

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
J12V	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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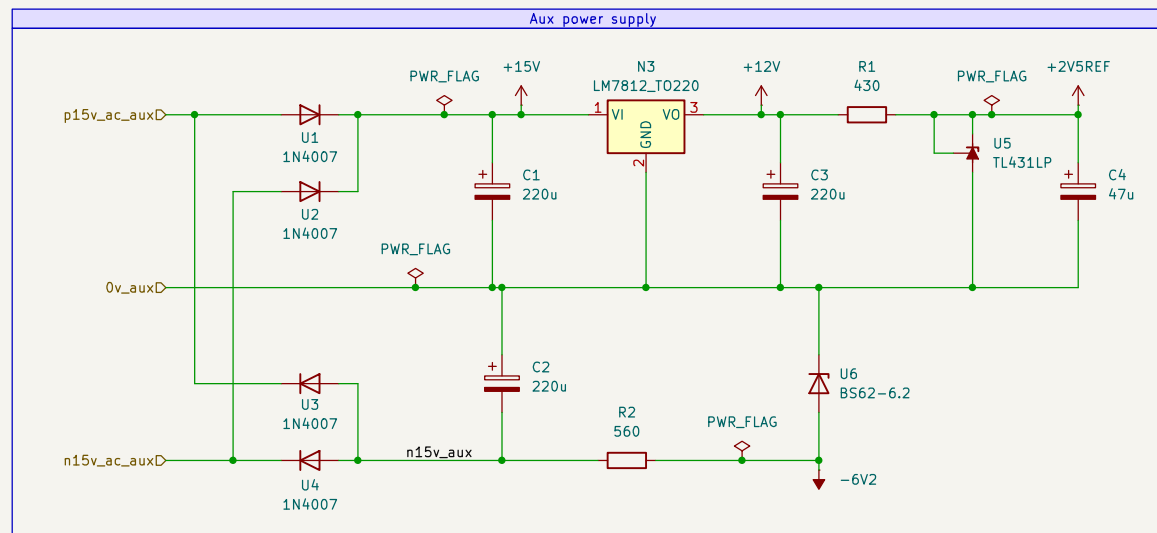
Compliant with Velleman's layout

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

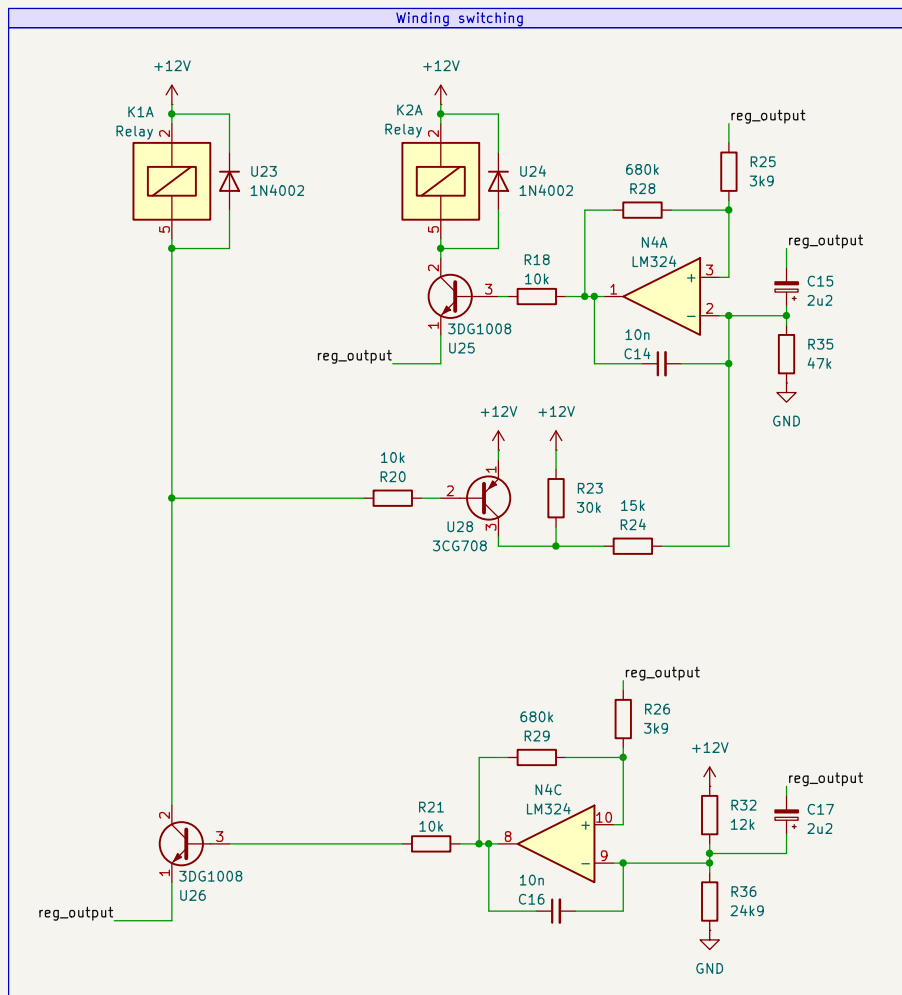
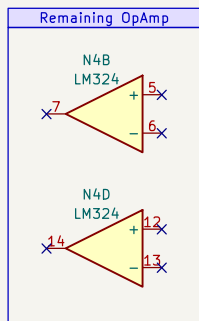
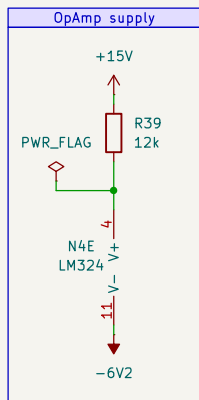
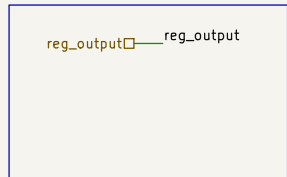
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Author: AntoninPvr

Rev: 1.0.0

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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Compliant with Velleman's layout

Sheet: /winding_switching/
File: winding_switching.kicad_sch

Title: PS23023 Master

Size: A4

Date: 2025-12-29

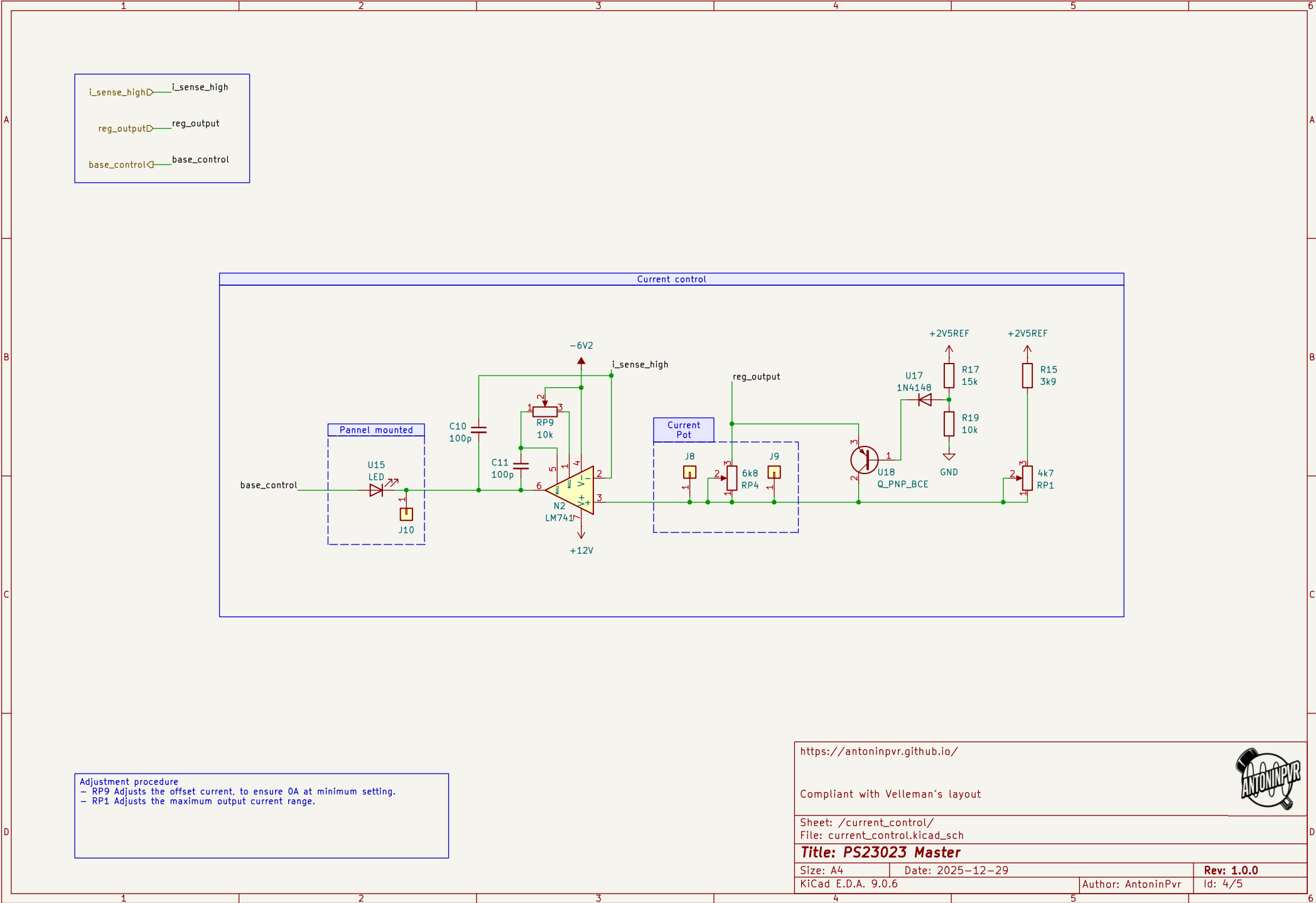
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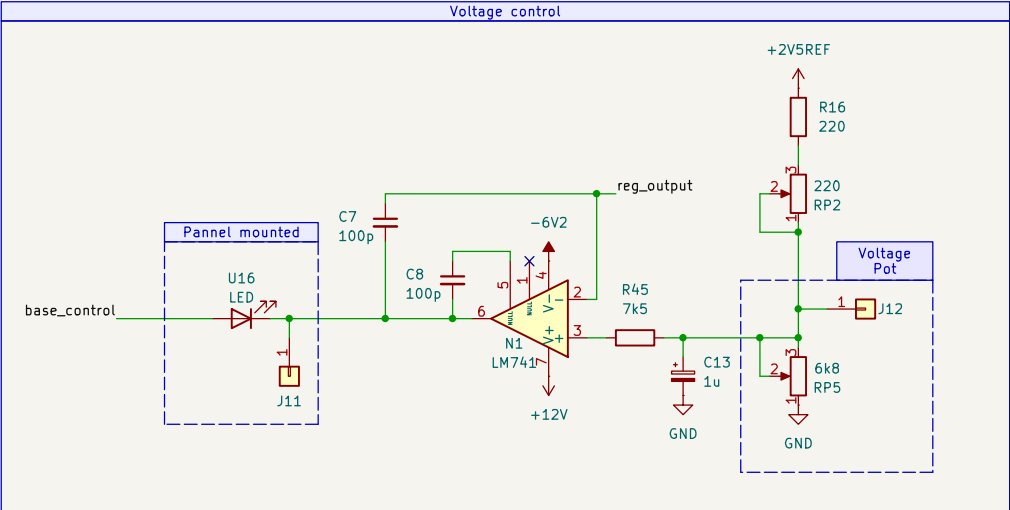
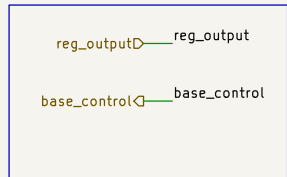


Adjustment procedure

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

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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: 2025-12-29	Author: AntoninPvr	Rev: 1.0.0
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