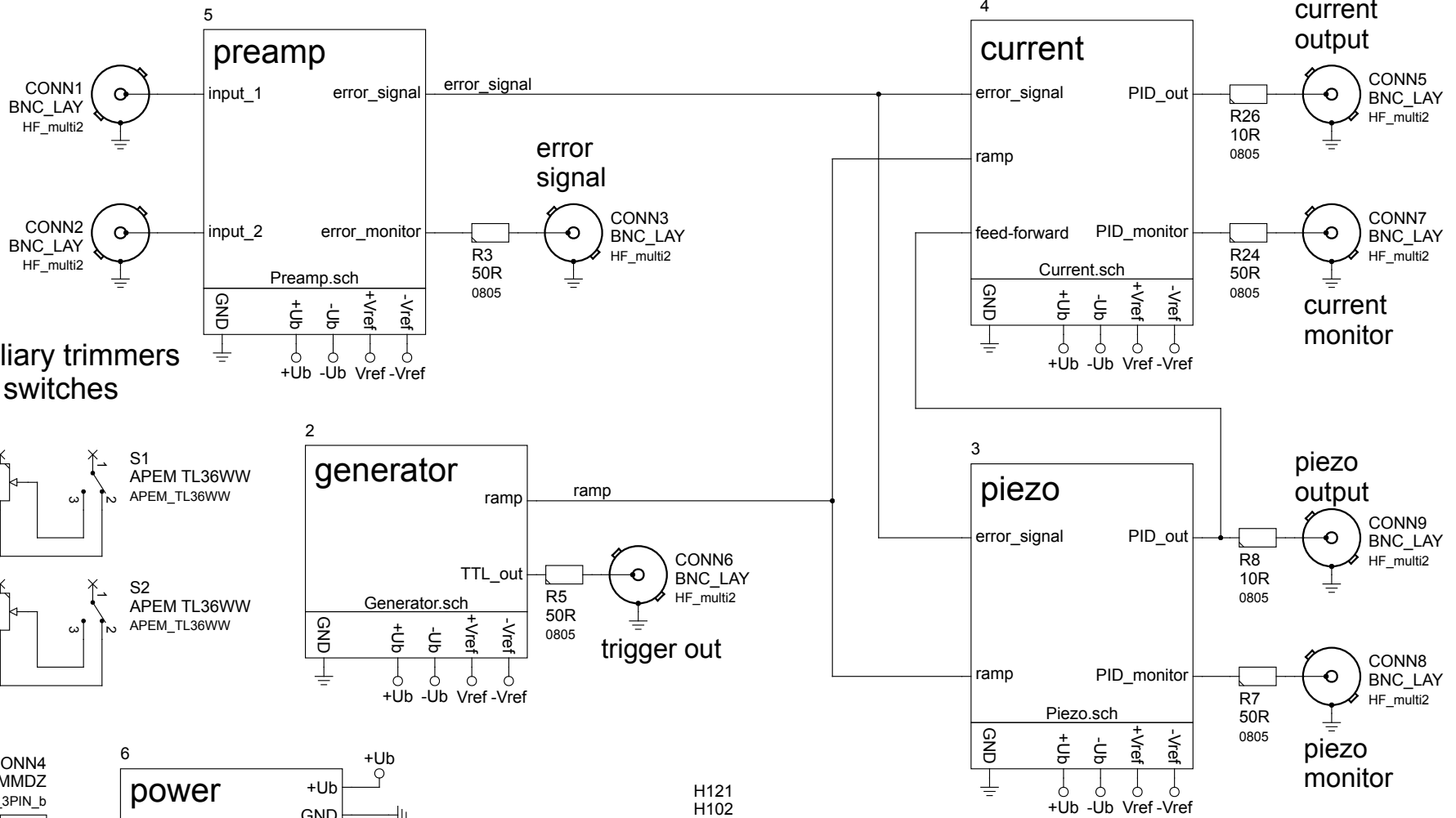
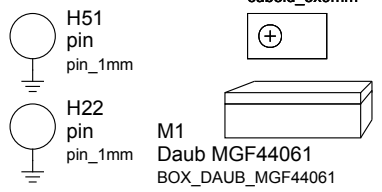
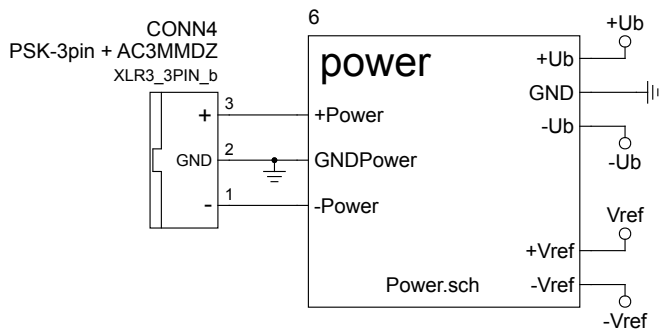
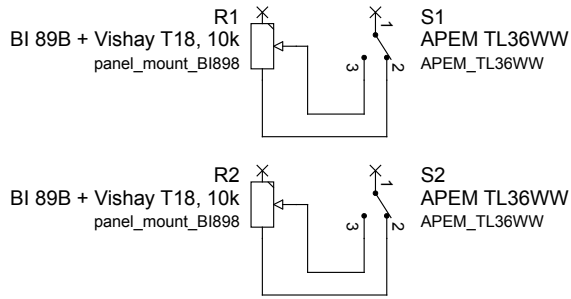
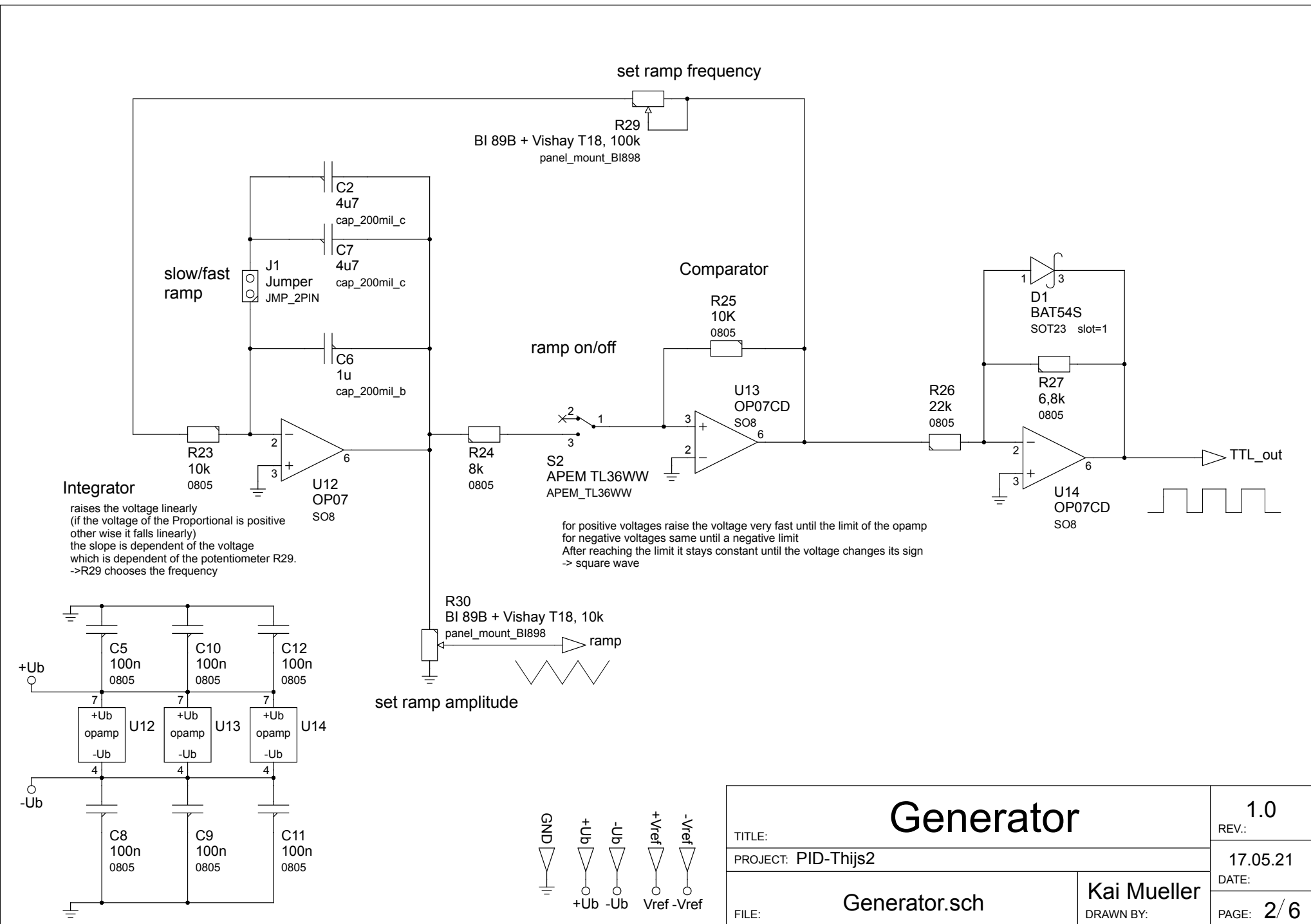


### auxiliary trimmers and switches

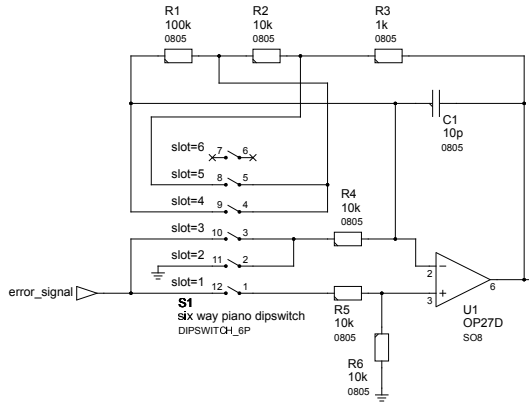


<h1 style="text-align: center;">PID-Thijs2</h1>		REV.: 1.0
		30.04.2021
TITLE: PID-Thijs2 PROJECT: PID-Thijs2		DATE:
FILE: PID-Thijs2.sch		DRAWN BY: Kai Mueller
		PAGE: 1 / 6



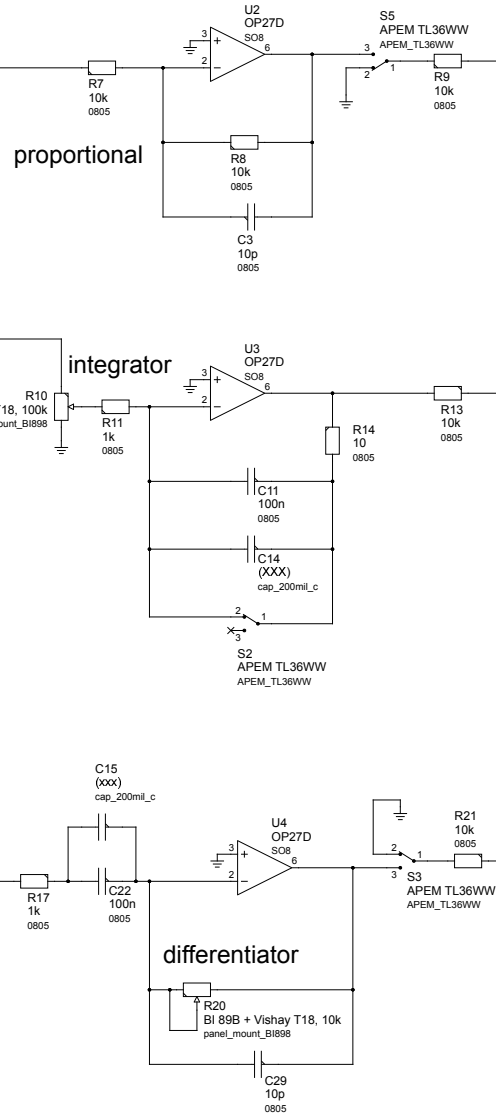
<h1 style="text-align: center;">Generator</h1>		REV.: 1.0
		DATE: 17.05.21
TITLE: PID-Thijs2 PROJECT: PID-Thijs2	FILE: Generator.sch	DRAWN BY: Kai Mueller PAGE: 2/6

**polarity and amplification times 0.1 / 1.1 / 11.1**

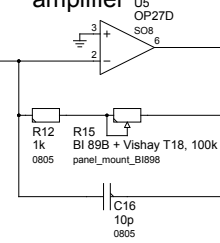


- 001xxx = non-inverting
- 110xxx = inverting
- x11xxx = forbidden (short circuit)
- 100xxx = times 0.5 non-inverting
- 000xxx = 0
- 010xxx = 0
- 101xxx = ?
- xxx00x = times 11.1
- xxx01x = times 10.1
- xxx10x = times 1.1
- xxx11x = times 0.1

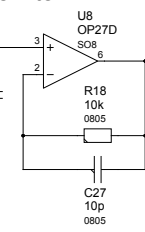
**slow PID regulator**



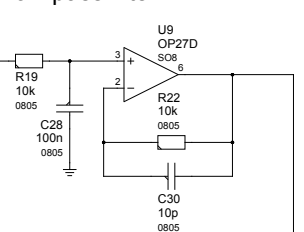
**summing, inverting amplifier**



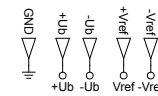
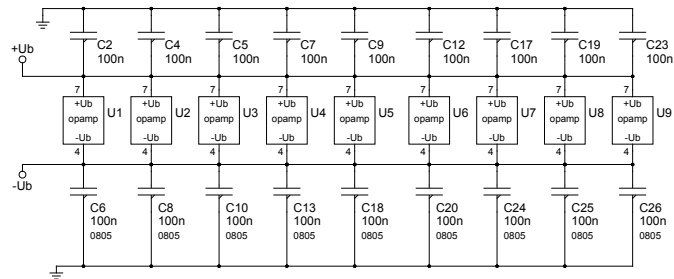
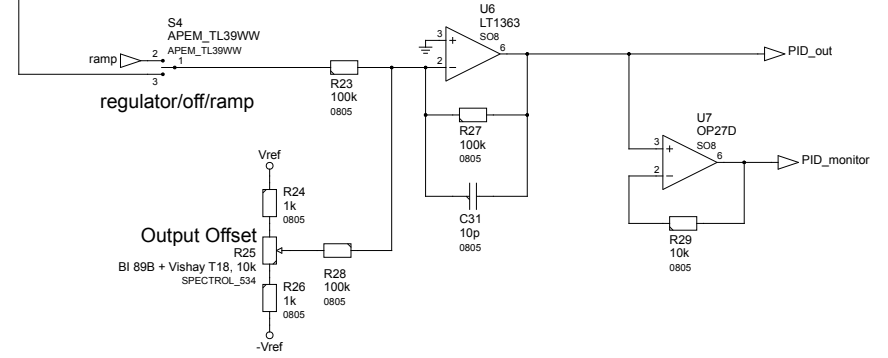
**low pass filter 1**



**low pass filter 2**



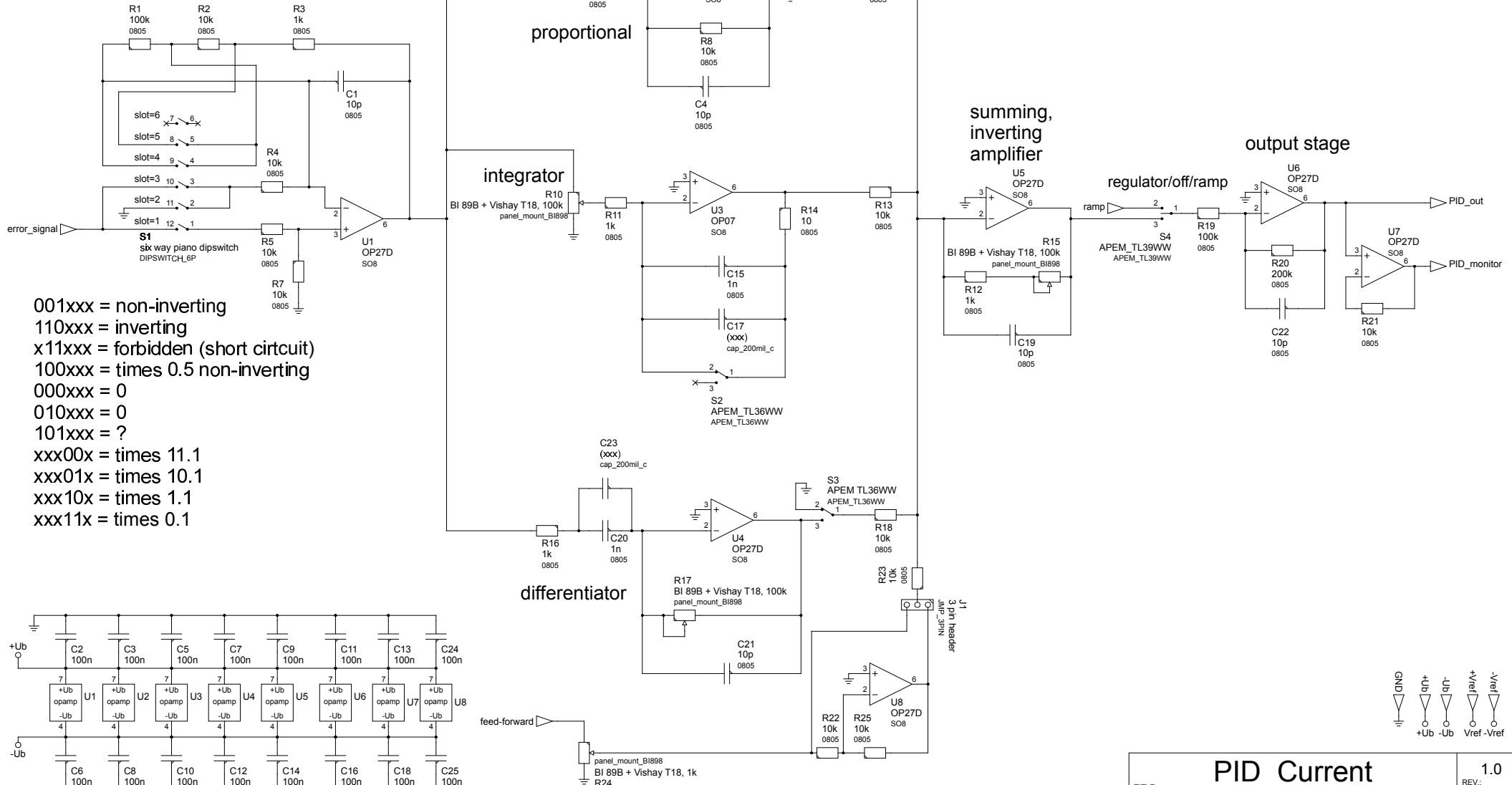
**output stage**



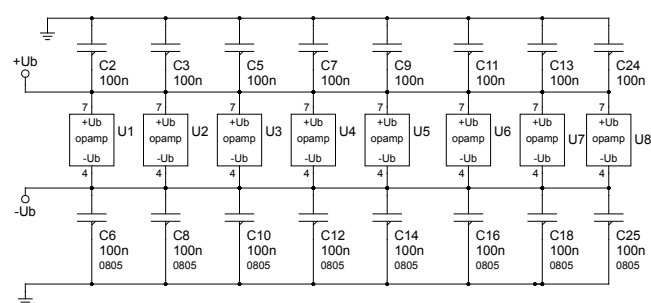
<b>Piezo</b>		1.0
TITLE:	REV:	
PROJECT: PID-Thijs2	30.04.21	
FILE: Piezo.sch	Kai Mueller	DATE:
	DRAWN BY:	PAGE: 3/6

# PID regulator

polarity and amplification times 0.1 / 1.1 / 11.1

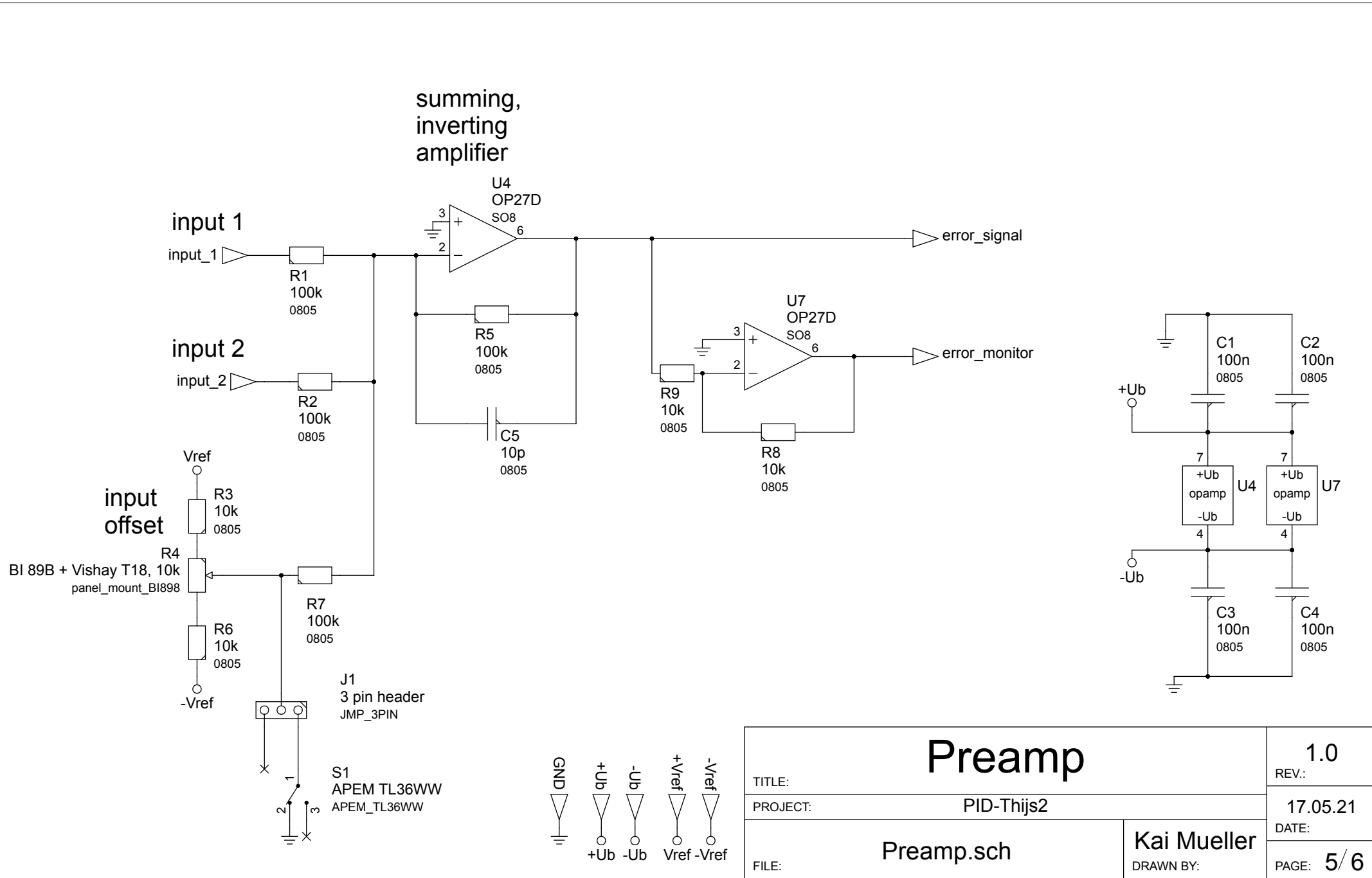


- 001xxx = non-inverting
- 110xxx = inverting
- x11xxx = forbidden (short circuit)
- 100xxx = times 0.5 non-inverting
- 000xxx = 0
- 010xxx = 0
- 101xxx = ?
- xxx00x = times 11.1
- xxx01x = times 10.1
- xxx10x = times 1.1
- xxx11x = times 0.1



"feed forward"  
 no jumper = piezo regulator does not affect current  
 top position = piezo output adds to current output  
 bottom position = piezo output subtracts from current output

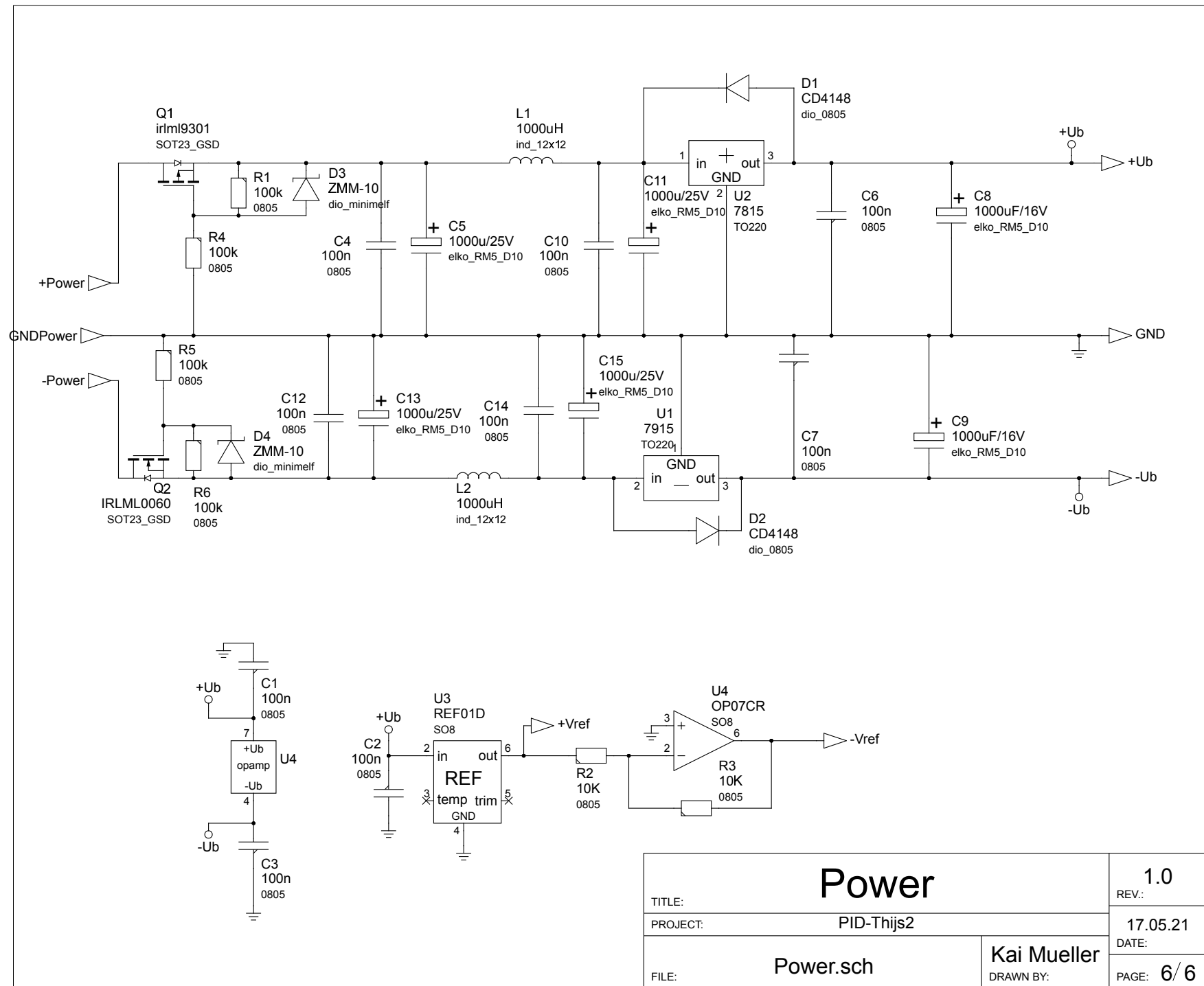
<b>PID_Current</b>		1.0
TITLE:	REV.:	
PROJECT:	PID-Thijs2	
FILE:	Current.sch	DATE: 30.04.21
	DRAWN BY: Kai Mueller	PAGE: 4/6



summing,  
inverting  
amplifier

# Preamp

TITLE:		1.0	
PROJECT:		REV.:	
PID-Thijs2		17.05.21	
DATE:		17.05.21	
FILE:		PAGE: 5/6	
Preamp.sch		DRAWN BY: Kai Mueller	



<h1 style="text-align: center;">Power</h1>		TITLE:	<b>1.0</b>
		PROJECT:	PID-Thijs2
FILE:		DRAWN BY:	<b>Kai Mueller</b>
			DATE:
			PAGE: <b>6/6</b>