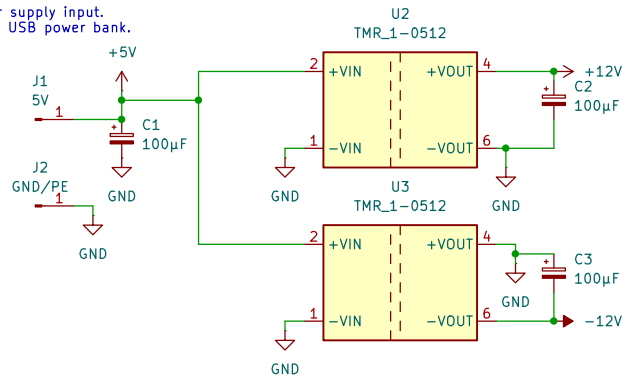


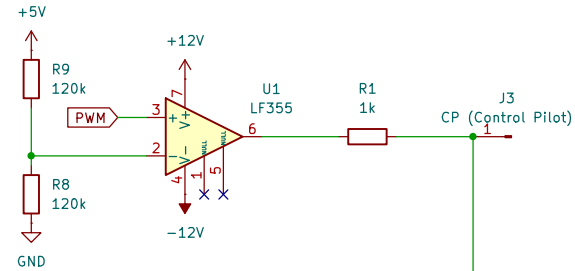
**Power Supply**

From 5V input, create +12V and -12V.  
The isolated DC/DC converters are e.g. B0512S-1WR3.

5V power supply input.  
E.g. from an USB power bank.

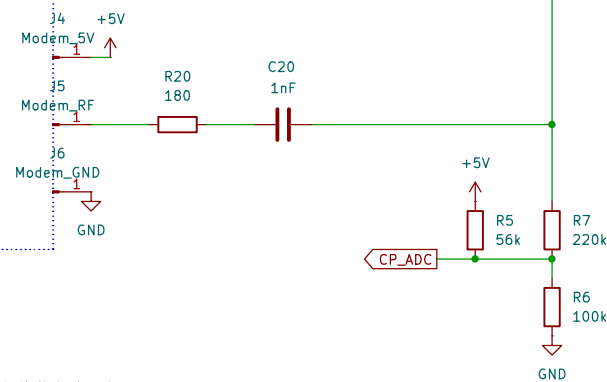


Amplifier: gets the PWM from the controller, which is a 0V/5V signal, and creates a +12V/-12V PWM out of this.



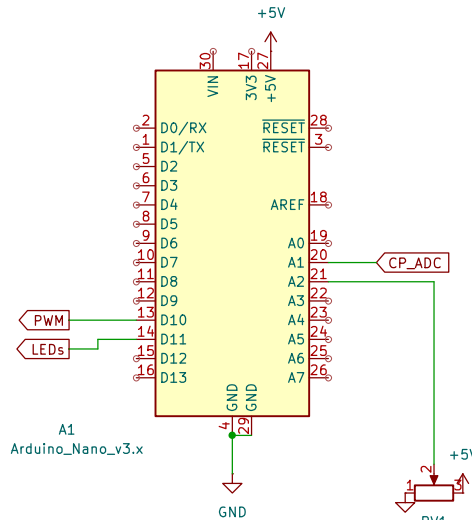
Notebook or Raspberry running pyPLC  
<https://github.com/uhi22/pyPLC>

Homeplug Modem: gets data from ethernet and modulates them according the Homeplug Green Phy (HomePlugGP) specification, and vice versa. E.g. a modified TL-PA4010 wallplug.

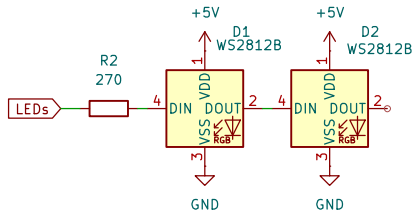


Voltage Divider: gets the CP voltage (which is in range -12V to +12V) and divides it to a range which the controllers analog-to-digital converter can process, i.e. between 0 and 5V. To be able to measure also negative voltages, the divider contains a resistor to plus, which create a voltage offset.

controller: evaluates the voltage on the CP and generates the 1kHz PWM  
<https://github.com/uhi22/WallboxArduino>



LEDs: show the status. Get a serial digital signal from the controller which selects the color and intensity of the LEDs. Shows the charging status (green=ready, yellow=vehicle detected, blue=charging, red=error)



poti: lets the user adjust the intended PWM duty cycle. Gets 5V from the power supply and provides 0V to 5V to the controller.  
For digital communication, the PWM duty shall be 5%. This is reached by turning the potentiometer to ground, which leads to 0V on controllers A2.

Discussion: <https://openinverter.org/forum/viewtopic.php?t=5116>  
Github repository: <https://github.com/uhi22/pyPLC>

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File: plc_evse.kicad_sch	
<b>Title: PLC EVSE</b>	
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KiCad E.D.A. 8.0.3	Rev: 1/1