

Note 1.1: Possible alternative AU1RFR5305, SUD19P06-60, SPD30P06P or other with similar or lower input capacitance  
 Note 1.2: WE 7447709330, WE 7443551331, Coilcraft MSS1210-333, Coilcraft XAL1510-333, Vishay IHL4040DZER470M11, etc.  
 Note 1.3: Use 240K for 30 VAC main transformer  
 Note 1.4: Install 0R only if 100% Duty cycle feature for Low Ripple mode is not needed  
 Note 1.5: Use R020 for 0-3.12 A or R015 for 0-4.16 A range

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SMPS power pre-regulator with 100% duty cycle

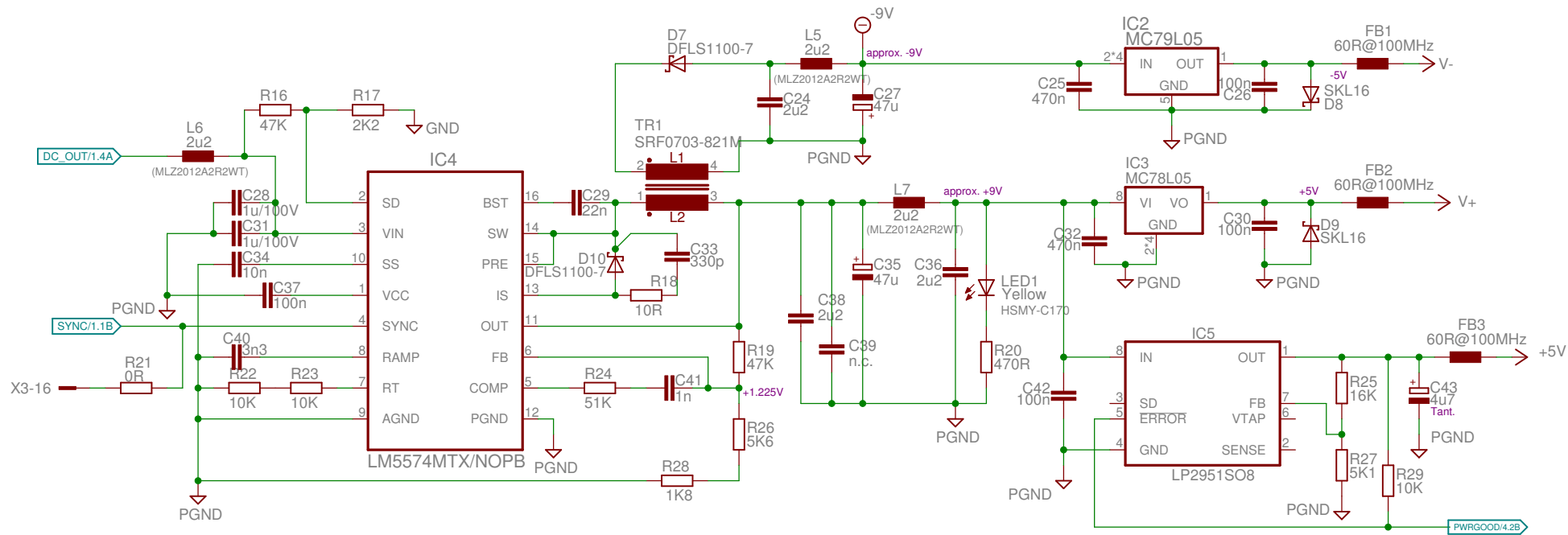
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Bias power supply with SMPS pre-regulator

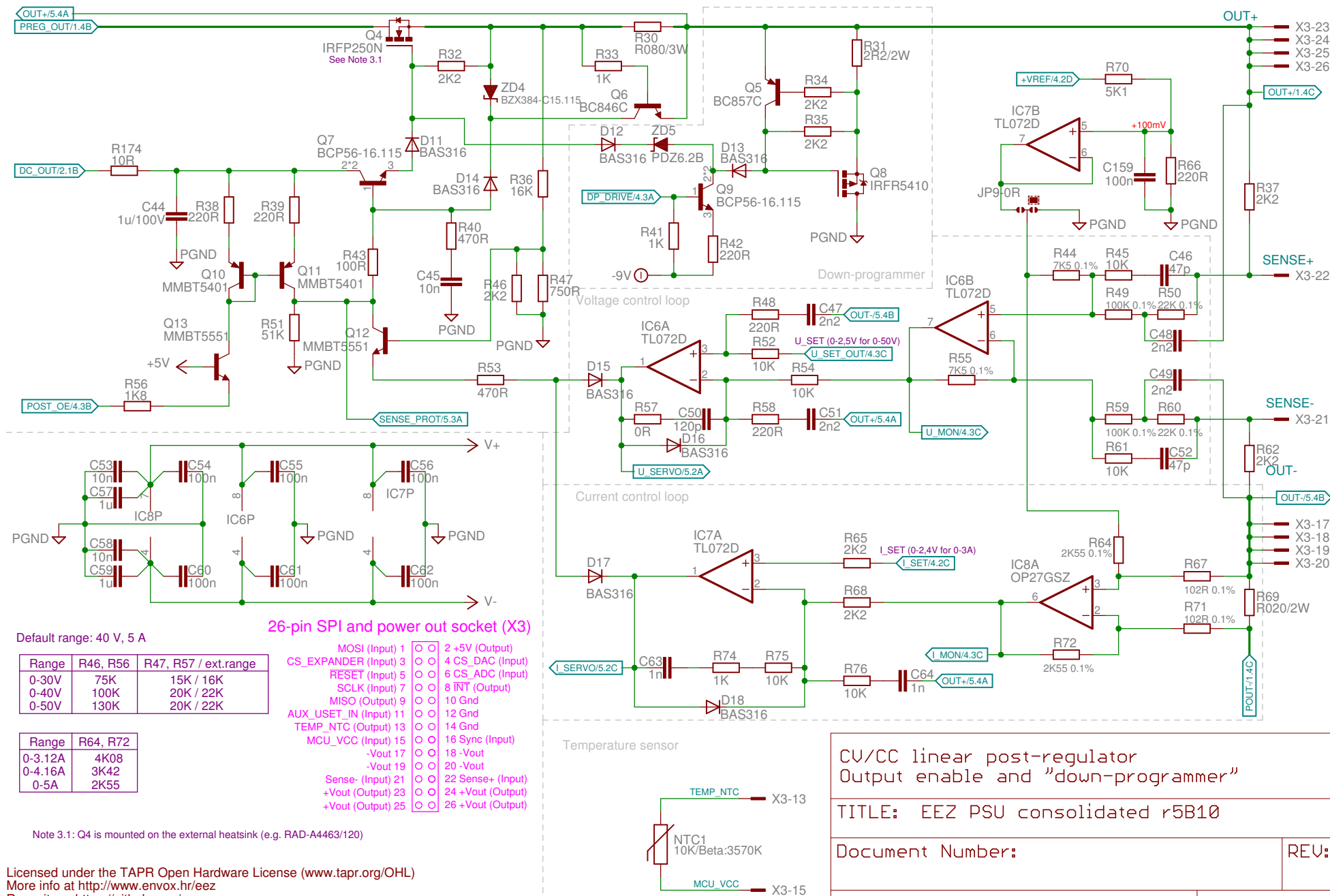
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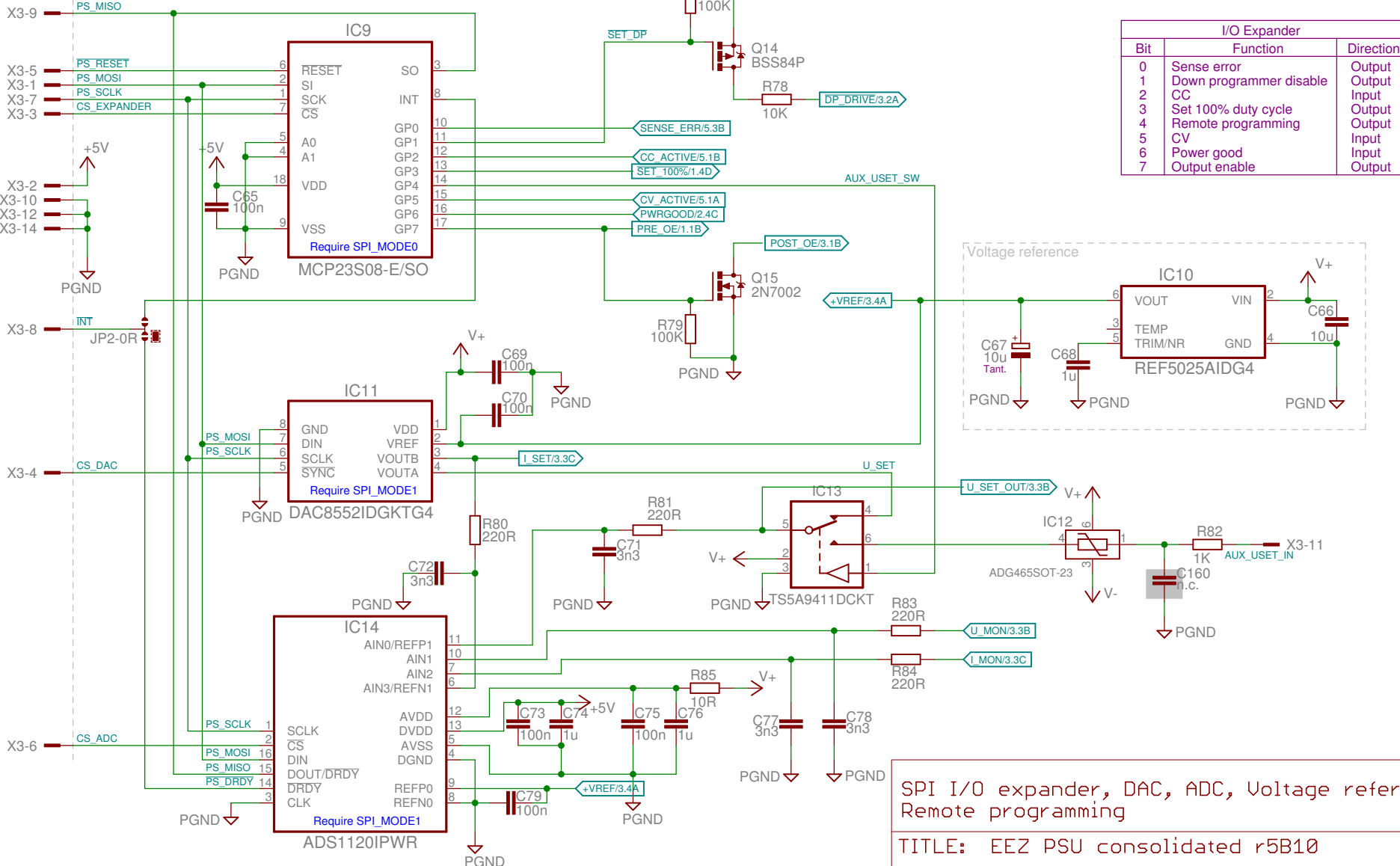
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# Digital control (SPI)

SSW-113-02-T-D-RA



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

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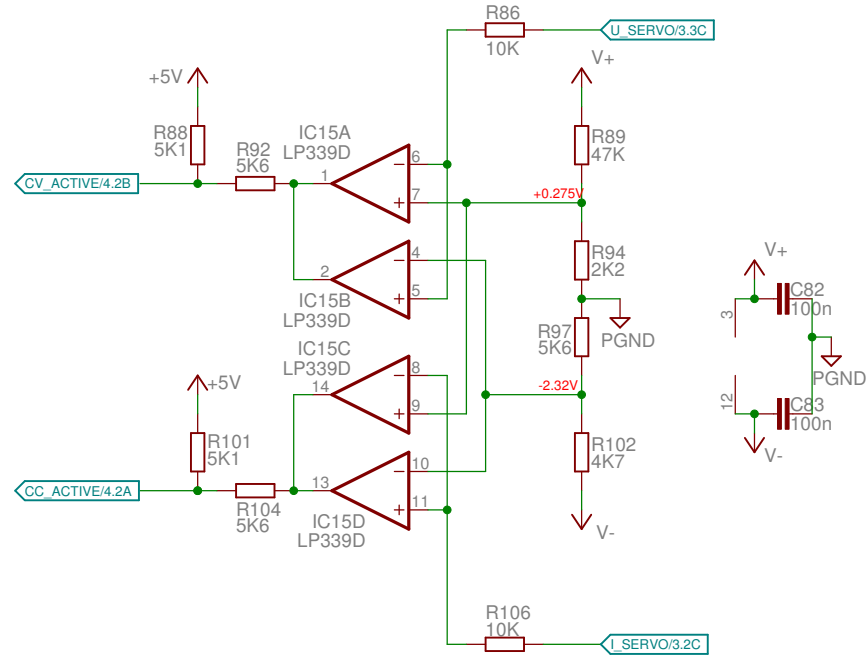
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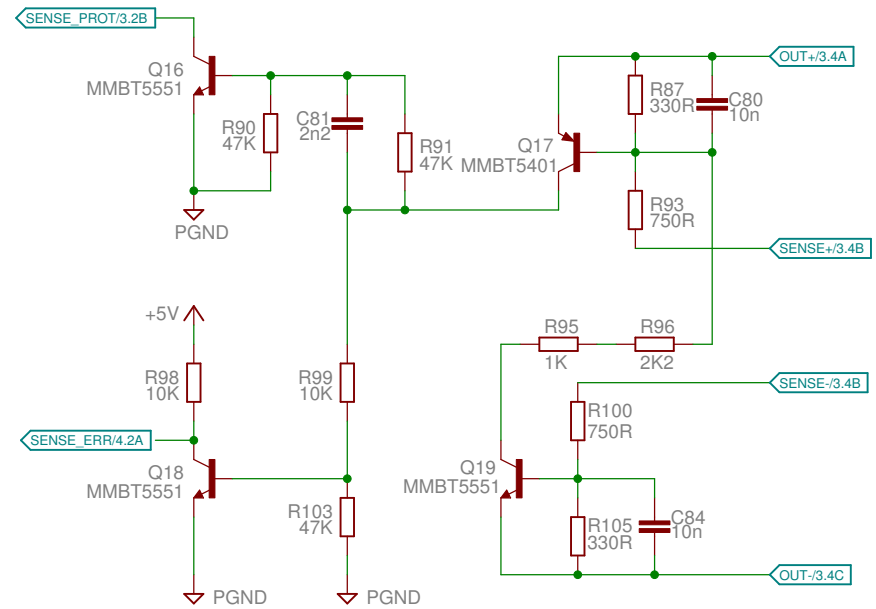
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# Constant Voltage (CV) and Constant Current (CC) mode indicator



# Remote sense reverse polarity detection



CC/CV indicators, Sense error detection

TITLE: EEZ PSU consolidated r5B10

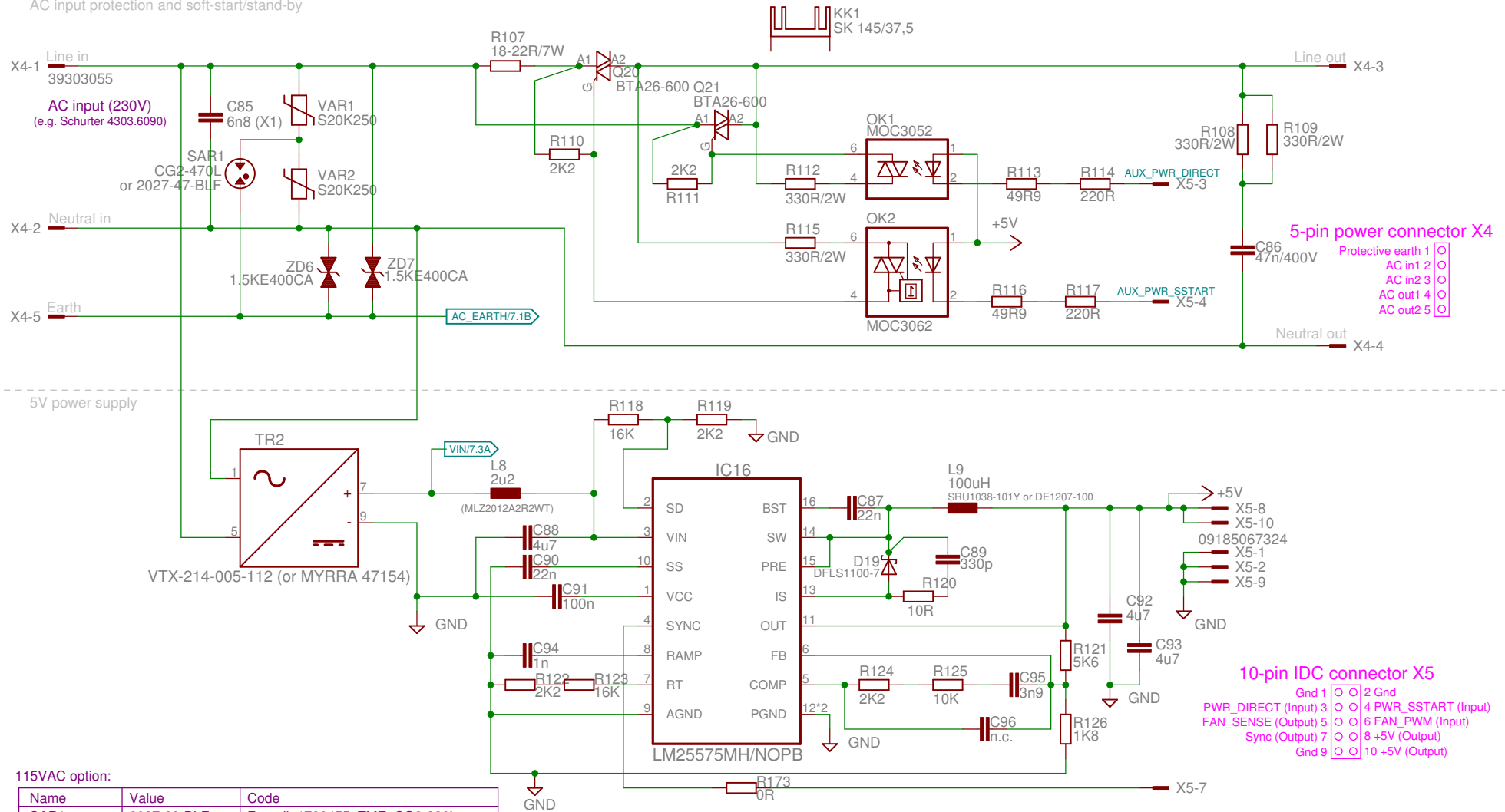
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# AC input protection and soft-start/stand-by



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	

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AC input protection, in-rush current limiter  
+5V/1A power supply

TITLE: EEZ PSU consolidated r5B10

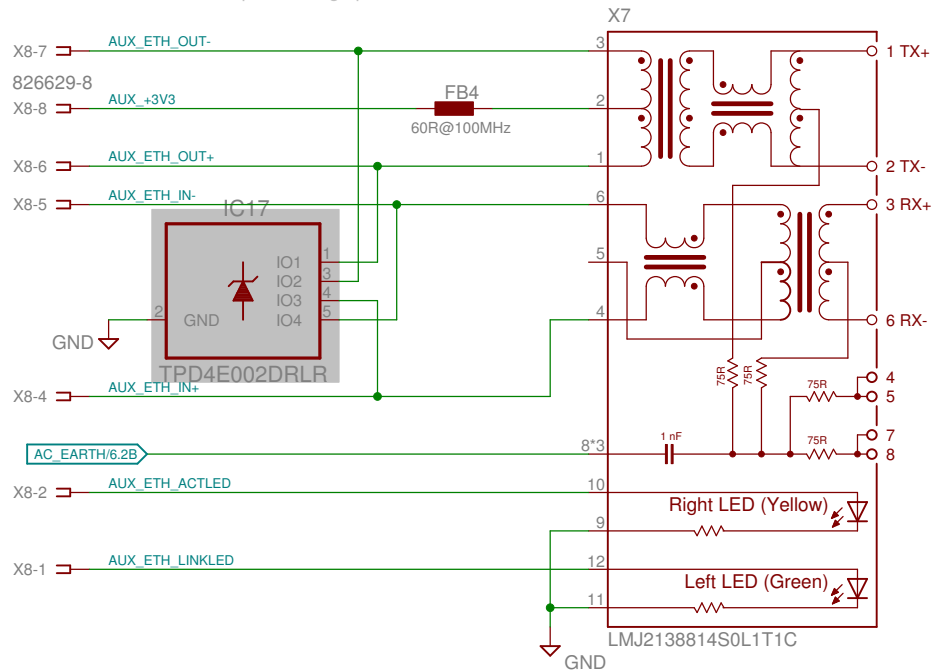
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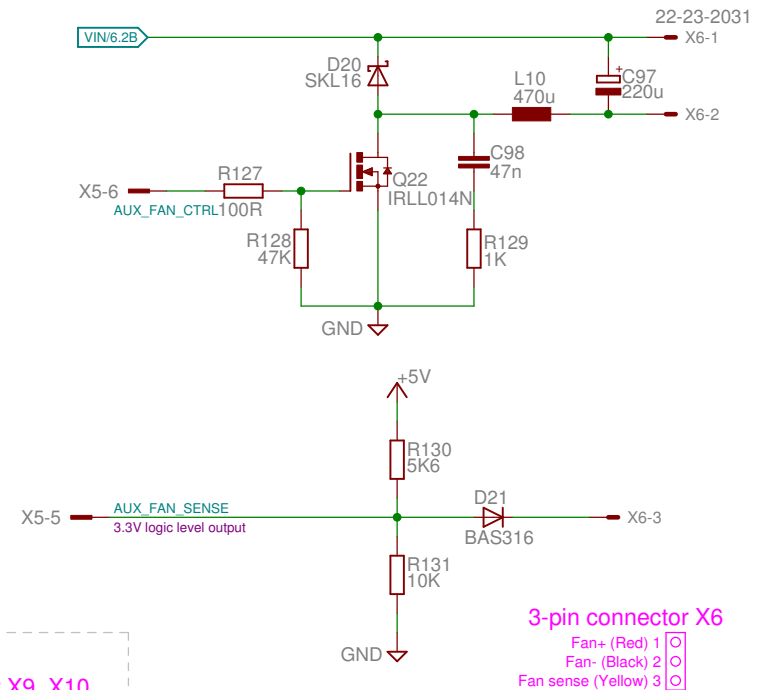
Ethernet connector with optional surge protection



8-pin connector X8

- LED Link (Input) 1
- LED Act (Input) 2
- Shield 3
- RX+ (Output) 4
- RX- (Output) 5
- TX+ (Input) 6
- TX- (Input) 7
- +3.3V (Input) 8

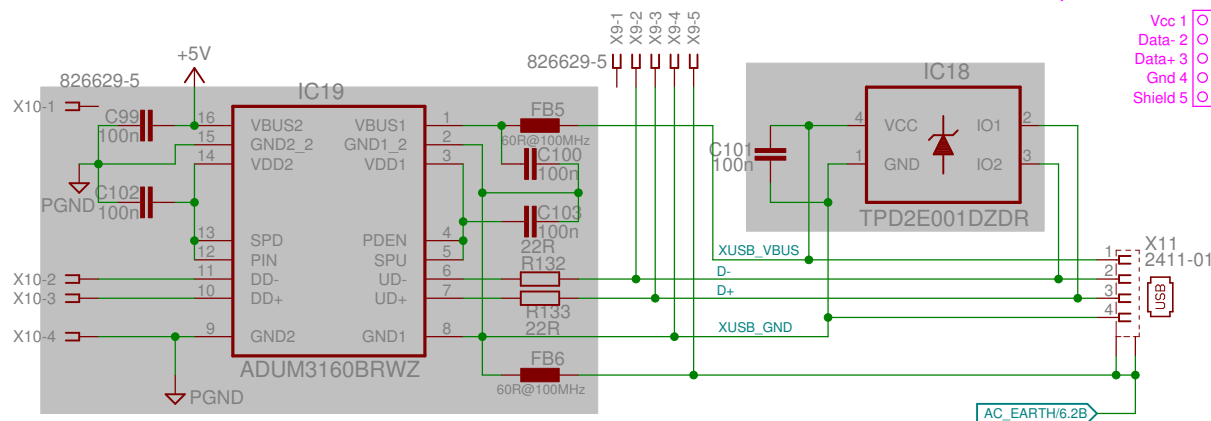
12VDC fan control



3-pin connector X6

- Fan+ (Red) 1
- Fan- (Black) 2
- Fan sense (Yellow) 3

USB connector with optional isolator and surge protection



5-pin connector X9, X10

- Vcc 1
- Data- 2
- Data+ 3
- Gnd 4
- Shield 5

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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Ethernet and USB PCB connectors  
12VDC fan driver (max. 300 mA)

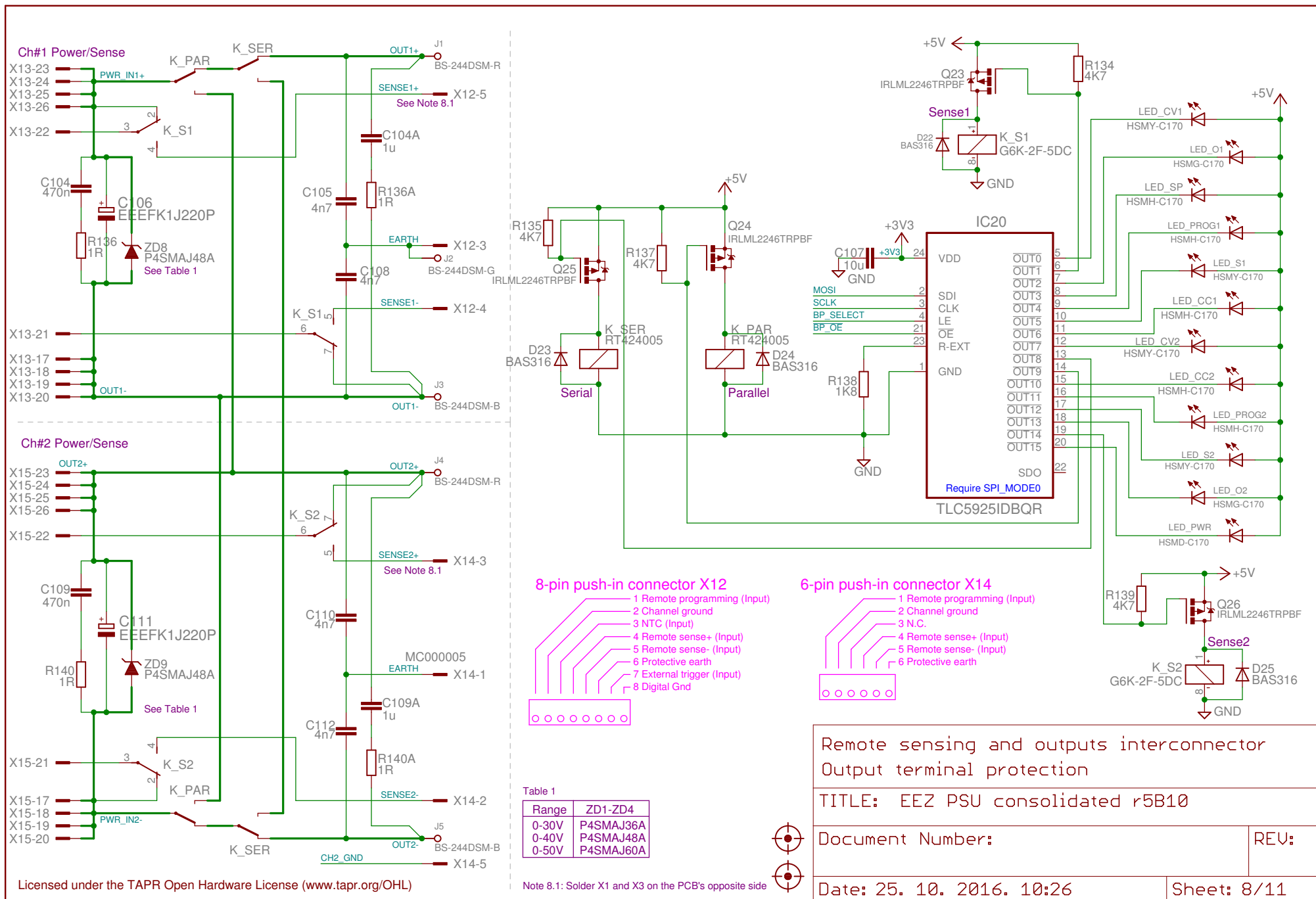
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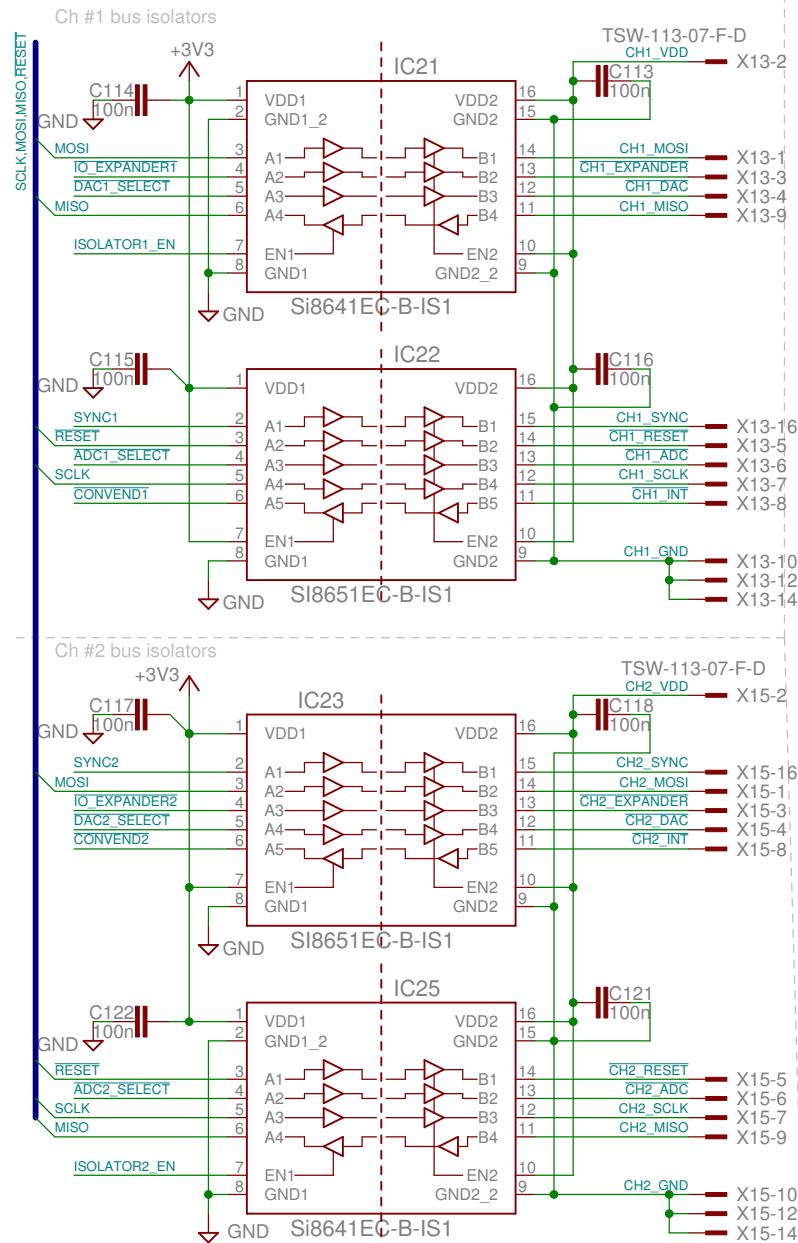
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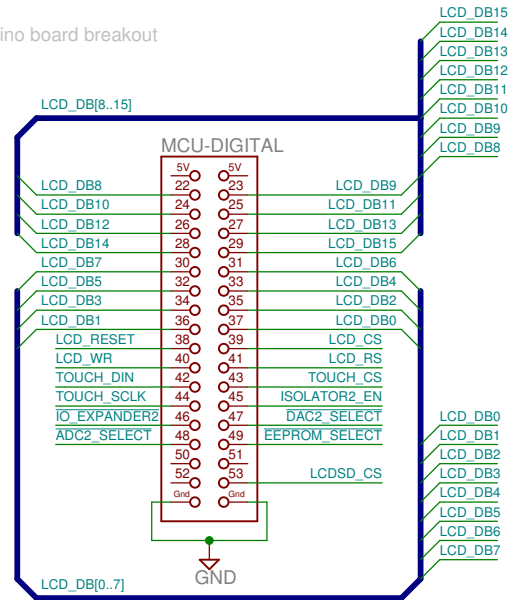
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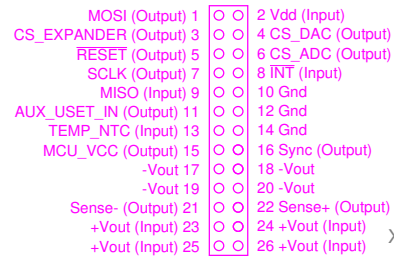




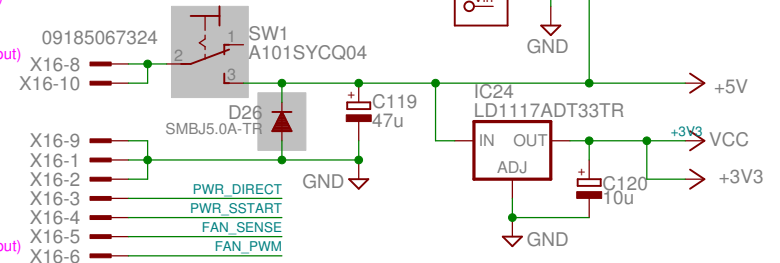
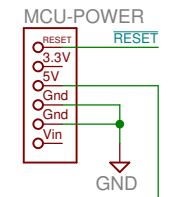
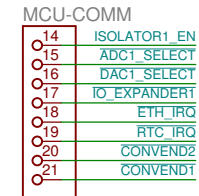
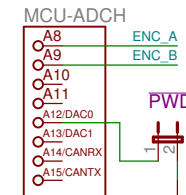
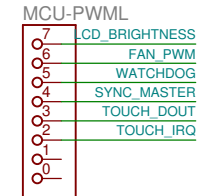
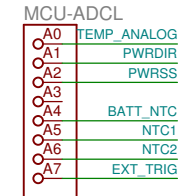
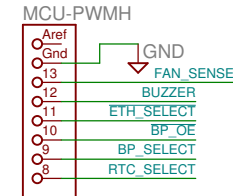
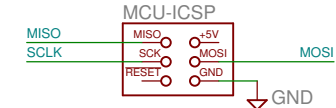
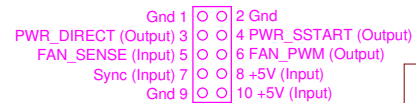
Arduino board breakout



26-pin SPI and power out socket (X13, X15)



10-pin IDC connector X16



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

TITLE: EEZ PSU consolidated r5B10

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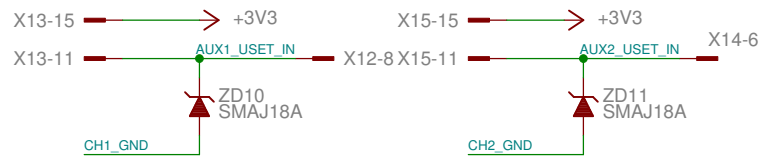
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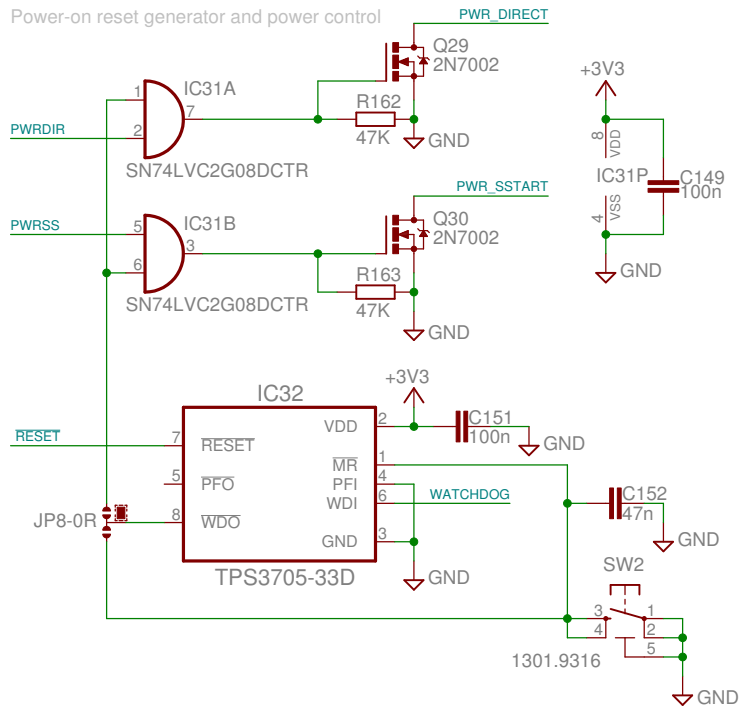
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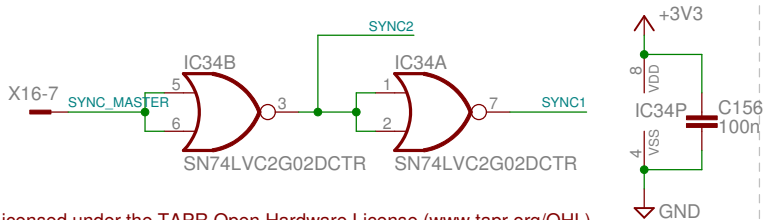
# Remote programming inputs



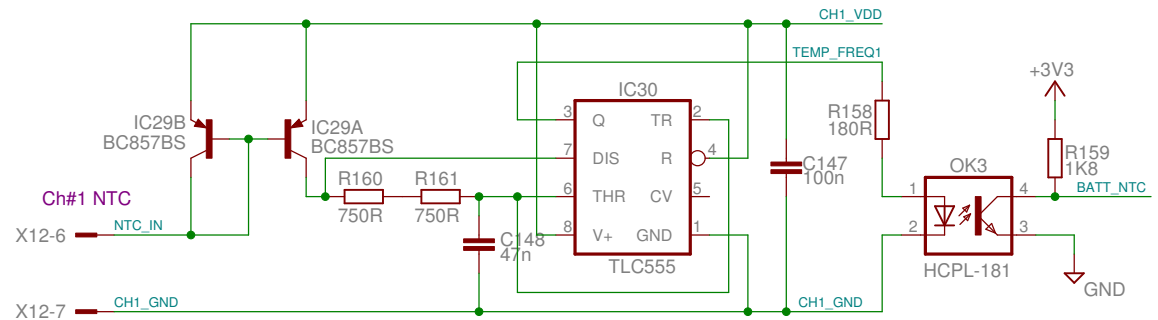
# Power-on reset generator and power control



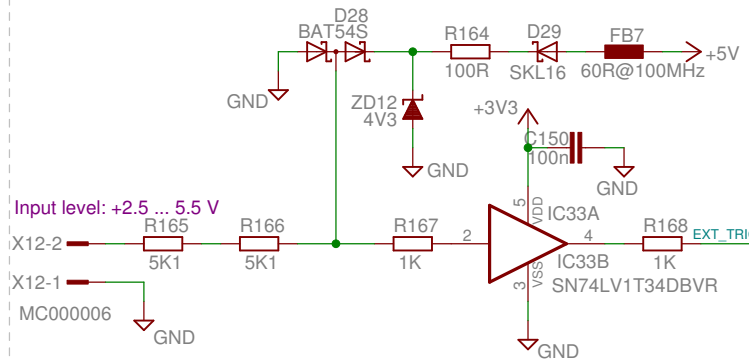
# Master sync signal phase shifting



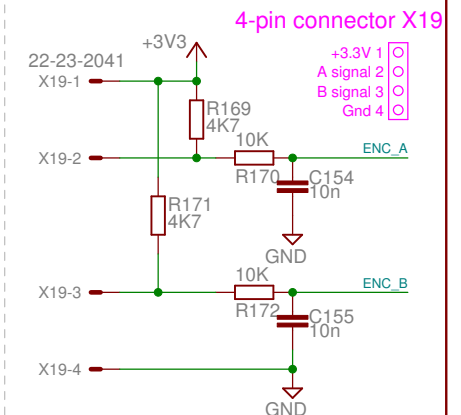
# Channel 1 V/F converter for battery NTC (optional)



# External trigger protection and level shifter/buffer



# Rotary encoder (optional)



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Reset control, soft-start driver, encoder (optional)  
U/F converter for battery NTC, External trigger

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