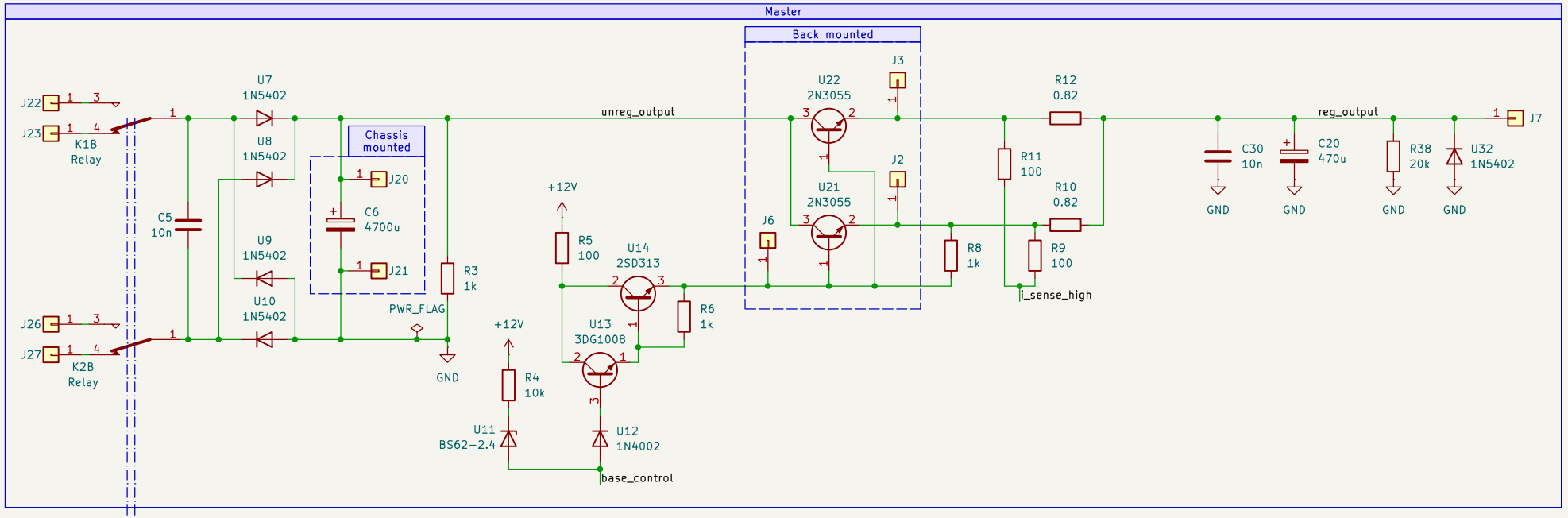

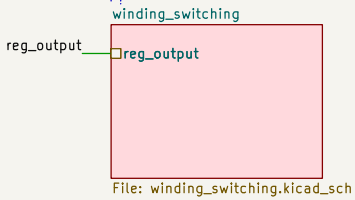

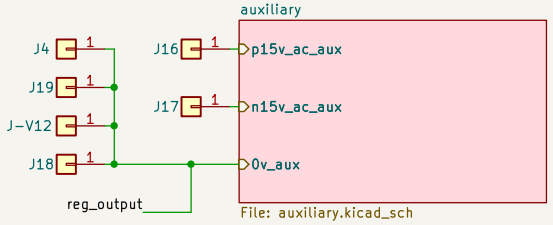

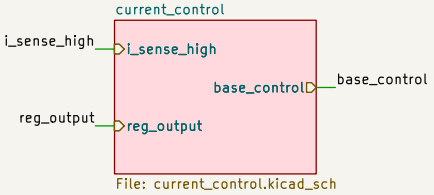

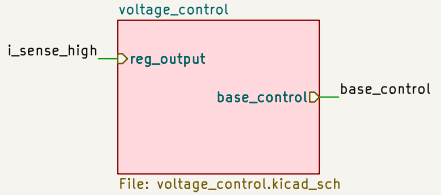

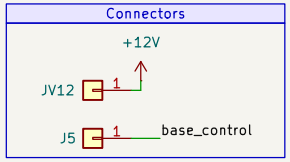

Connectors Table

J2	Emitter Ballast A	J15	Emitter Ballast A
J3	Emitter Ballast B	J16	Aux Winding high
J4		J17	Aux Winding low
J5	Base control	J18	Aux Winding middle
J6	Base Ballast AB	J19	
J12V	Charge Pump 12V	J12V-	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	Secondary	
230v	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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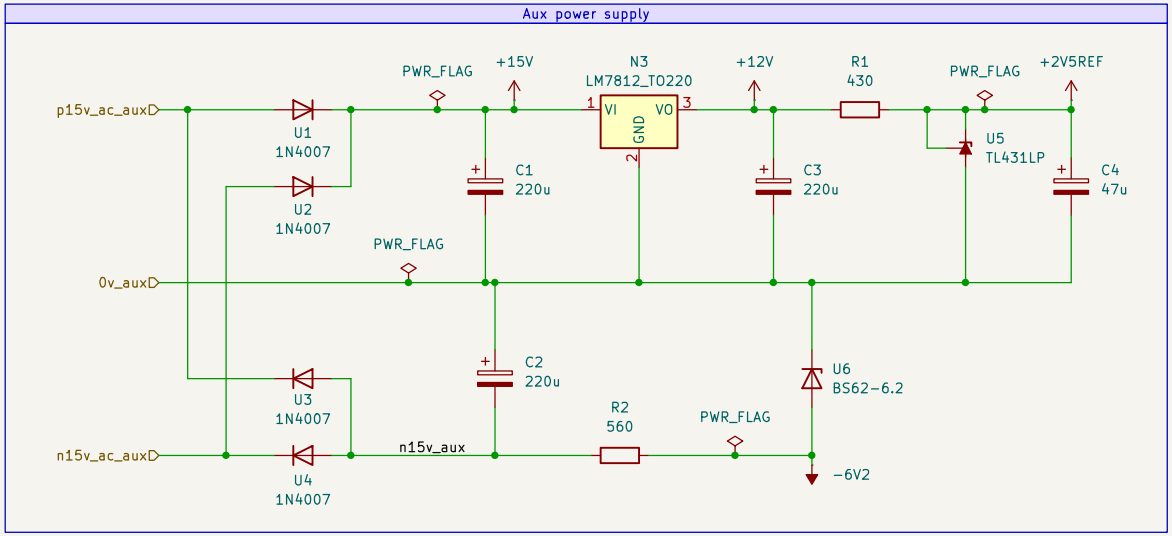
Ref: AQF7.820.7120
Compliant with Velleman's layout

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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Ref: AQF7.820.7120
Compliant with Velleman's layout

Sheet: /auxiliary/
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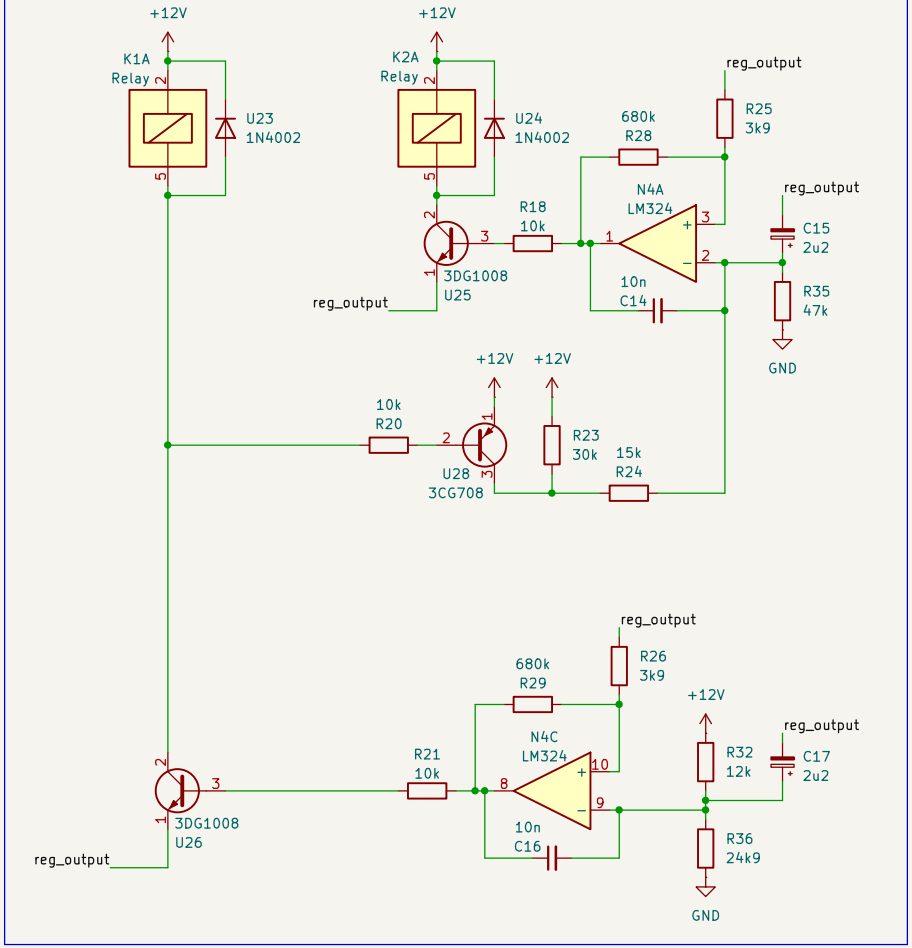
Title: PS23023 Master

Size: A4	Date: 2025-12-29	**Rev: 1.0.0**
KiCad E.D.A. 9.0.6	Author: AntoninPvr	Id: 2/5

reg_output ── reg_output

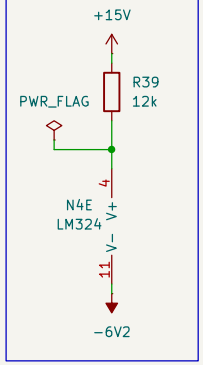
Winding switching



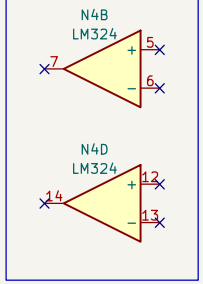
Here is the switching diagram of the transformer:
All voltages are measured without load.

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

OpAmp supply



Remaining OpAmp



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Ref: AQF7.820.7120
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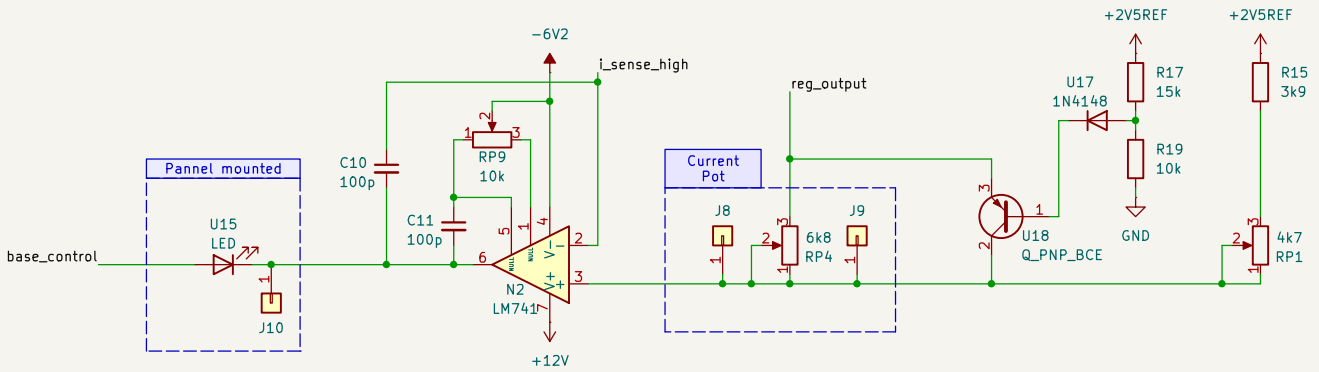
Title: PS23023 Master

Size: A4	Date: 2025-12-29	Rev: 1.0.0
KiCad E.D.A. 9.0.6	Author: AntoninPvr	Id: 3/5

i_sense_high
reg_output
base_control

Current control



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

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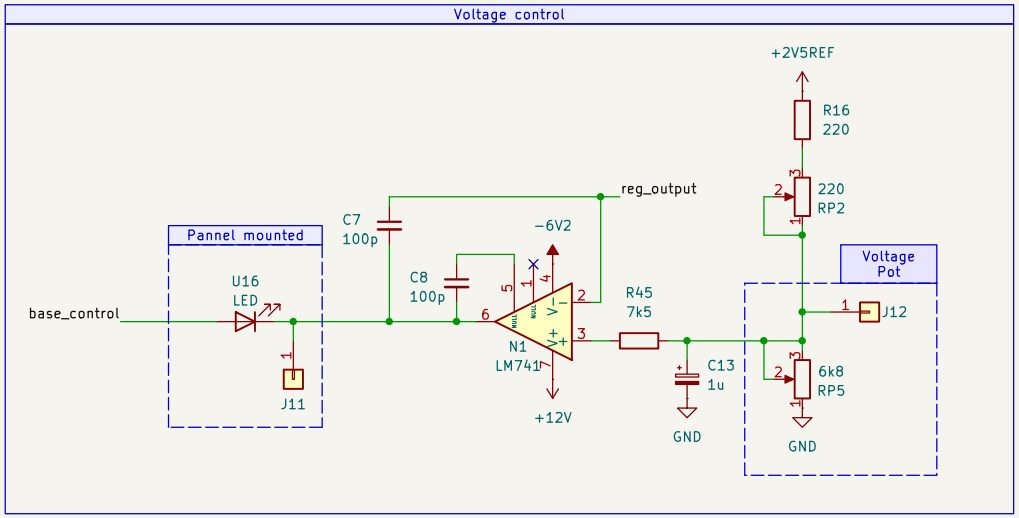
Ref: AQF7.820.7120
Compliant with Velleman's layout

Sheet: /current_control/
File: current_control.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: 4/5

reg_output
base_control



Adjustment procedure
– RP2 Adjusts the maximum output voltage range.

https://antoninpvr.github.io/

Ref: AQF7.820.7120
Compliant with Velleman's layout

Sheet: /voltage_control/
File: voltage_control.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: 5/5