

Bias power supply (+/-5V, -10V)

TITLE: EEZ PSU consolidated r5B12

Document Number:

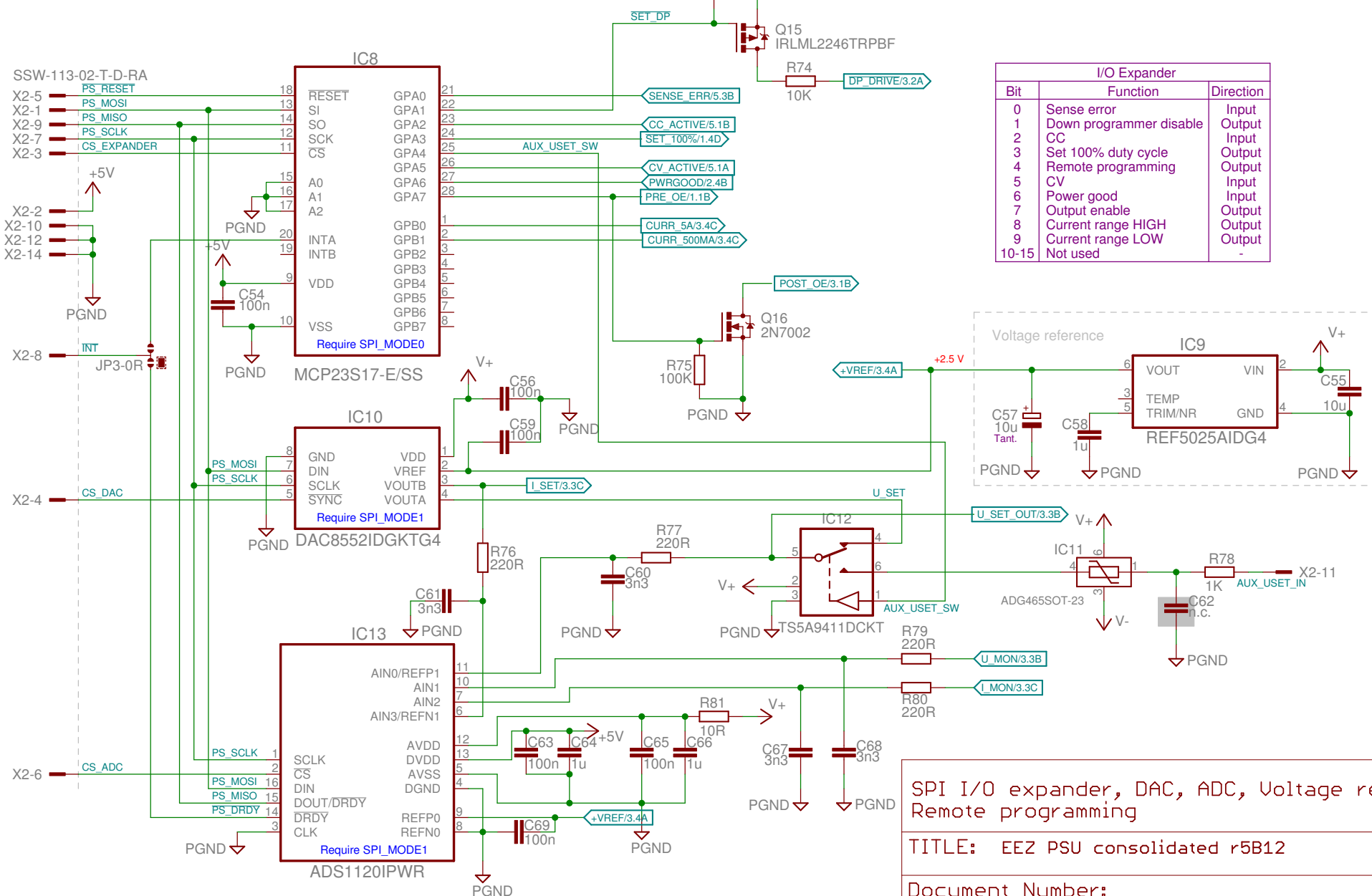
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# Digital control (SPI)



SPI I/O expander, DAC, ADC, Voltage reference  
Remote programming

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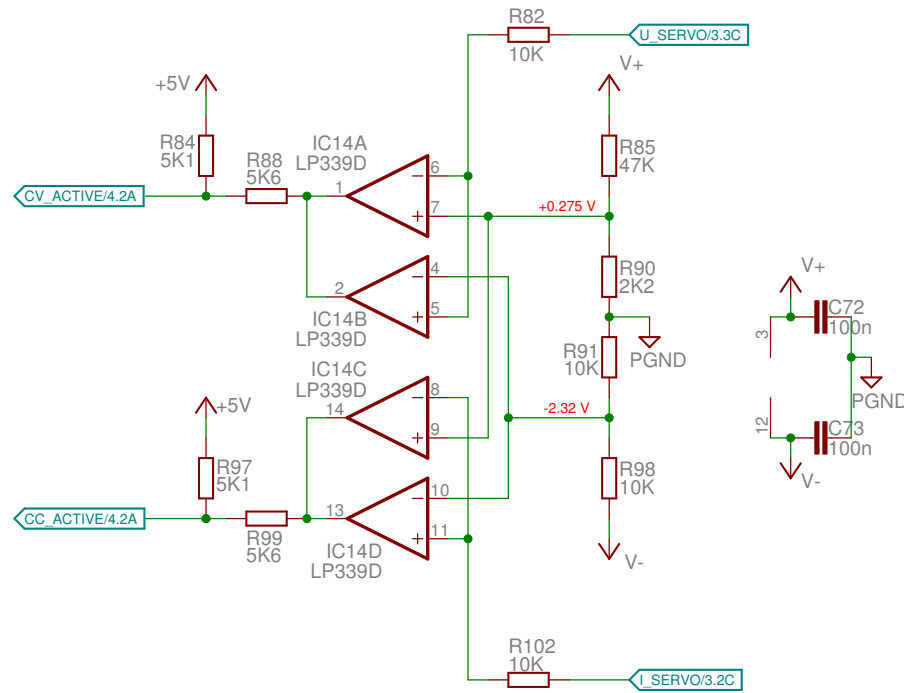
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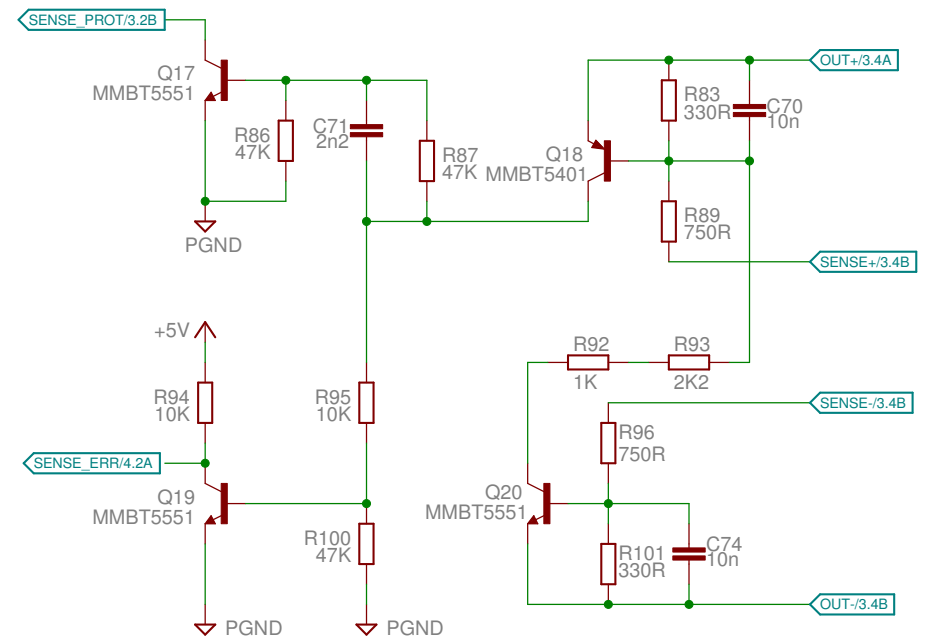
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# Constant Voltage (CV) and Constant Current (CC) mode indicator



# Remote sense reverse polarity detection



CC/CV indicators, Sense error detection

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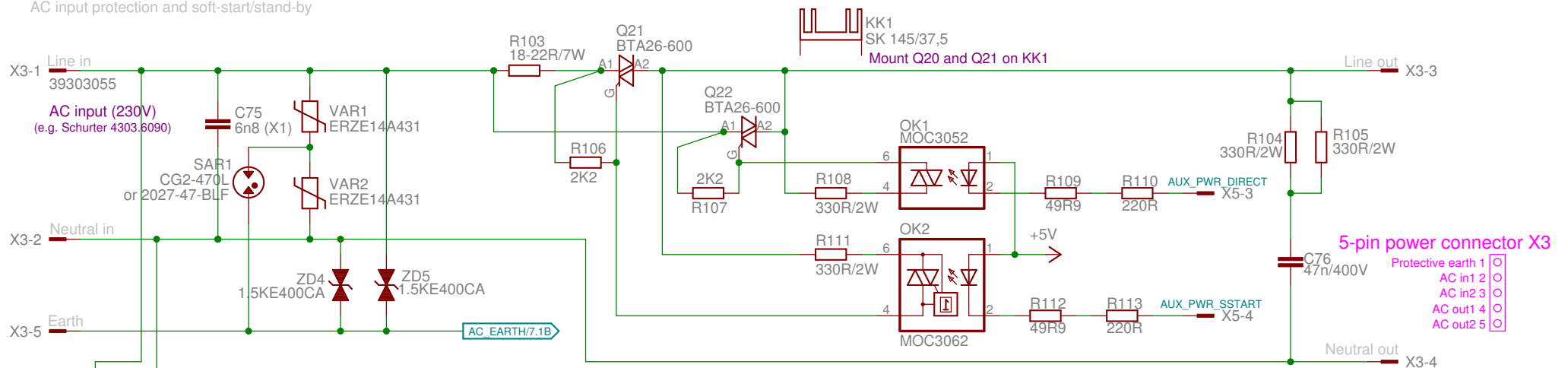
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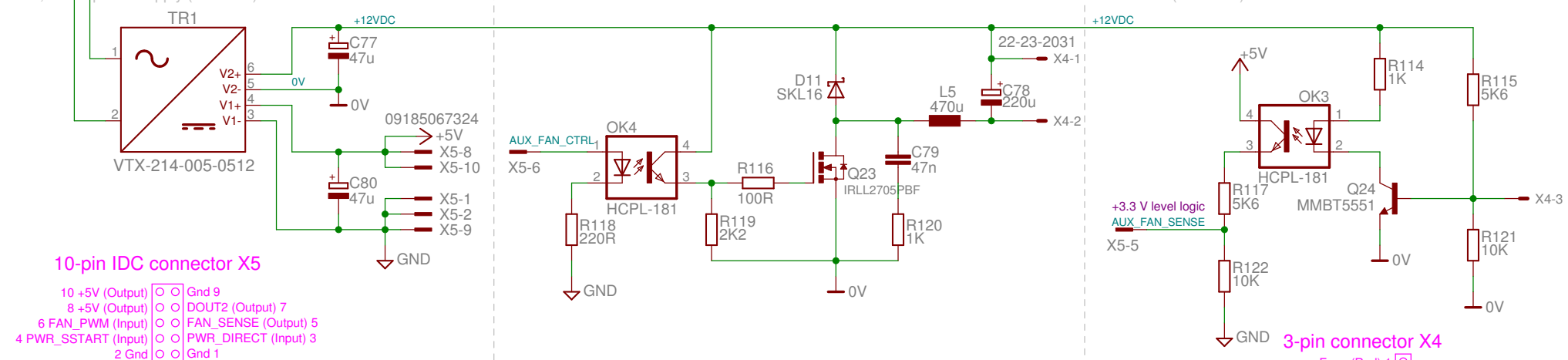
# AC input protection and soft-start/stand-by



## +5 V, +12 V power supply (max. 5W)

## +12VDC fan control

## Fan sense (tacho out)



## 10-pin IDC connector X5

10 +5V (Output)	○	○	Gnd 9
8 +5V (Output)	○	○	DOUT2 (Output) 7
6 FAN_PWM (Input)	○	○	FAN_SENSE (Output) 5
4 PWR_SSTART (Input)	○	○	PWR_DIRECT (Input) 3
2 Gnd	○	○	Gnd 1

## 115VAC option:

Name	Value	Code
SAR1	2027-23-BLF	Farnell: 1780455, TME: CG2-230L
TR2	VPP24-210	Digikey: 237-1085-ND
		Mouser: 553-VPP24-210
		Newark: 93F8764
VAR1, VAR2	or AC/DC module	Farnell: 2469211
ZD1, ZD2	Myrra 47202	Farnell: 1004387, TME: SIOV-S20K140
	S20K140	Farnell: 1837117, TME: 1.5KE200CA
	1.5KE200CA	

AC input protection, in-rush current limiter  
+5V/+12V 5W power supply, fan control

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826629-8

X8-7 AUX\_ETH\_OUT-

X8-8 AUX\_+3V3

X8-6 AUX\_ETH\_OUT+

X8-5 AUX\_ETH\_IN-

IC15

GND

X8-4 AUX\_ETH\_IN+

TPD4E002DRLR

AC\_EARTH/6.2B

X8-2 AUX\_ETH\_ACTLED

X8-1 AUX\_ETH\_LINKLED

FB4

60R@100MHz

X7

1 TX+

2 TX-

3 RX+

6 RX-

4

5

7

8

1 nF

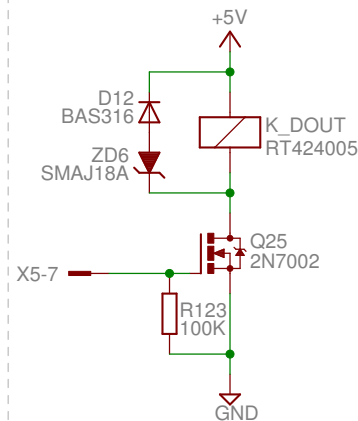
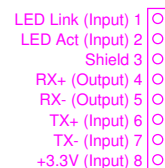
Right LED (Yellow)

Left LED (Green)

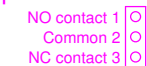
LMJ2138814S0L1T1C

GND

8-pin connector X8

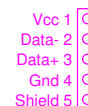


## 3-pin connector X6

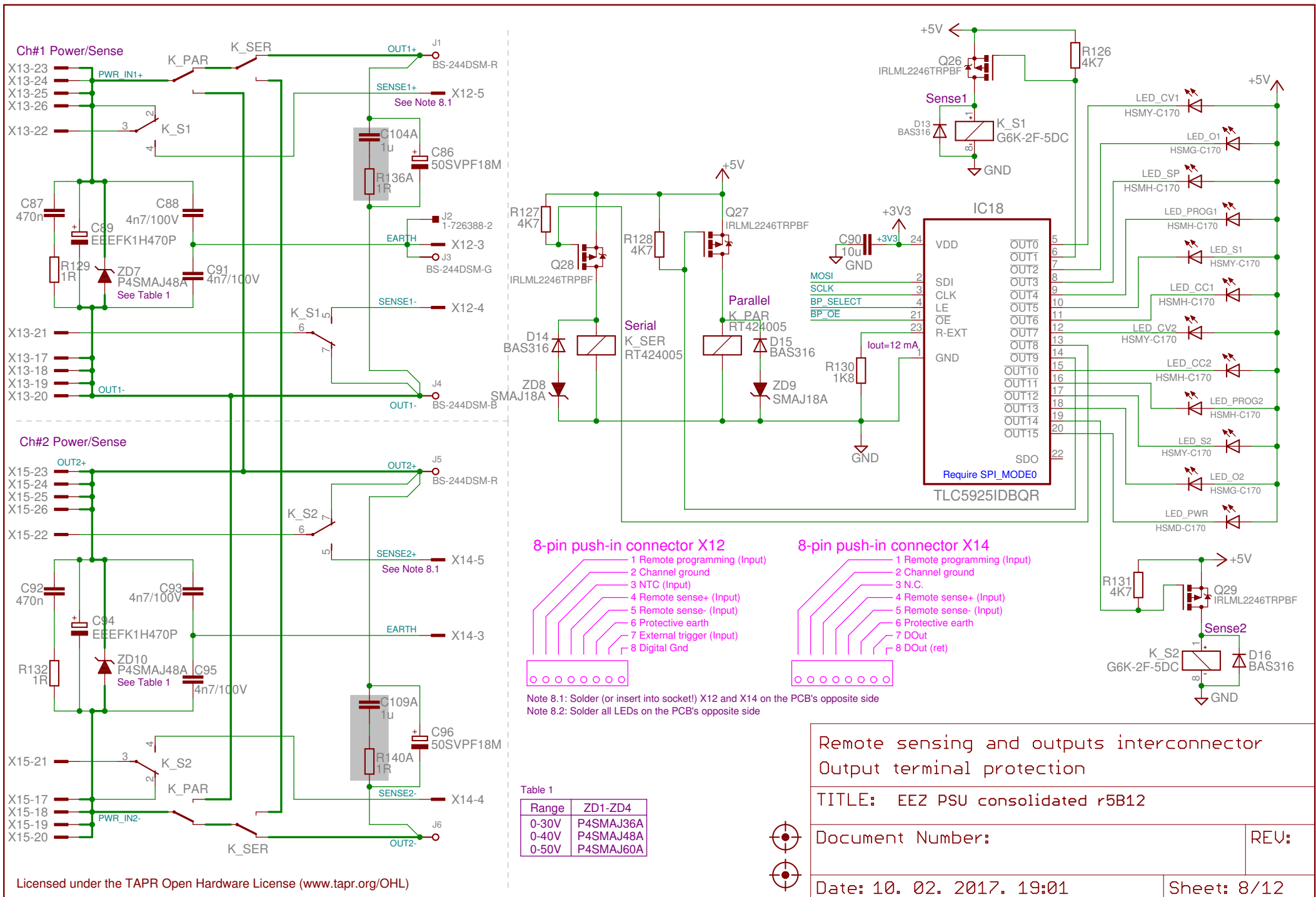


The schematic shows the ADUM3160BRWZ circuit. It includes two ICs: IC17 (ADUM3160BRWZ) and IC16 (TPD2E001DZDR). IC17 has pins for VBUS2, GND2\_2, VDD2, SPD, PIN, PDEN, SPU, UD-, DD-, UD+, DD+, GND2, and GND1. IC16 has pins for VCC, IO1, GND, and IO2. The circuit also features several capacitors (C81, C82, C83, C84, C85), resistors (R124, R125), and ferrite beads (FB5, FB6). A USB connector X11 is shown at the bottom right.

5-pin connector X9, X10

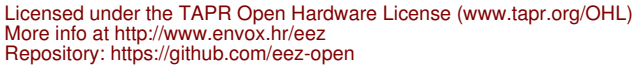


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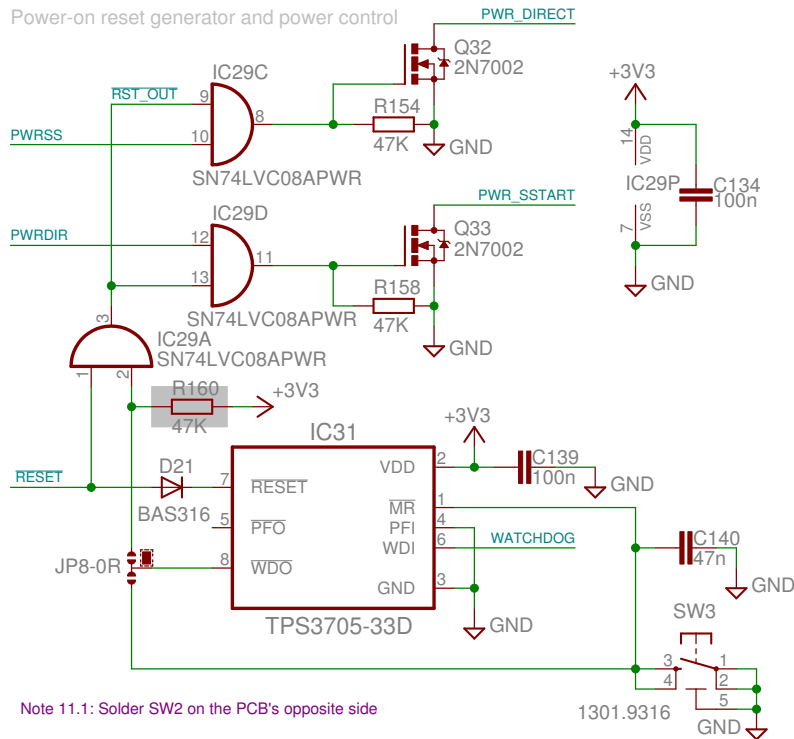




## Remote programming inputs

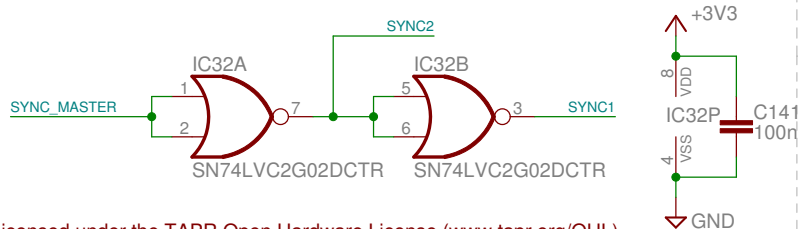


## Power-on reset generator and power control

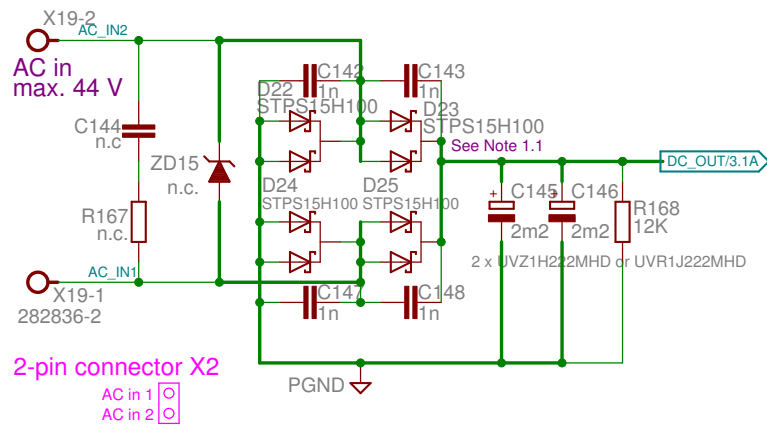


Note 11.1: Solder SW2 on the PCB's opposite side

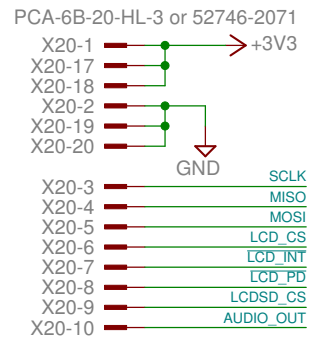
## Master sync signal phase shifting



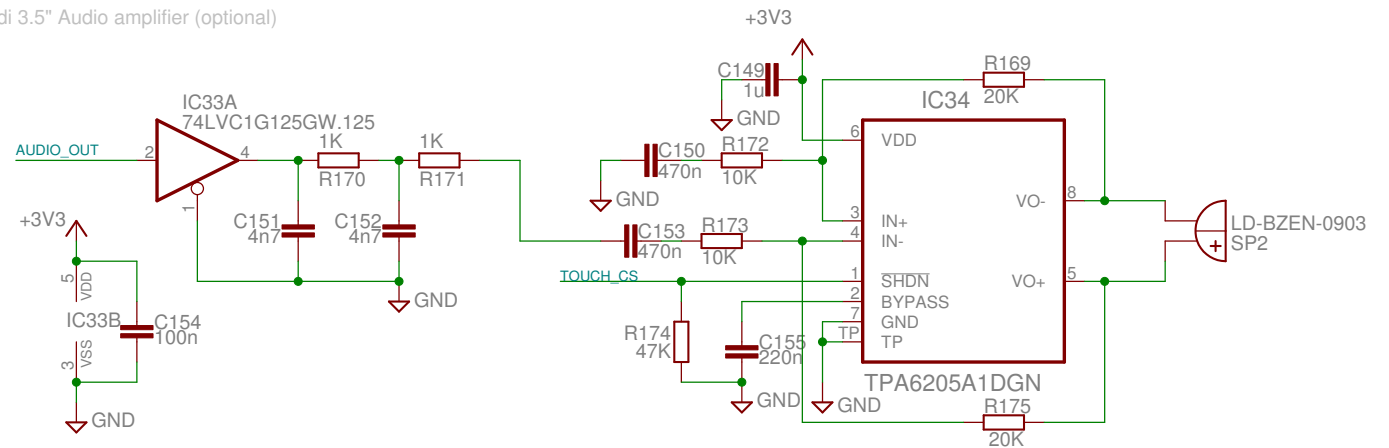
## AC input option



## Riverdi 3.5" LCD (optional)



## Riverdi 3.5" Audio amplifier (optional)



Optional sections: AC input, 20-pin 3.5" TFT display  
Audio amplifier for 3.5" TFT display

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