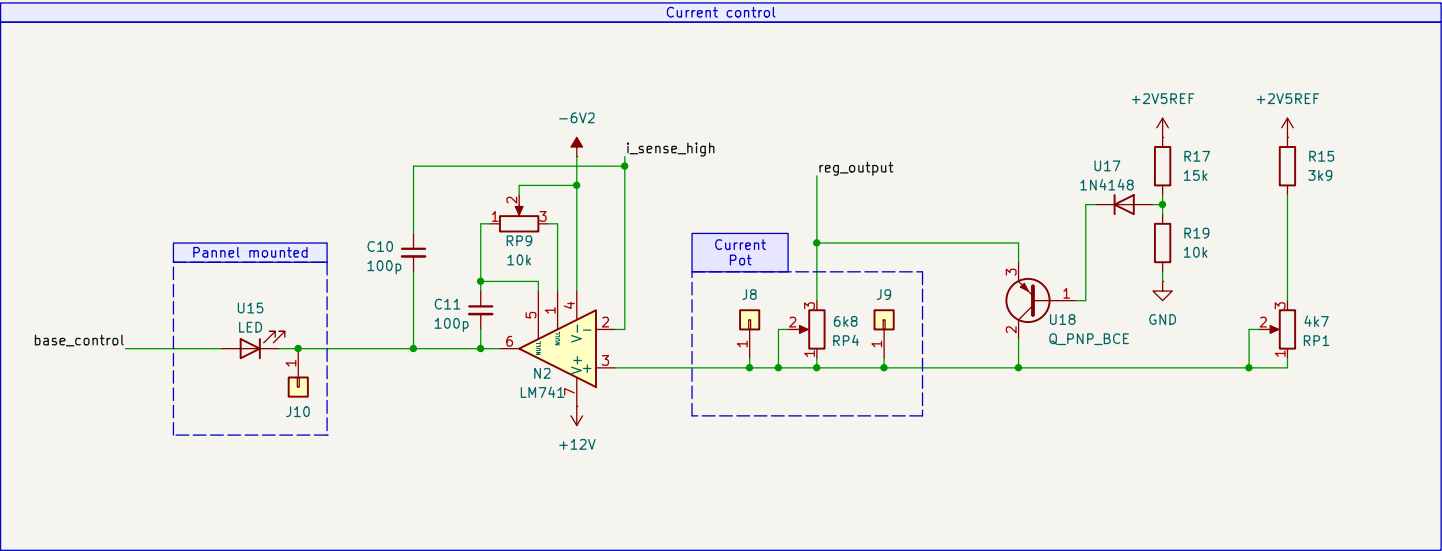
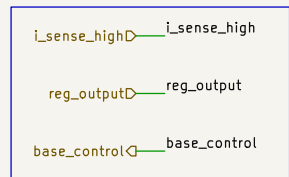
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Adjustment procedure

- RP9 Adjusts the offset current, to ensure 0A at minimum setting.
- RP1 Adjusts the maximum output current range.

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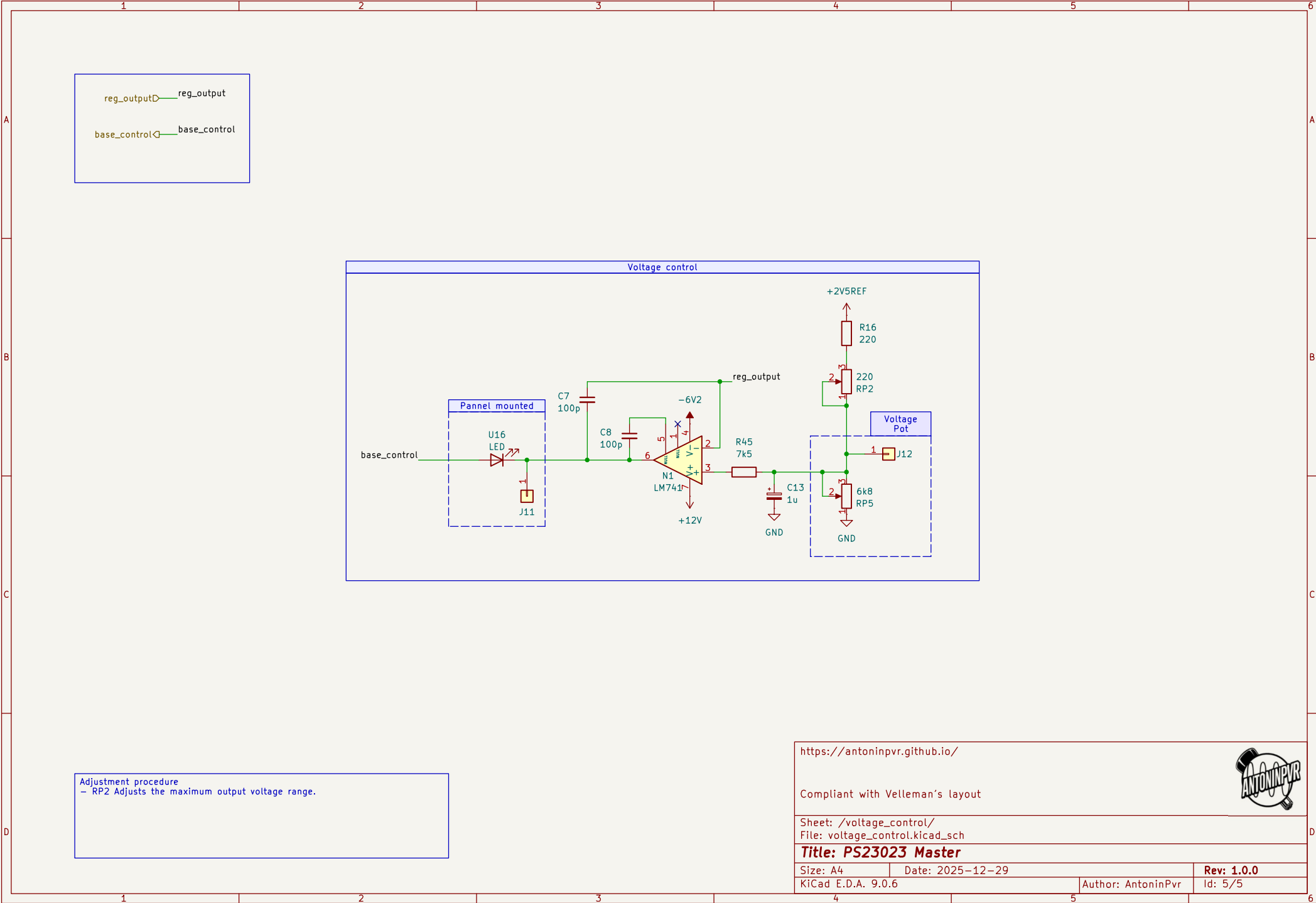


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Sheet: /current_control/
File: current_control.kicad_sch

Title: PS23023 Master

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|--------------------|------------------|--------------------|------------|
| Size: A4 | Date: 2025-12-29 | Author: AntoninPvr | Rev: 1.0.0 |
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- Adjustment procedure
 - RP2 Adjusts the maximum output voltage range.

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Compliant with Velleman's layout

Sheet: /voltage_control/
File: voltage_control.kicad_sch

Title: PS23023 Master

| | |
|----------|------------|
| Size: A4 | Date: 2025 |
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