

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	
J12V	Output	J12V-	Charge Pump GND
J7	Current Pot Cursor	J20	Cap & Collector Ballast AB
J8	Current Pot Low	J21	Cap & Output GND
J9	Current LED	J22	Transformer Tap 1
J10	Voltage LED	J23	Transformer Tap 2
J11	Voltage Pot Cursor	J24	#####
J12	#####	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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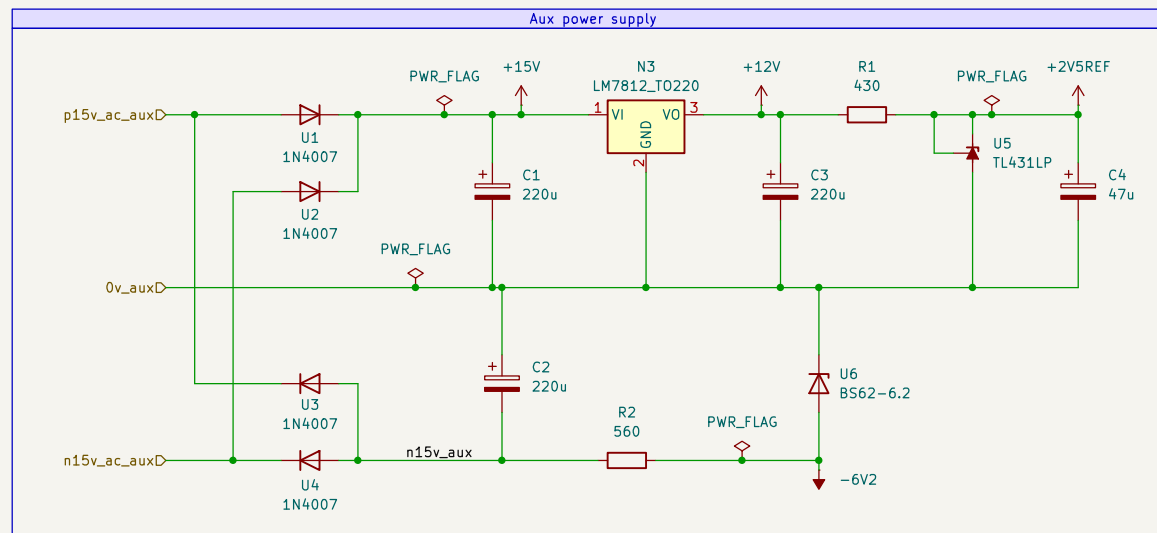
Compliant with Velleman's layout

Sheet: /  
File: ps23023.kicad\_sch

**Title: PS23023 Master**

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





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Sheet: /auxiliary/  
File: auxiliary.kicad\_sch

**Title: PS23023 Master**

Size: A4

Date: 2025-12-29

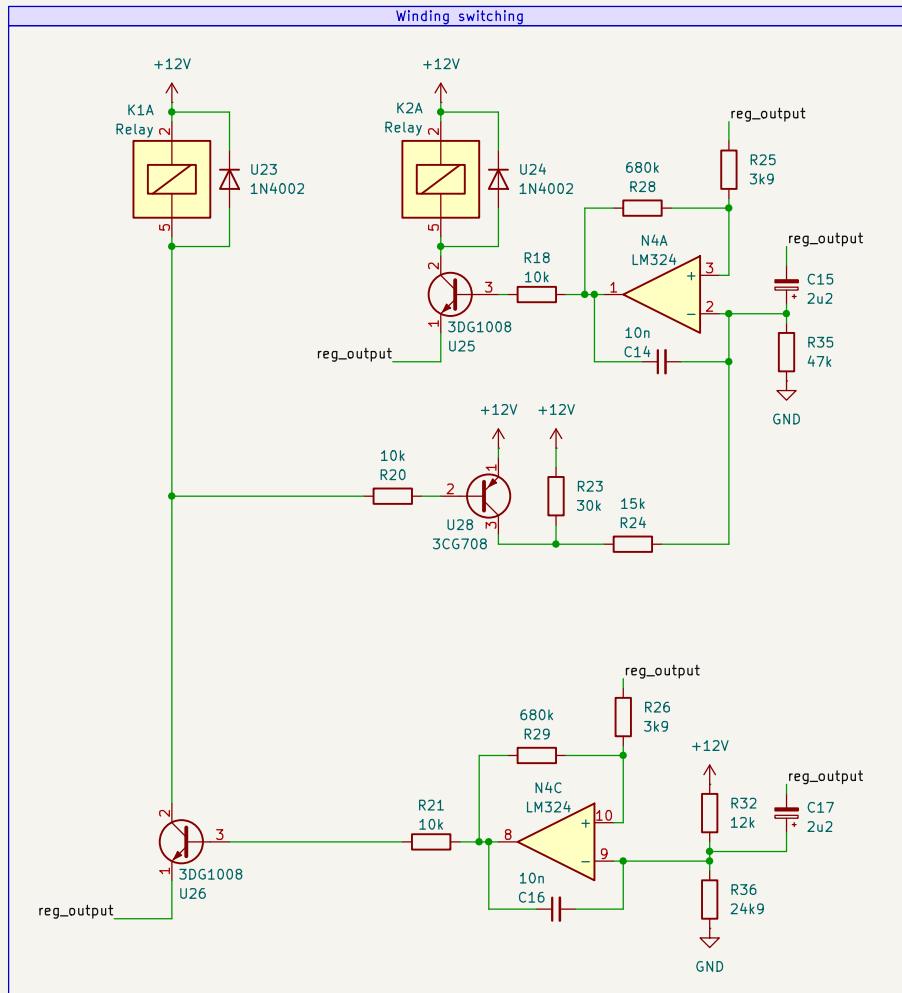
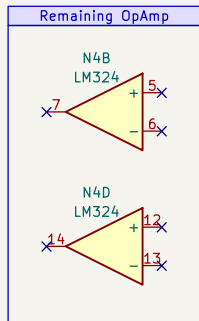
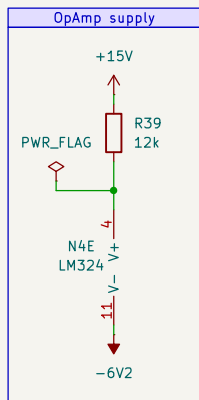
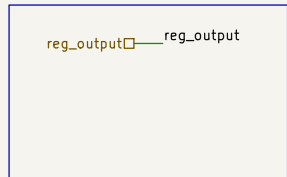
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Here is the switching diagram of the transformer:  
All voltages are measured without load.

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

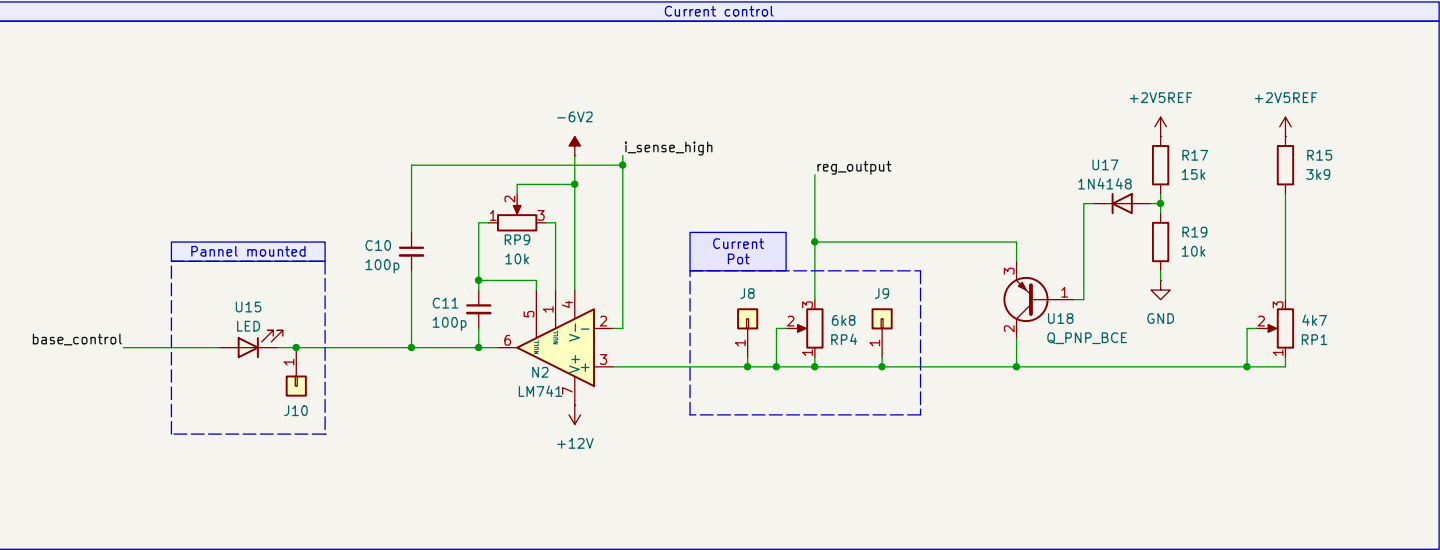
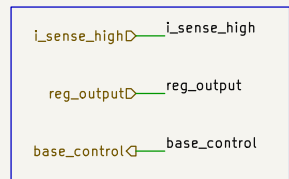
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Adjustment procedure

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

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Sheet: /current\_control/  
File: current\_control.kicad\_sch

**Title: PS23023 Master**

Size: A4

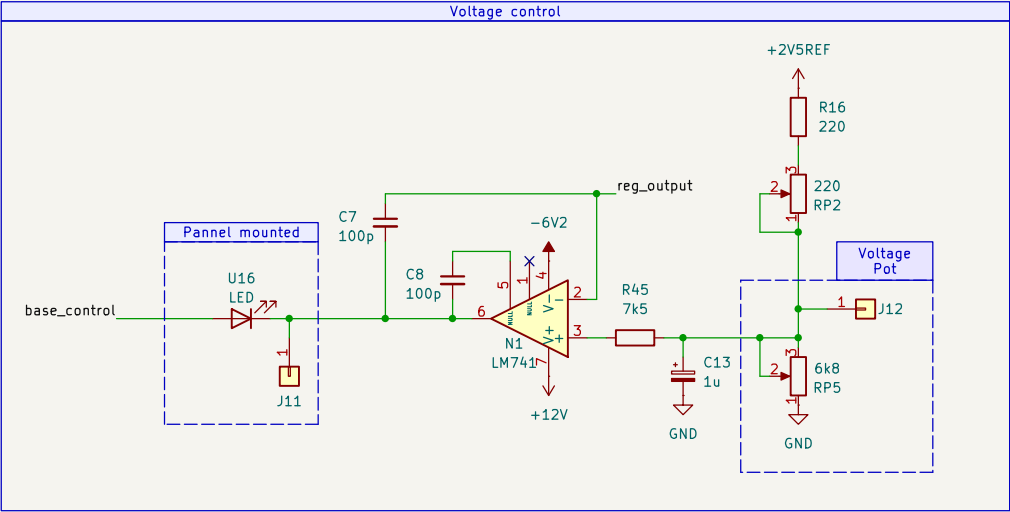
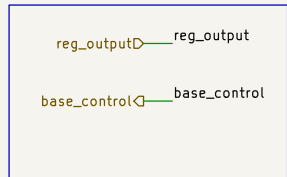
Date: 2025-12-29

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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
KiCad E.D.A. 9.0.6			Id: 5/5