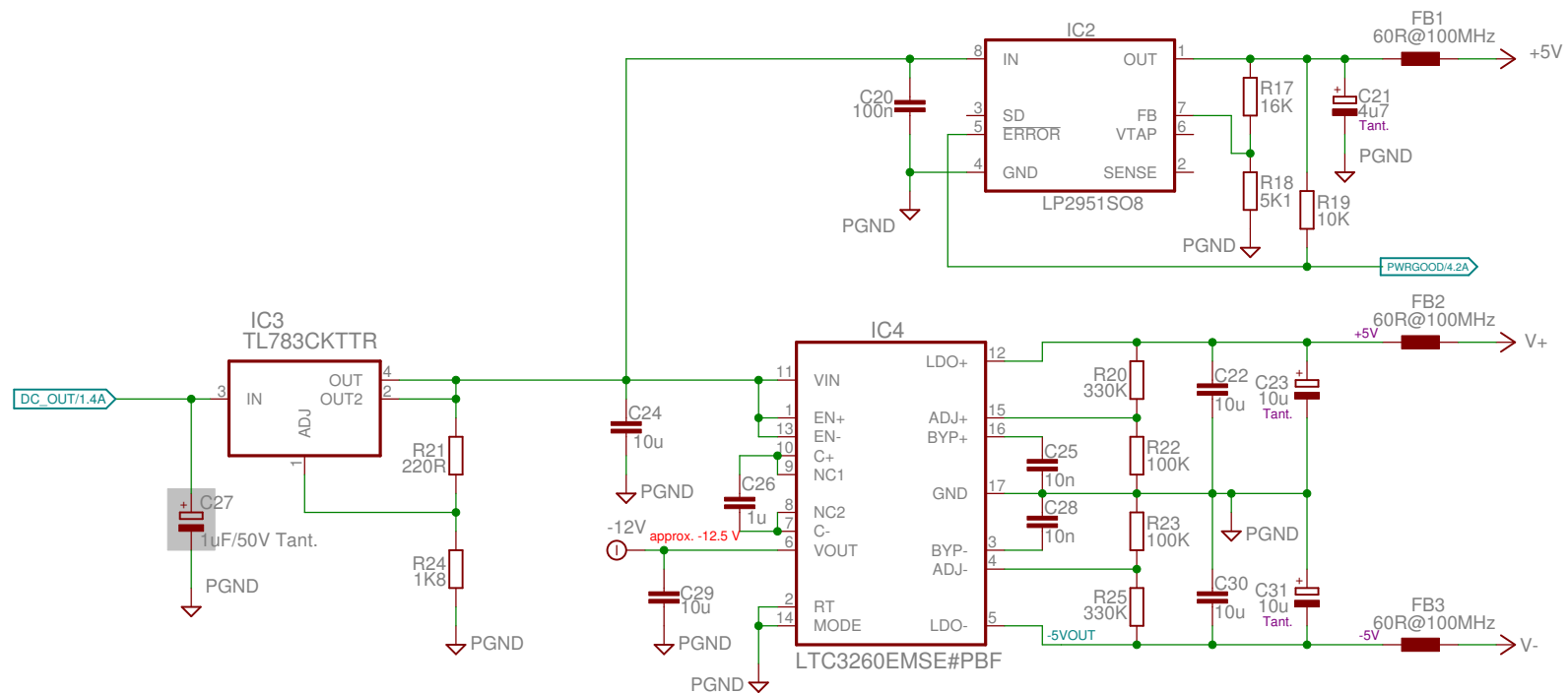




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Bias power supply (+/-5V, +5V, -12V)
Powergood signal

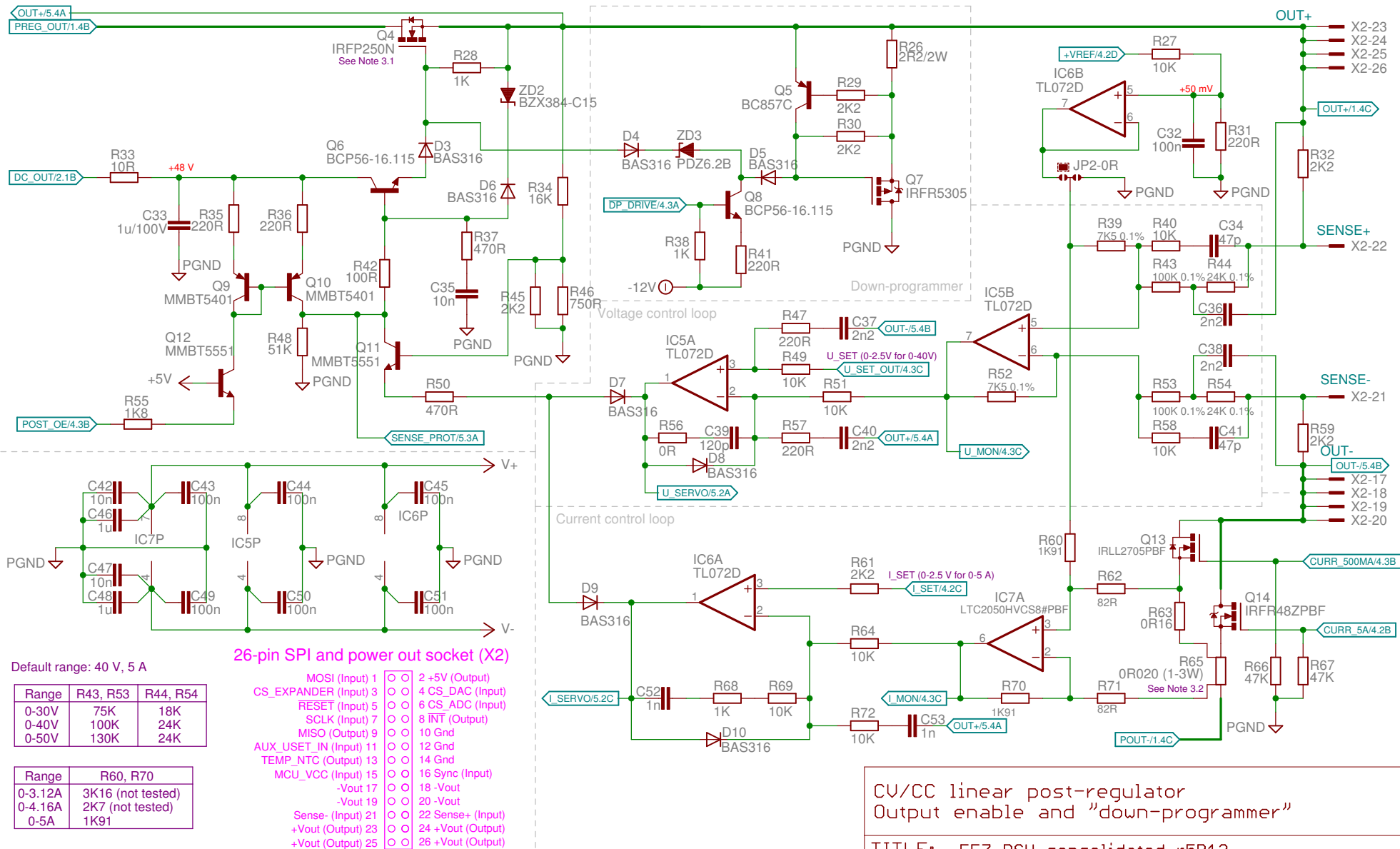
TITLE: EEZ PSU consolidated r5B12

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CV/CC linear post-regulator
Output enable and "down-programmer"

TITLE: EEZ PSU consolidated r5B12

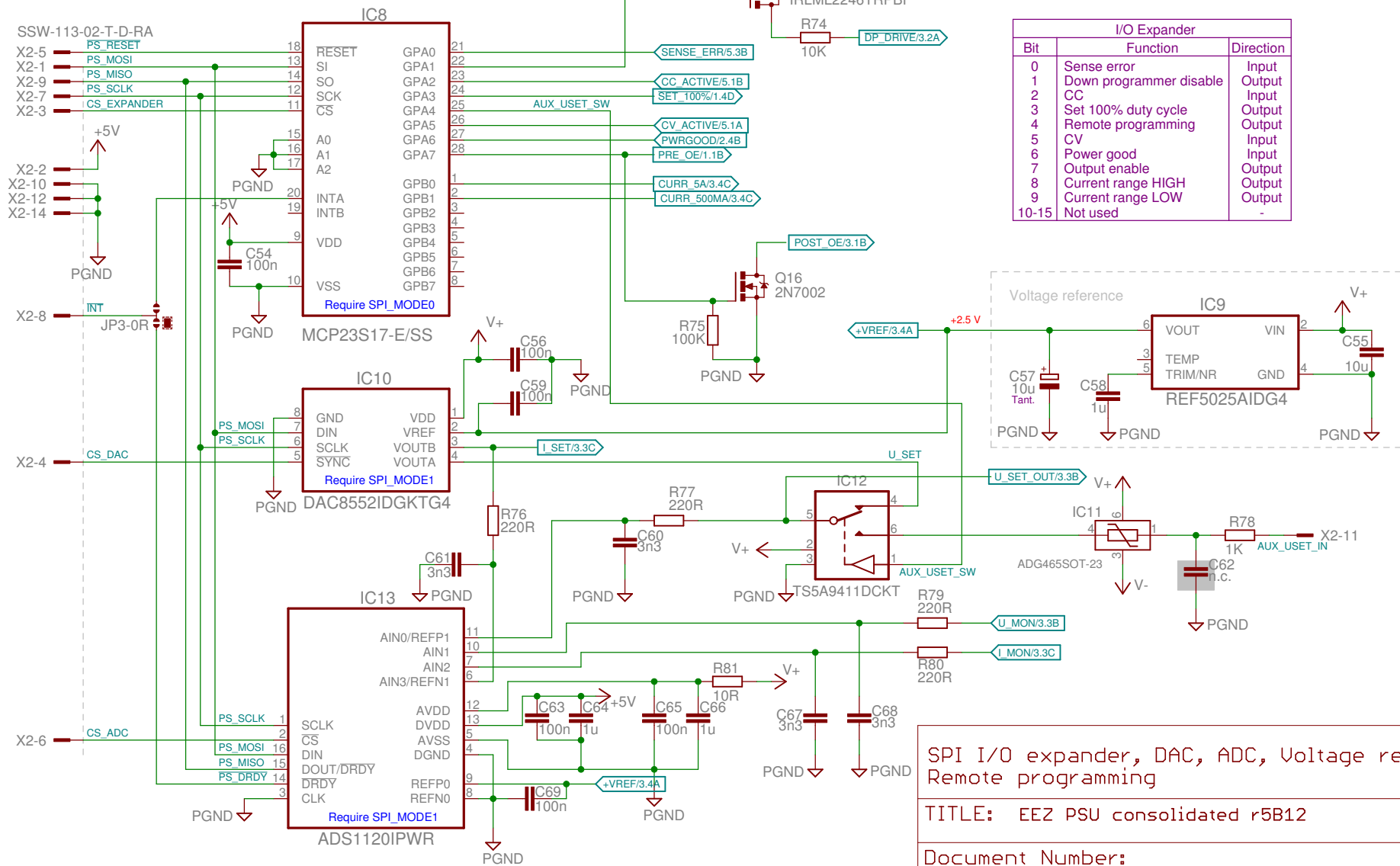
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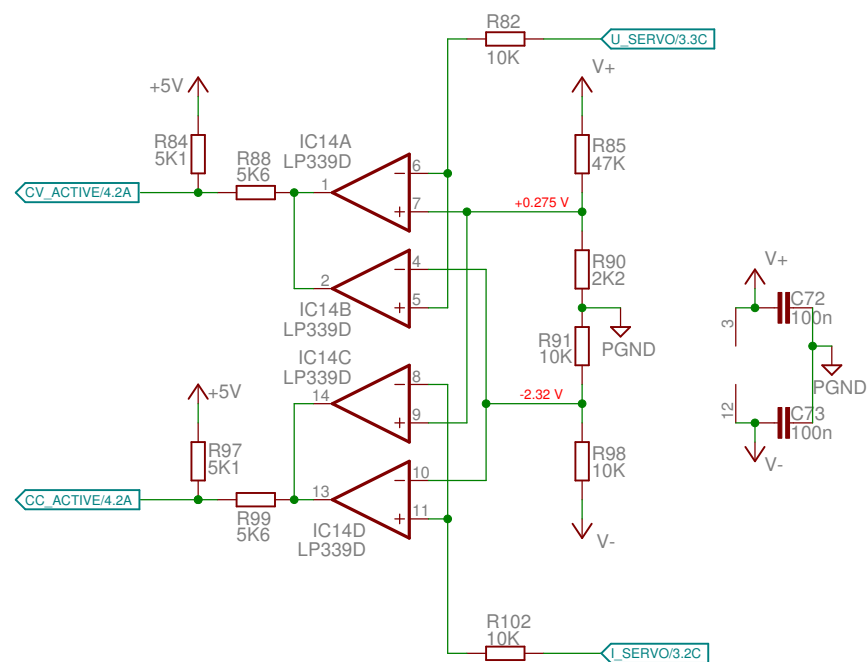
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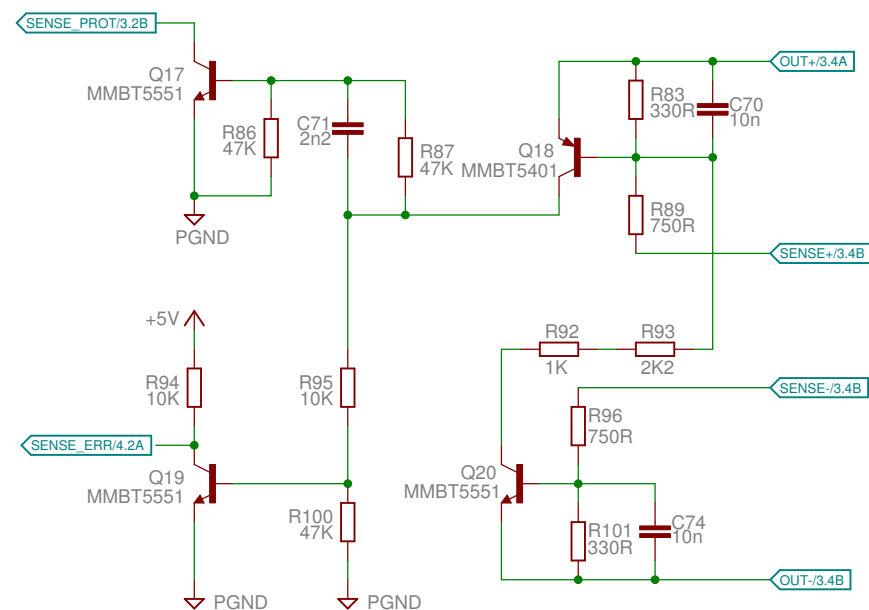
Digital control (SPI)



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



Remote sense reverse polarity detection



CC/CV indicators, Sense error detection

TITLE: EEZ PSU consolidated r5B12

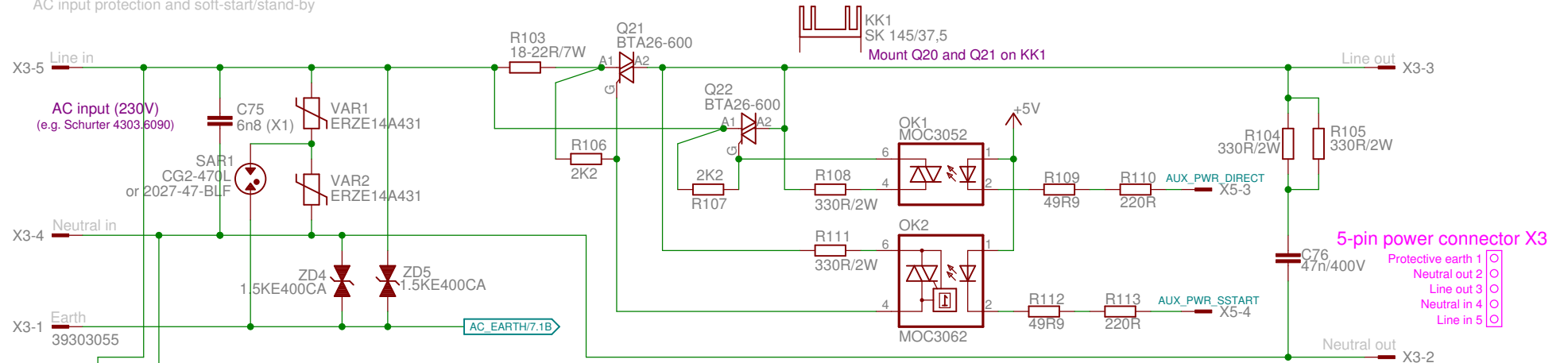
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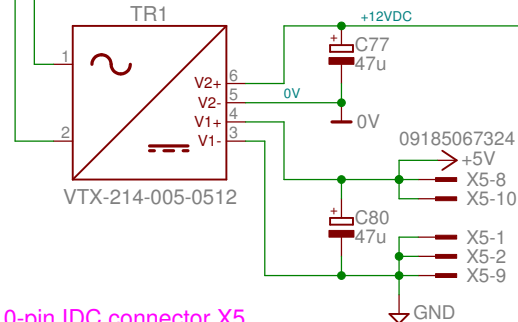
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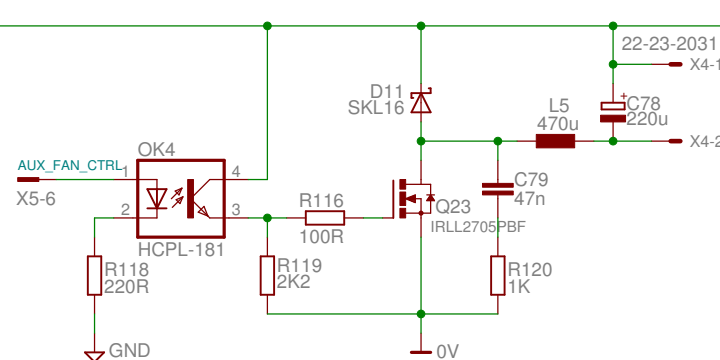
AC input protection and soft-start/stand-by



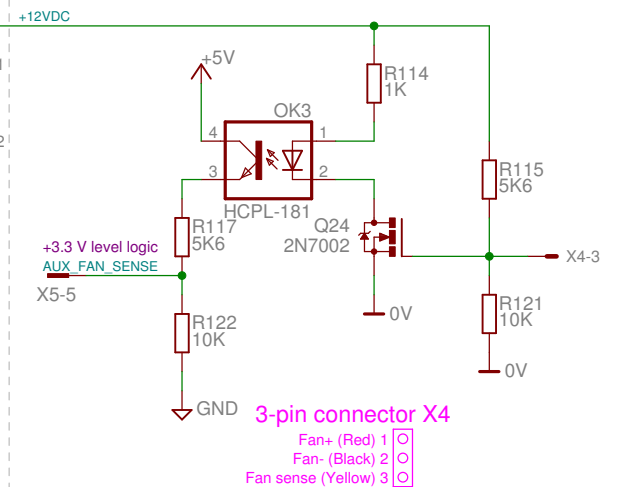
+5 V, +12 V power supply (max. 5W)



+12VDC fan control



Fan sense (tacho out)



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 Myrra 47202	Farnell: 2469211
ZD1, ZD2	S20K140	Farnell: 1004387, TME: SIOV-S20K140
	1.5KE200CA	Farnell: 1837117, TME: 1.5KE200CA

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

TITLE: EEZ PSU consolidated r5B12

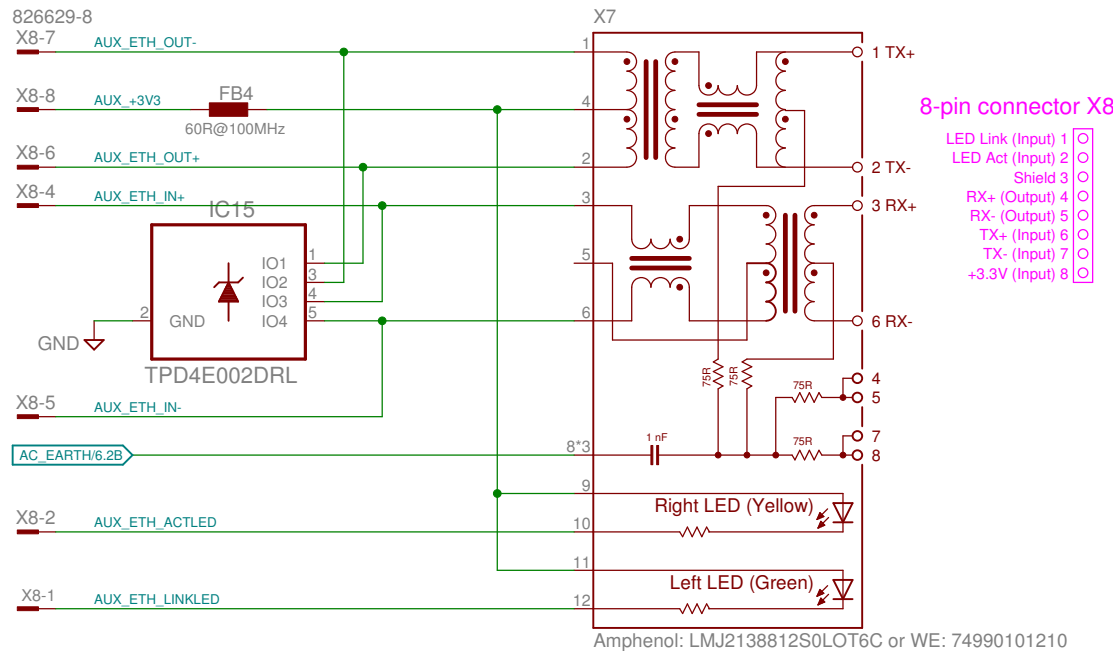
Document Number:

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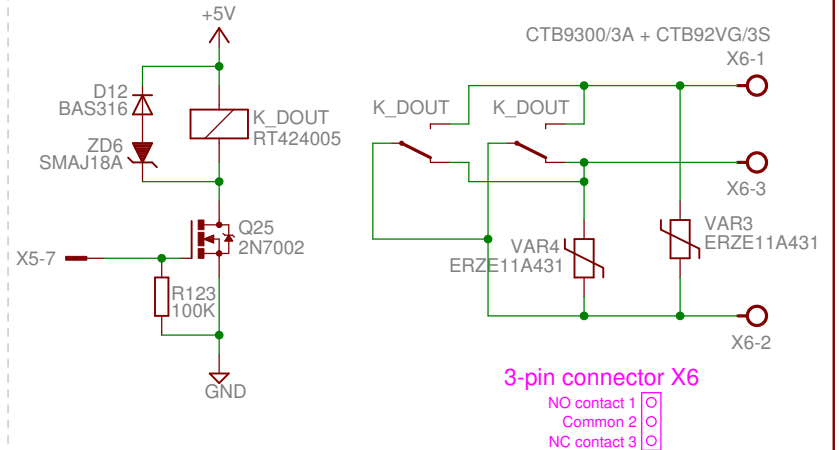
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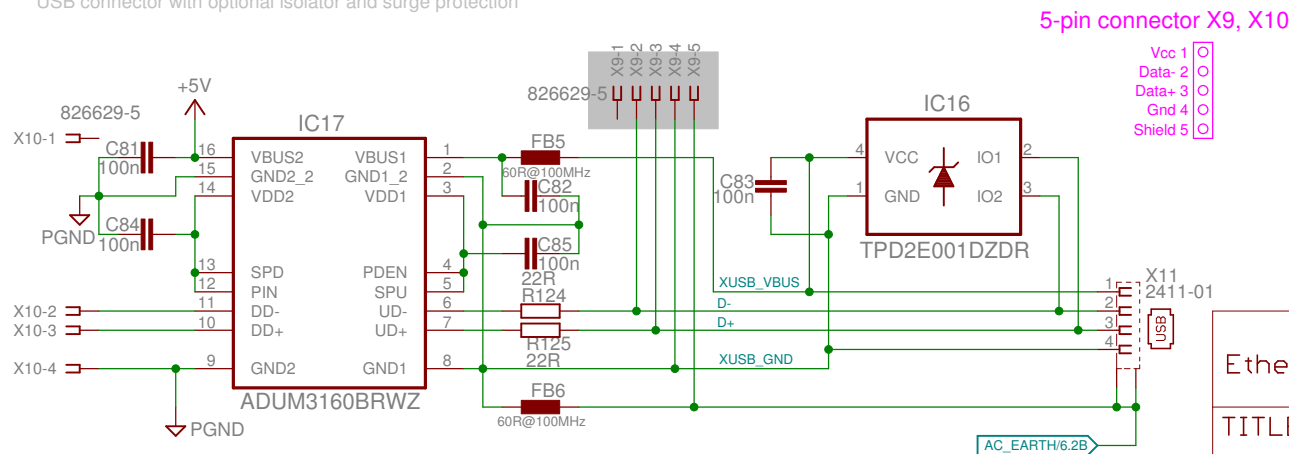
Ethernet connector with optional surge protection



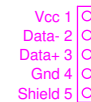
Digital OUT2 relay



USB connector with optional isolator and surge protection



5-pin connector X9, X10



Note 7.1: Mount X4 and X8 on the opposite (top) side of the PCB. Use 14 mm (e.g. Bossard B3X14/BN3320) for enclosure with 3 mm rear panel

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 More info at <http://www.envox.hr/eez>
 Repository: <https://github.com/eez-open>

Ethernet and USB PCB connectors

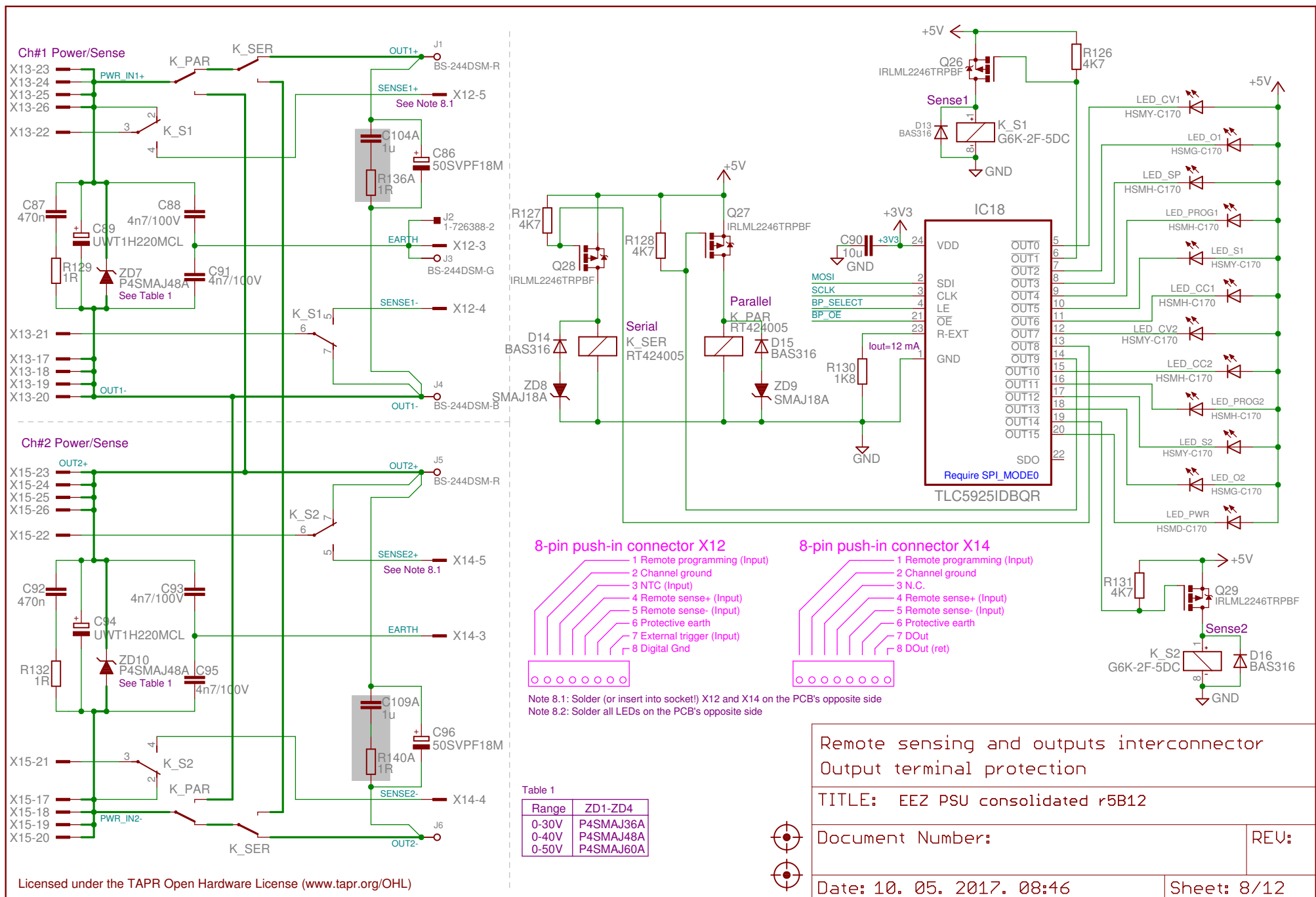
TITLE: EEZ PSU consolidated r5B12

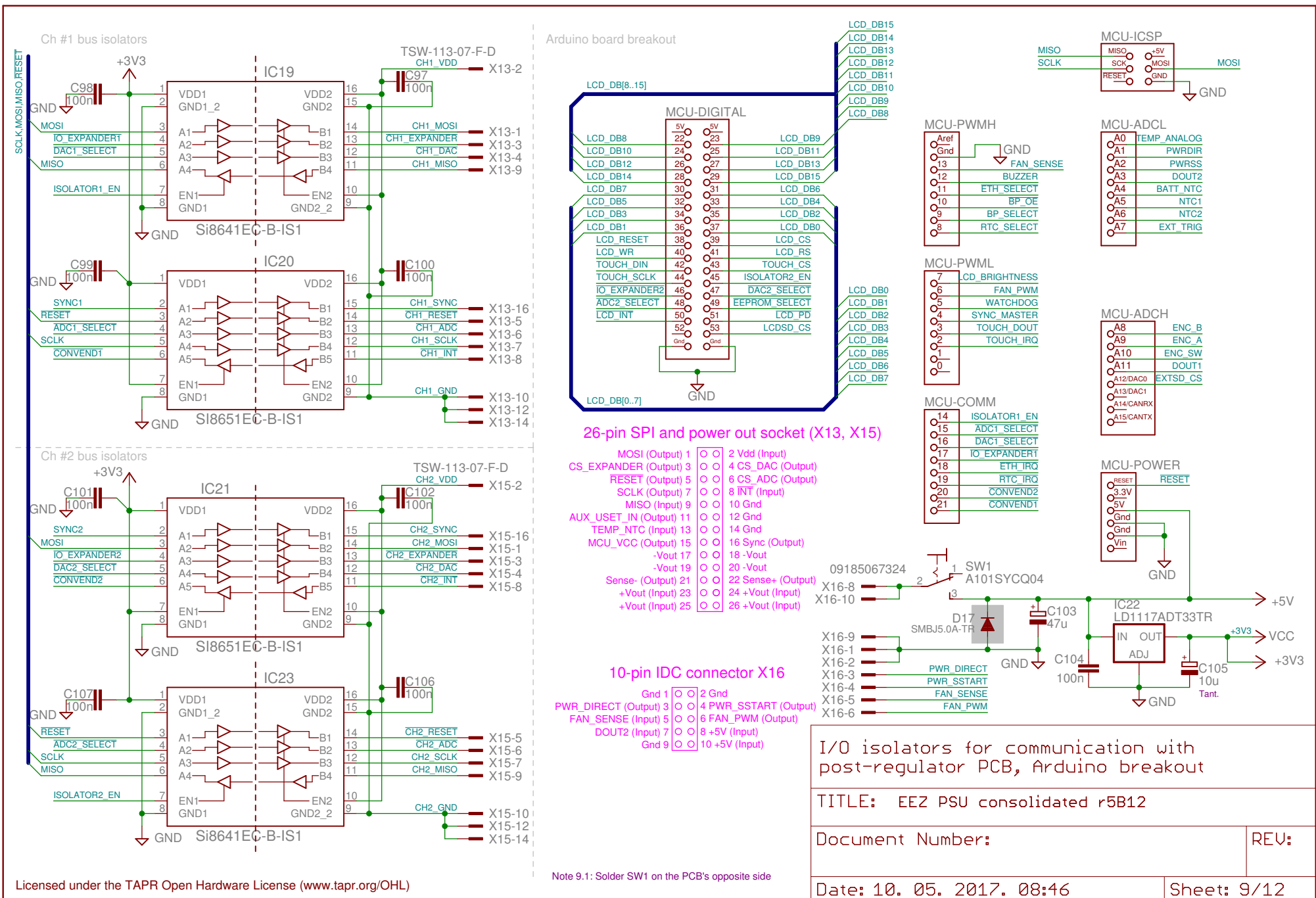
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I/O isolators for communication with post-regulator PCB, Arduino breakout

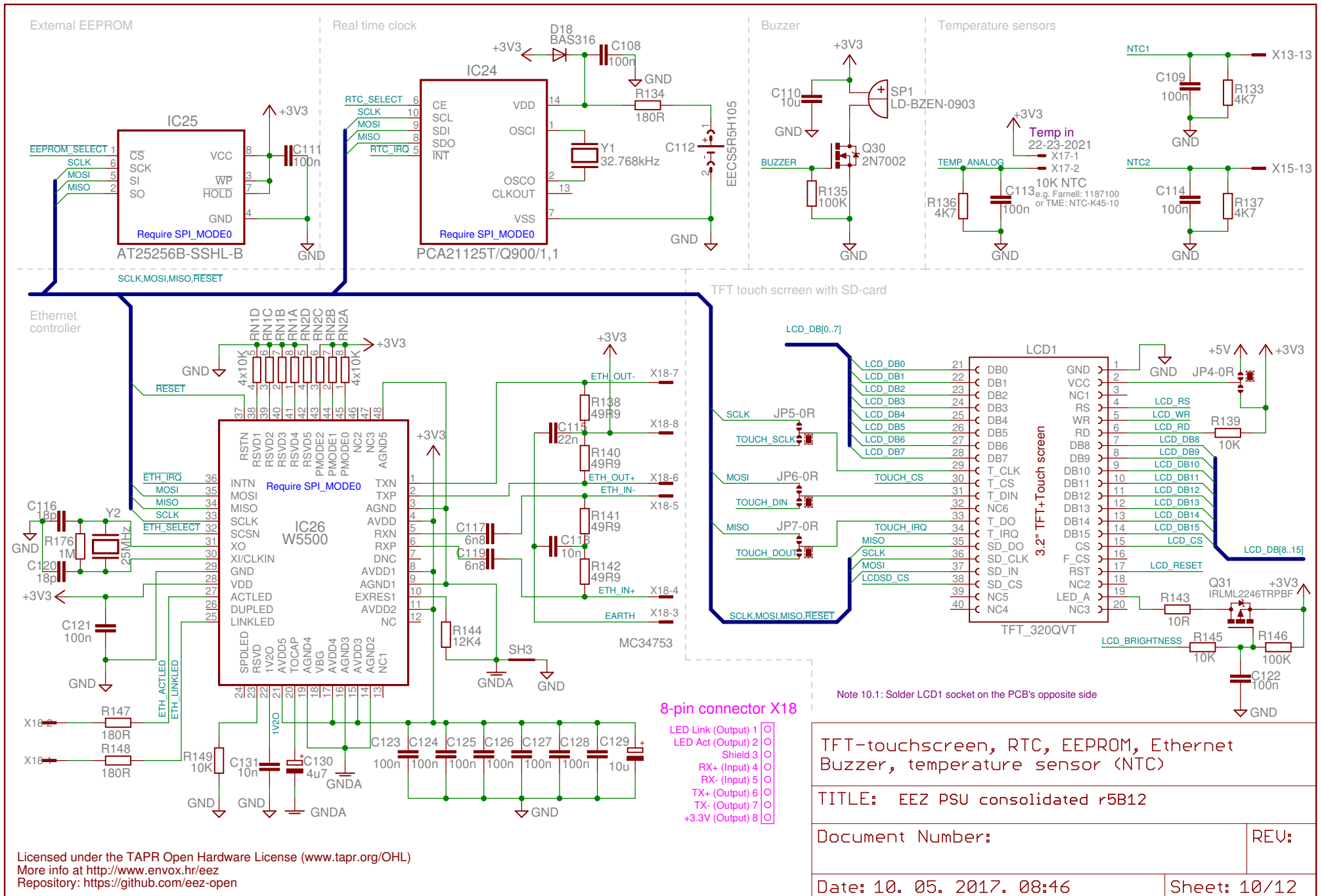
TITLE: EEZ PSU consolidated r5B12

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The diagrams illustrate the connection of the AUX1 and AUX2 USET_IN pins. In both cases, the USET_IN pin is connected to +3V3. A diode (ZD11 SMAJ18A for AUX1 and ZD12 SMAJ18A for AUX2) is connected between the USET_IN pin and the corresponding ground (CH1_GND or CH2_GND).

Power-on reset generator and power control

The schematic shows the power-on reset generator and power control circuit. Key components and connections include:

- Inputs:** PWRSS, PWRDIR, RESET, PWR_START.
- Logic:** IC29C, IC29D, and IC29A (SN74LVC08APWR) are 2-input AND gates. IC31 (TPS3705-33D) is the reset IC.
- Transistors:** Q32 and Q33 (2N7002) are NPN transistors used for power control.
- Resistors:** R154 (47K), R158 (47K), and R160 (n.c.).
- Capacitors:** C134 (100n), C139 (100n), and C140 (47n).
- Switch:** SW3 (SW2 on the opposite side of the PCB).
- Outputs:** RST_OUT, PWR_DIRECT, +3V3.

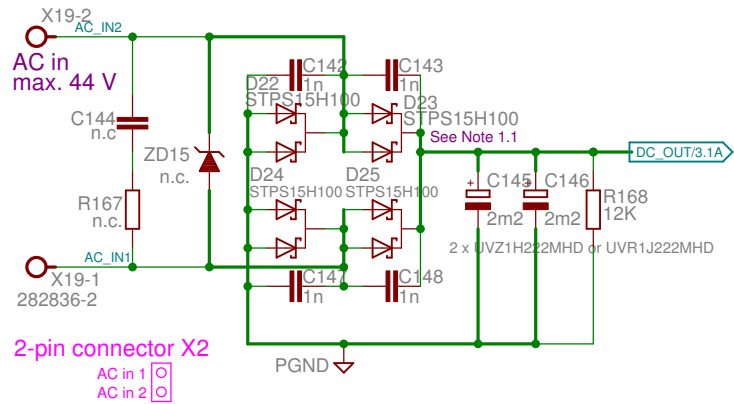
Note 11.1: Solder SW2 on the PCB's opposite side

Encoder shaft length: 25 mm
Knob head: A3116068 (OKW), Knob cap: A3216007 (OKW)

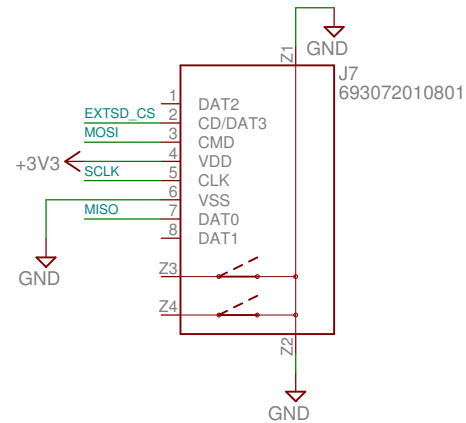
SN74LVC08APWR

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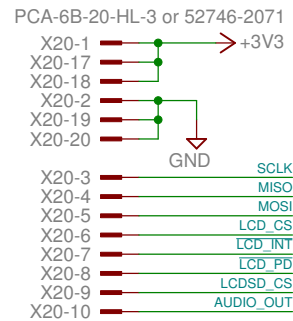
AC input option



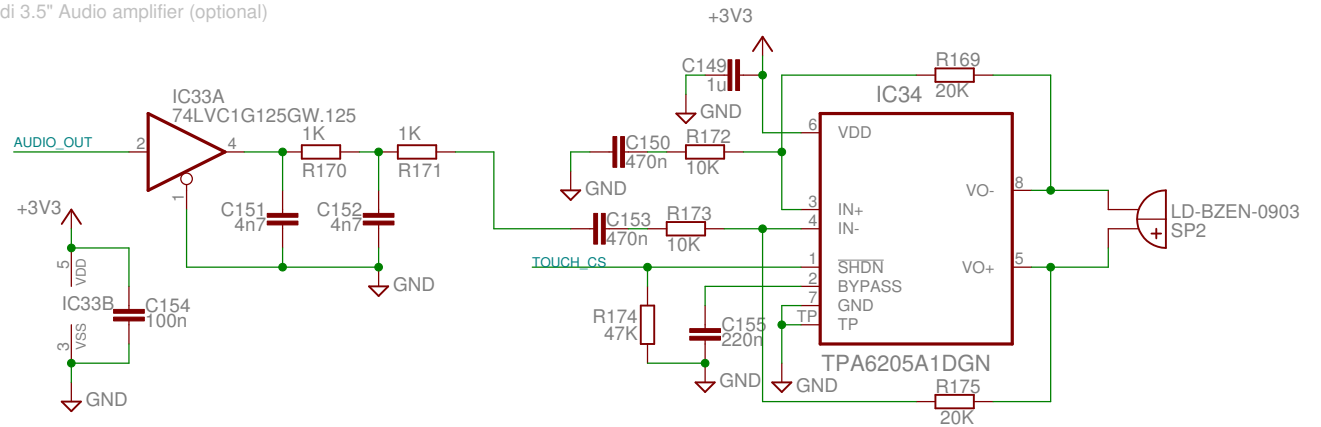
Micro SD card (optional)



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, Micro SD card

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