

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 IHL2040DZER470M11, etc.
 Note 1.3: Use 240K for 30 VAC main transformer
 Note 1.4: Install 0R only if 100% Duty cycle feature is not needed (do not mount Q3 in that case)
 Note 1.5: Use R020 for 0-3.12 A or R015 for 0-4.16 A range

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



SMPS power pre-regulator with 100% duty cycle

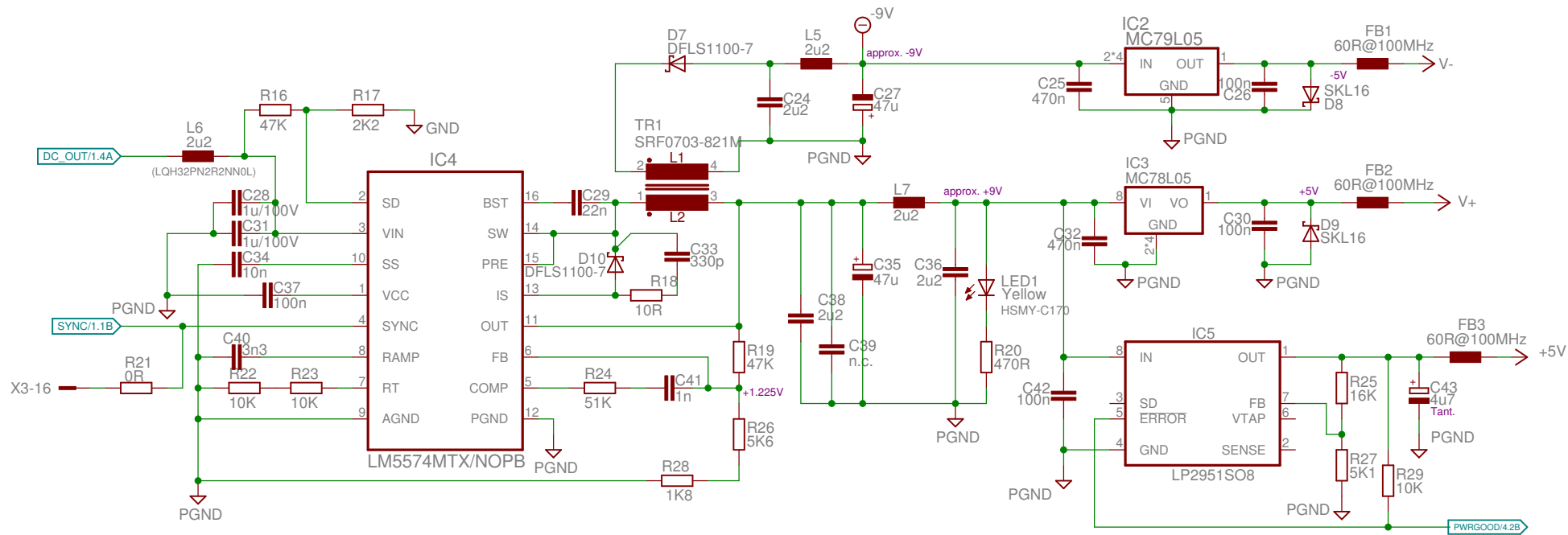
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Bias power supply with SMPS pre-regulator

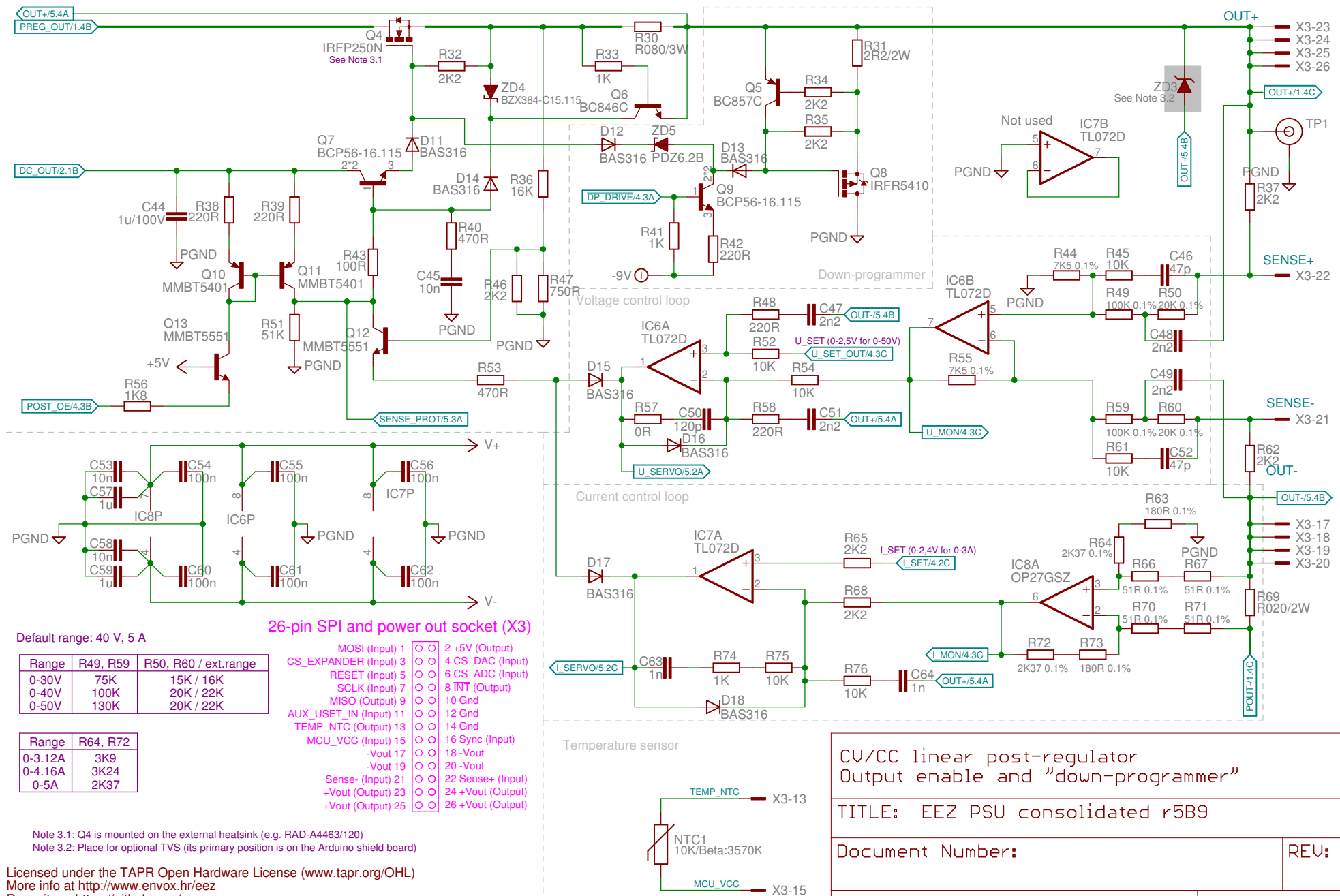
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CV/CC linear post-regulator
Output enable and "down-programmer"

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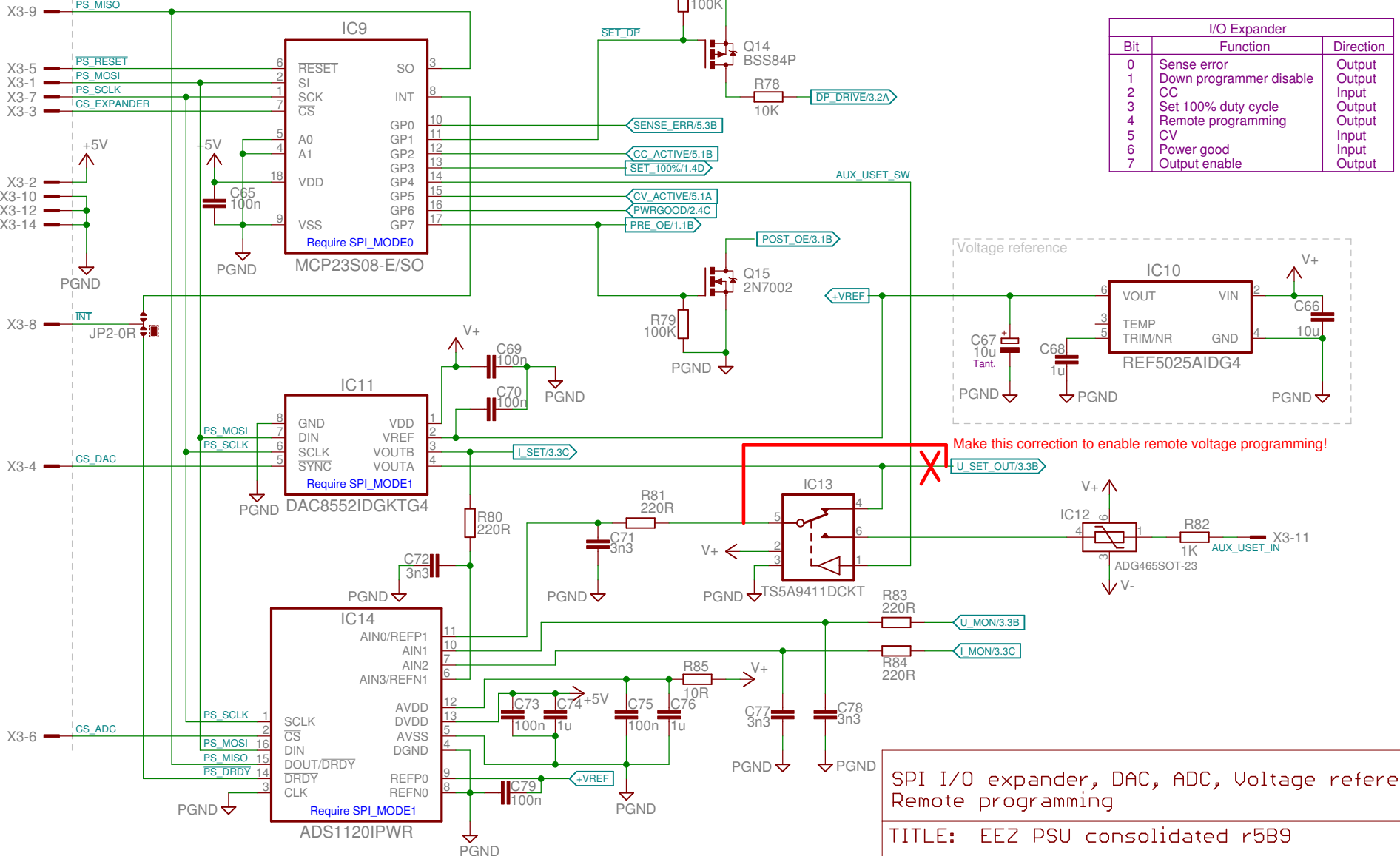
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Digital control (SPI)

SSW-113-02-T-D-RA



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

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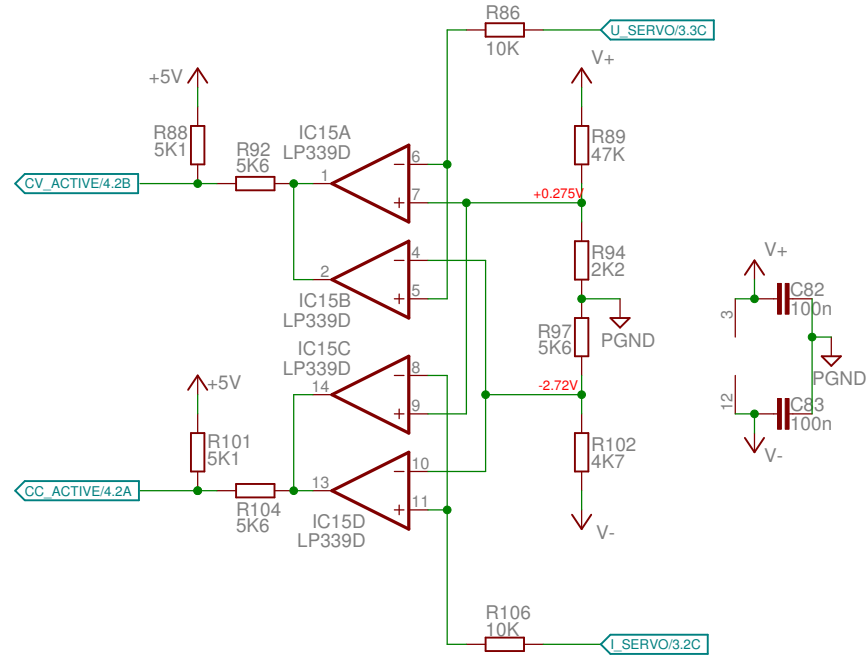
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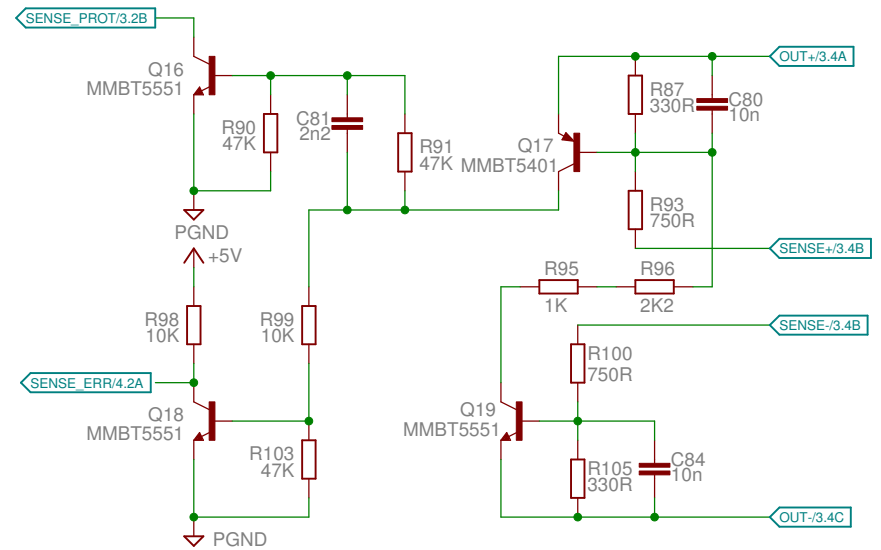
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Constant Voltage (CV) and Constant Current (CC) mode indicator



Remote sense reverse polarity detection



CC/CV indicators, Sense error detection

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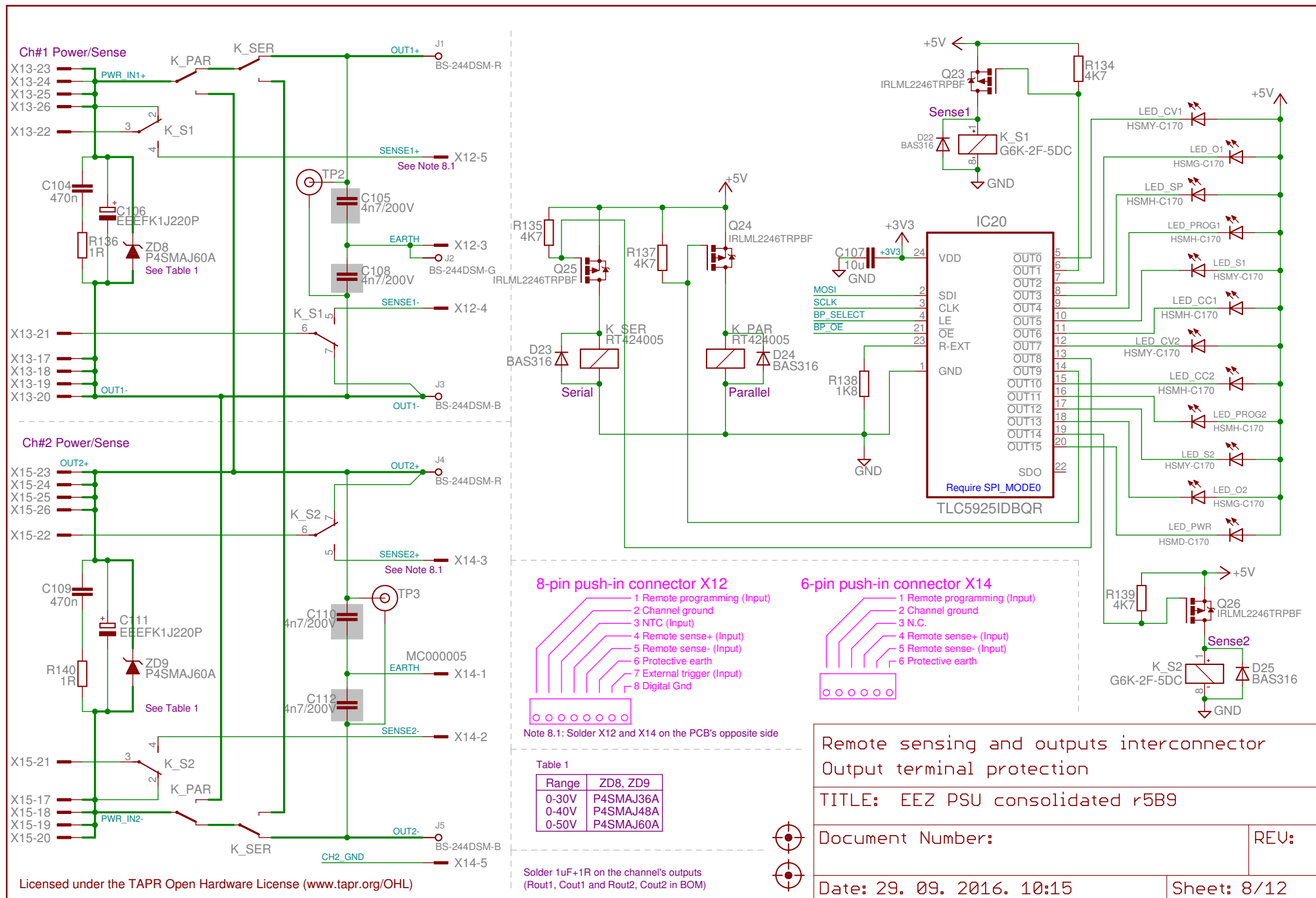
The schematic diagram illustrates the internal circuitry of the LED Link module. It shows the connection between the 8-pin connector X8 and various components:

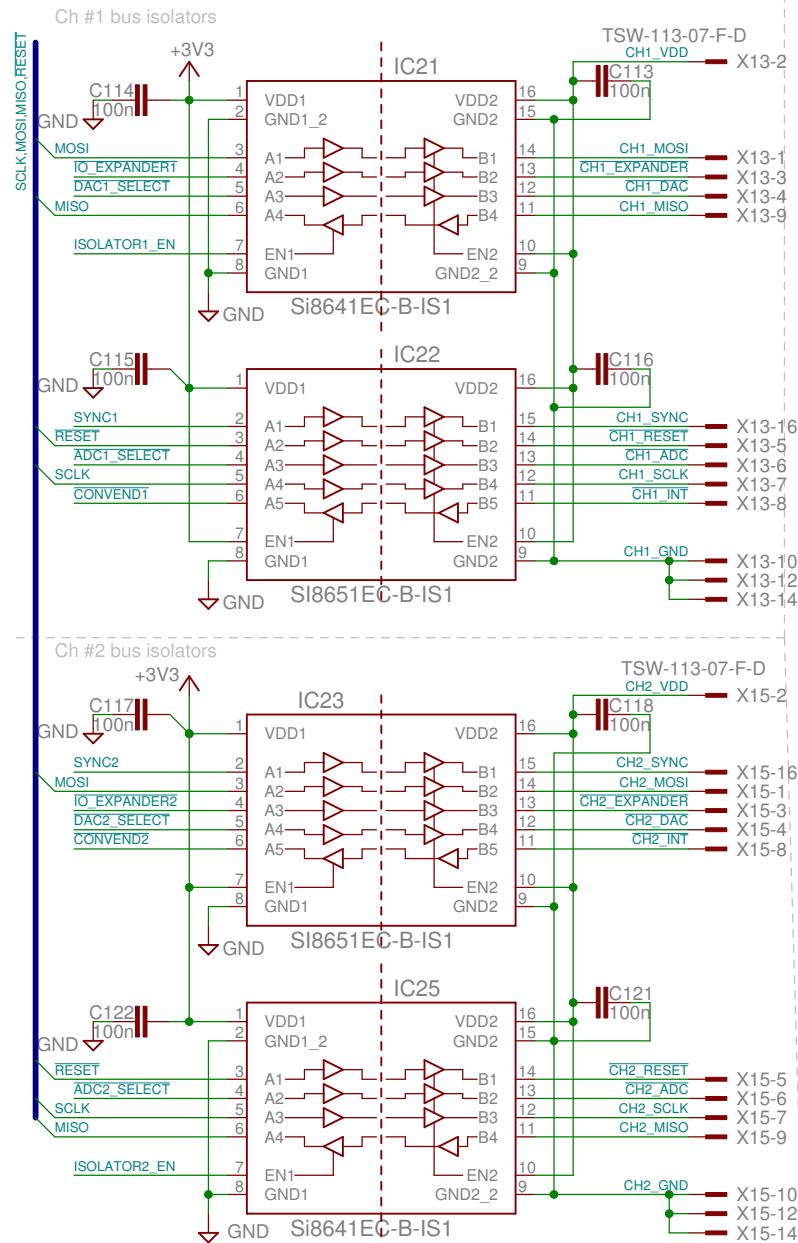
- Connector X8:**
 - Pin 7: AUX_ETH_OUT-
 - Pin 8: AUX_+3V3
 - Pin 6: AUX_ETH_OUT+
 - Pin 5: AUX_ETH_IN-
 - Pin 4: AUX_ETH_IN+
 - Pin 2: AUX_ETH_ACTLED
 - Pin 1: AUX_ETH_LINKLED
- Internal Components:**
 - Transformer:** A transformer with multiple windings, connected to pins 1, 2, 3, 4, 5, 6, 7, and 8.
 - IC17:** A component with pins 1, 2, 3, 4, and 5, connected to the transformer and the TPD4E002DRLR.
 - TPD4E002DRLR:** A component with pins 1, 2, 3, 4, and 5, connected to the transformer and the LMJ2138814S0L1T1C.
 - LMJ2138814S0L1T1C:** A component with pins 1, 2, 3, 4, 5, 6, 7, and 8, connected to the transformer and the LEDs.
 - LEDs:** Two LEDs, "Right LED (Yellow)" and "Left LED (Green)", connected to the LMJ2138814S0L1T1C.
 - Resistors:** Several resistors are shown, including a 60R@100MHz resistor (FB4) and various 75R resistors.
 - Capacitors:** A 1 nF capacitor is connected to pins 7 and 8.
- Legend:**
 - 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

The schematic diagram illustrates the internal circuitry of the ADUM3160BRWZ. Key components and connections include:

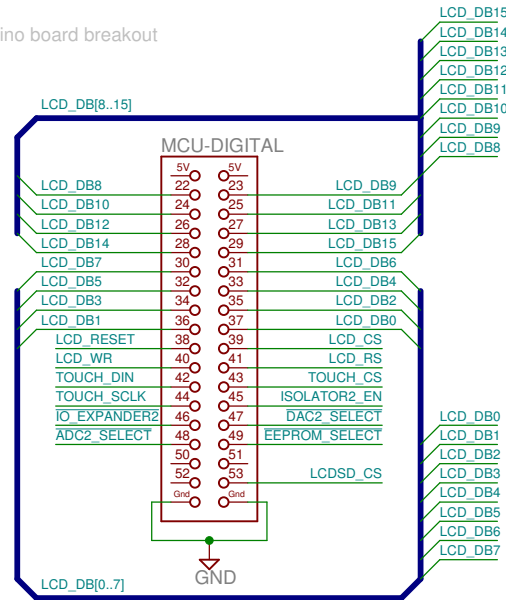
- Power and Grounding:** The circuit is powered by a +5V supply and connected to PGND. Decoupling capacitors C99 and C102 are used for power filtering.
- Signal Conditioning:** The TPD2E001DZDR (IC18) is used for signal conditioning, with VCC connected to +5V and GND to PGND. The output is labeled X11 2411-01.
- Resistors and Capacitors:** Various resistors (FB5, FB6, R132, R133) and capacitors (C101, C102) are used for signal conditioning and filtering.
- Signal Lines:** The circuit is connected to an Ethernet network (X11) and a TPD2E001DZDR (IC18) for signal conditioning. The output is labeled X11 2411-01.

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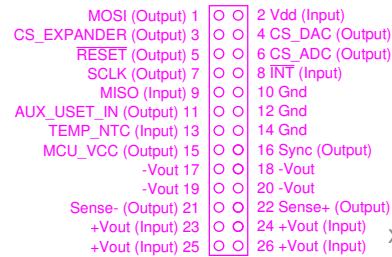




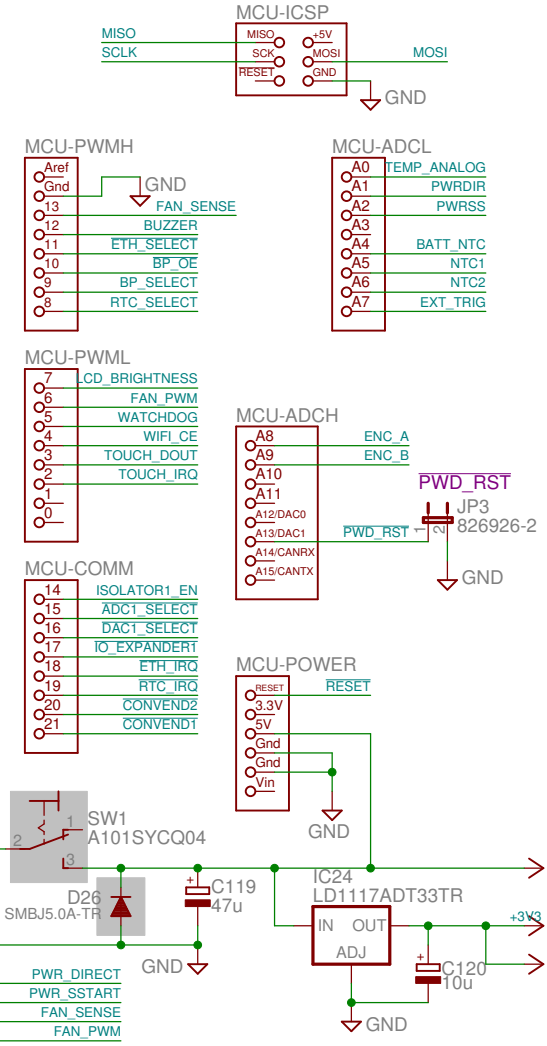
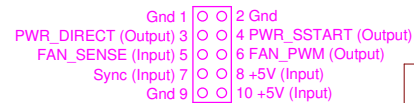
Arduino board breakout



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

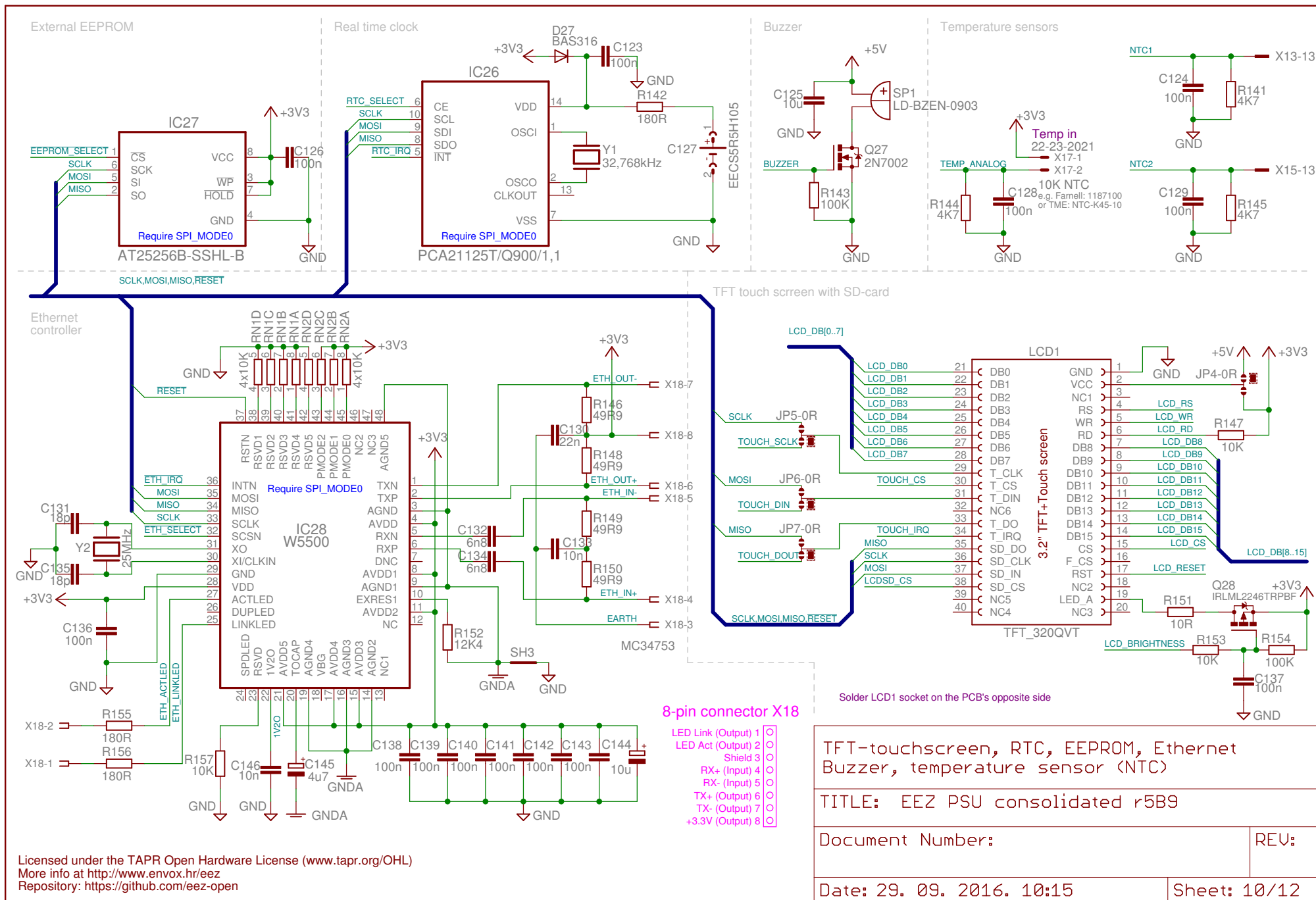
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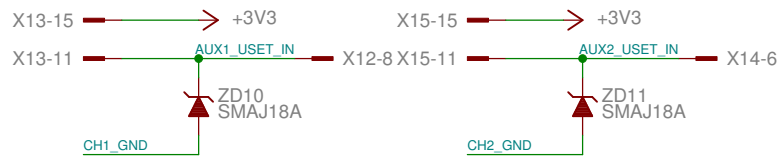
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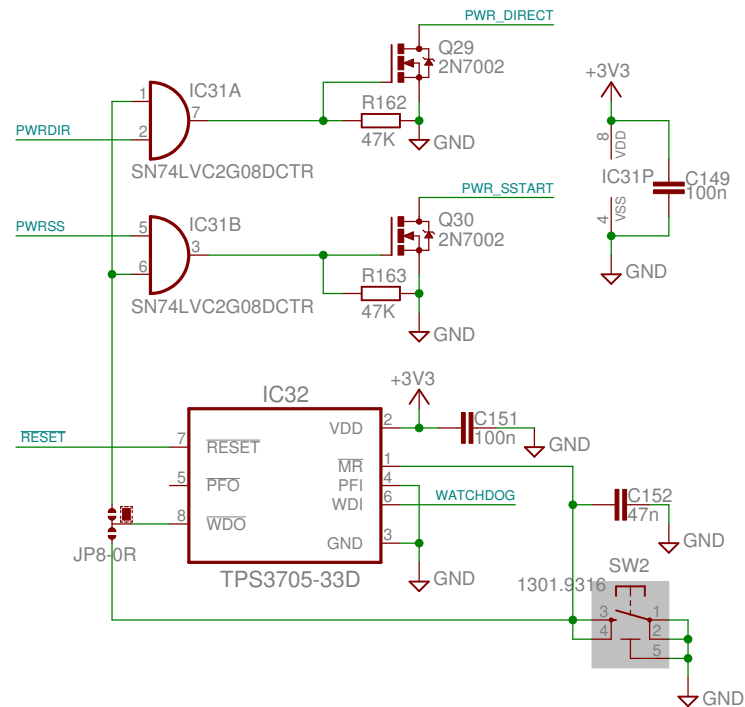
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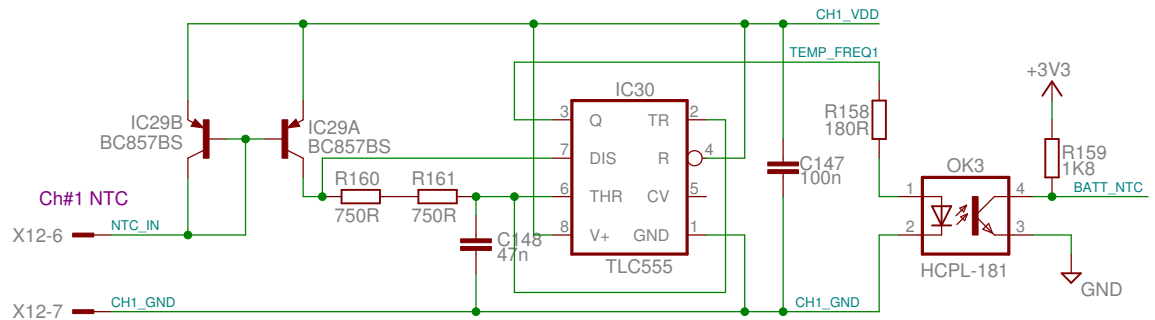
Remote programming inputs



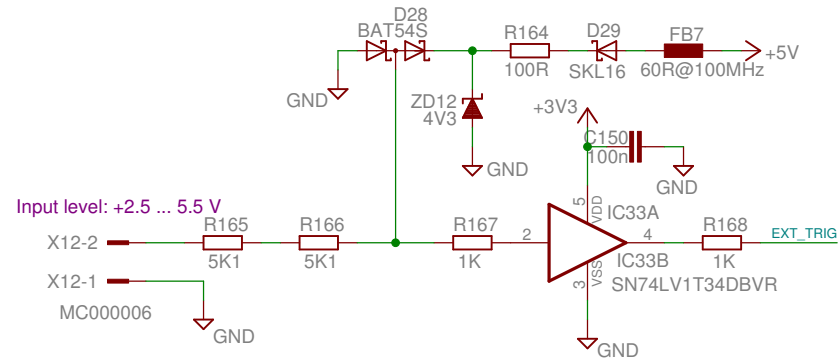
Power-on reset generator and power control



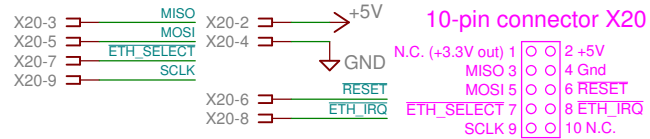
Channel 1 V/F converter for battery NTC (optional)



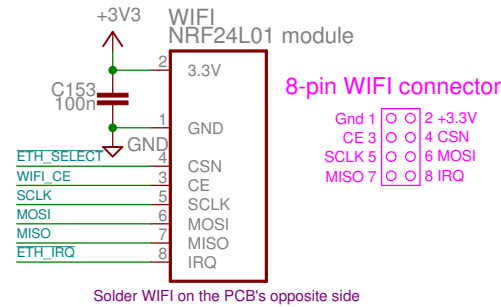
External trigger protection and level shifter/buffer



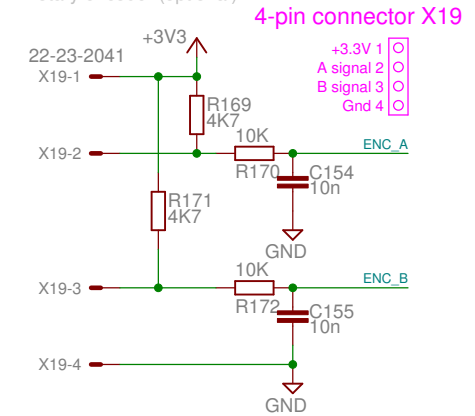
Optional Ethernet module connector



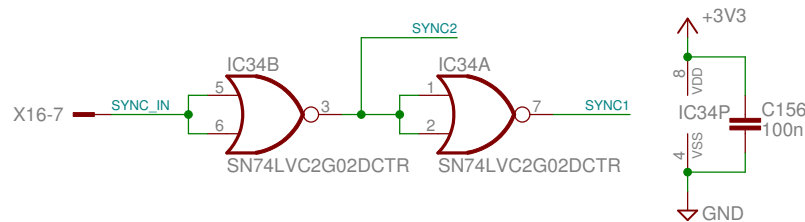
Optional Wifi module connector



Rotary encoder (optional)



Master sync signal phase shifting



Optional ethernet, Wifi and encoder
Power boards SMPS sync

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