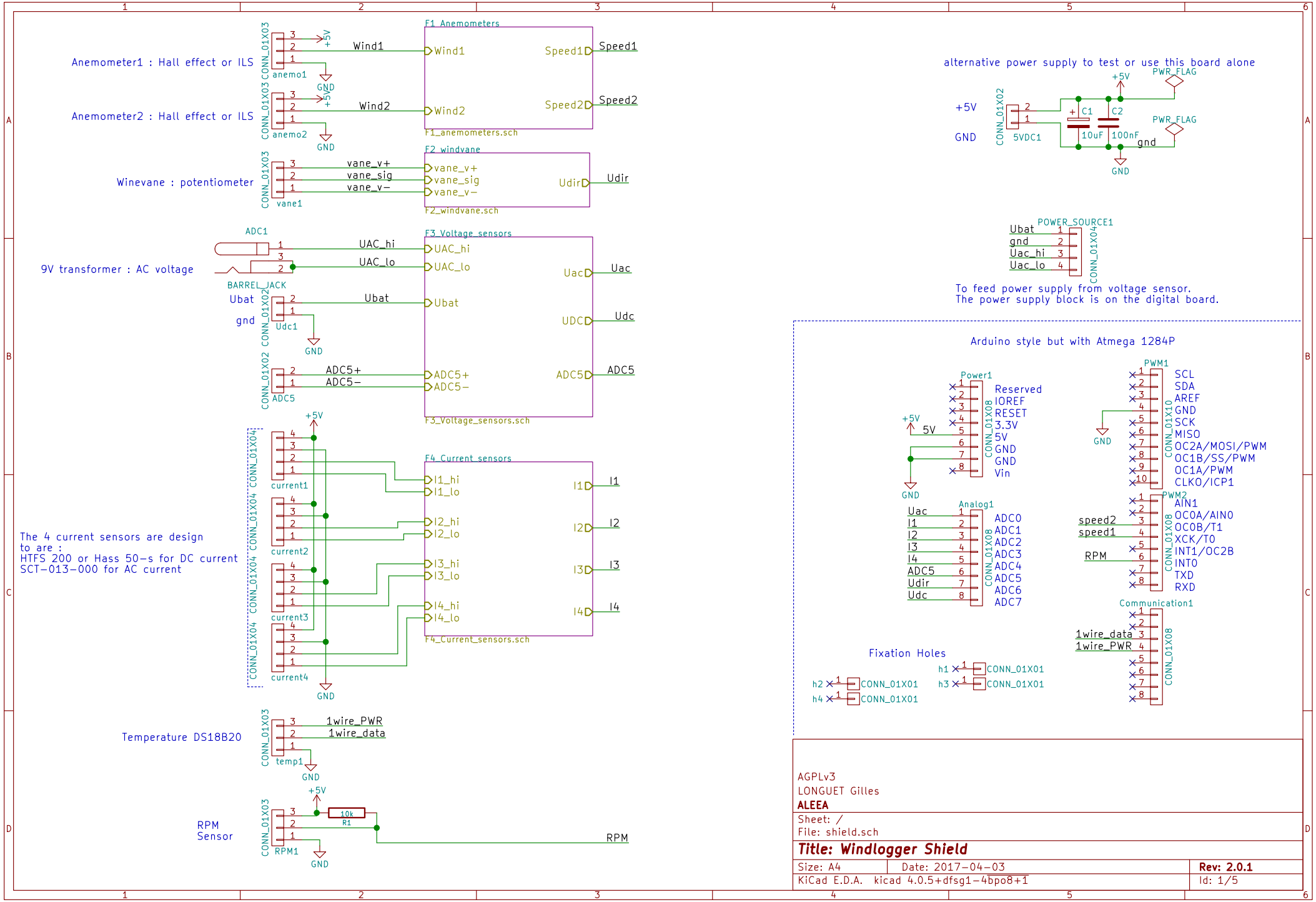
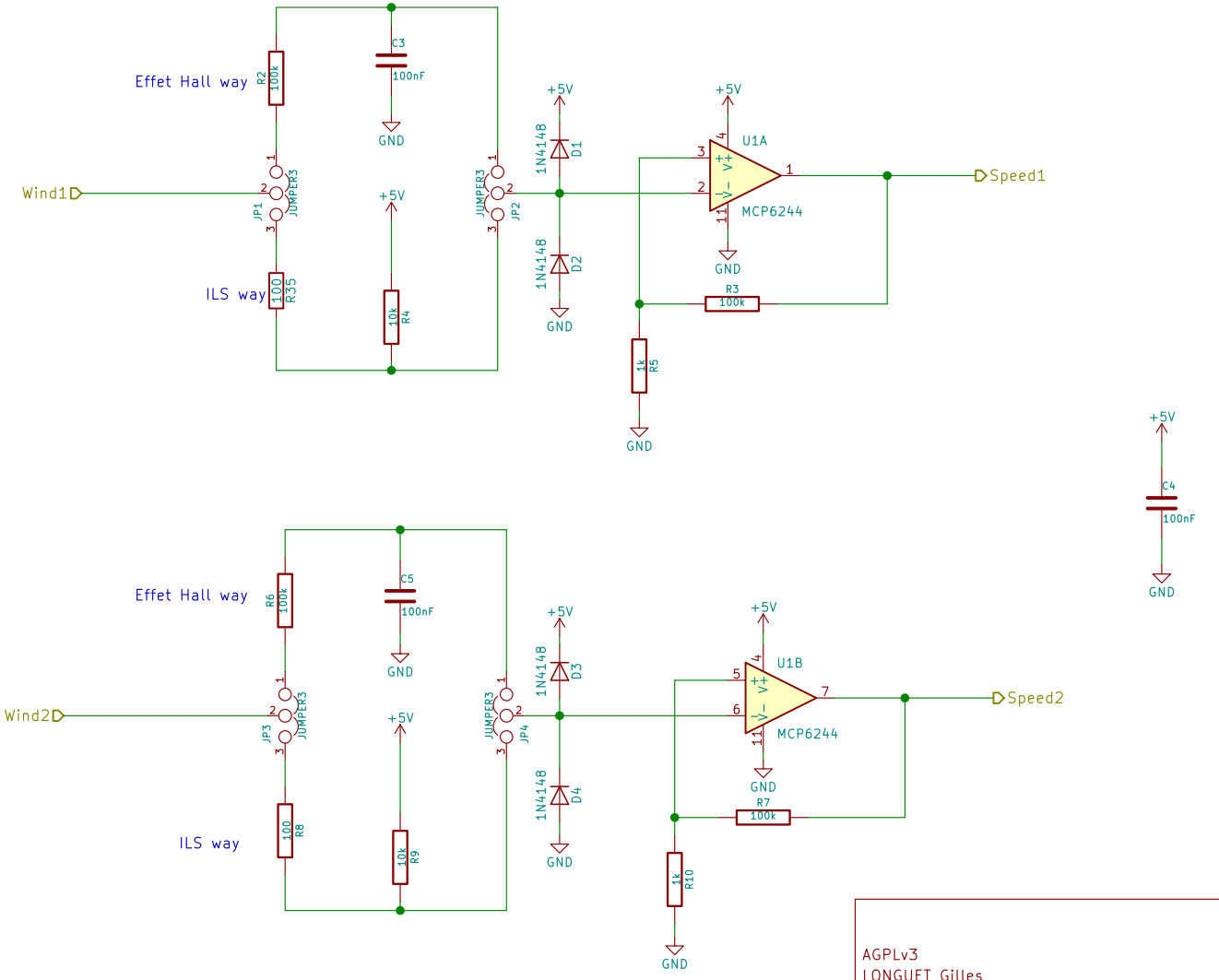

Anemometer1 : Hall effect or ILS
Anemometer2 : Hall effect or ILS
Winevane : potentiometer
9V transformer : AC voltage
The 4 current sensors are design to are :
HTFS 200 or Hass 50-s for DC current
SCT-013-000 for AC current
Temperature DS18B20
RPM Sensor
F1 Anemometers
F1_anemometers.sch
F2 windvane
F2_windvane.sch
F3 Voltage_sensors
F3_Voltage_sensors.sch
F4 Current_sensors
F4_Current_sensors.sch
alternative power supply to test or use this board alone
To feed power supply from voltage sensor.
The power supply block is on the digital board.
Arduino style but with Atmega 1284P
Fixation Holes
AGPLv3
LONGUET Gilles
ALEEA
Sheet: /
File: shield.sch
Title: Windlogger Shield
Size: A4
Date: 2017-04-03
Rev: 2.0.1
KiCad E.D.A. kicad 4.0.5+dfsg1-4bpo8+1
Id: 1/5

On this card it's possible to plug 2 anemometers.
For each, with 2 jumpers, select the good way : hall effect anemometer or ILS/open colector anemometers.



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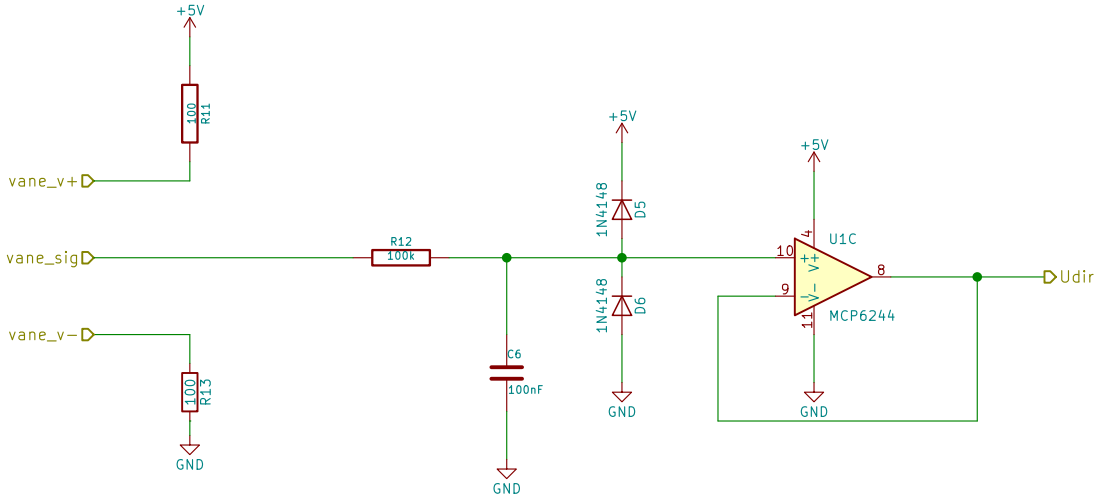
Sheet: /F1 Anemometers/
File: F1_anemometers.sch

Title: Anemometer function

Size: A4	Date: 2017-04-03	**Rev: 2.0.1**
KiCad E.D.A.	kicad 4.0.5+dfsg1-4bpo8+1	Id: 2/5

Convert the resistor value from the windvane sensor in voltage.
It will be convert in degree by the microcontroler.



The two 100 Ohms resistors are the blink band from the windvane (8°).
With these we can't have short circuit between supply in the blink band.

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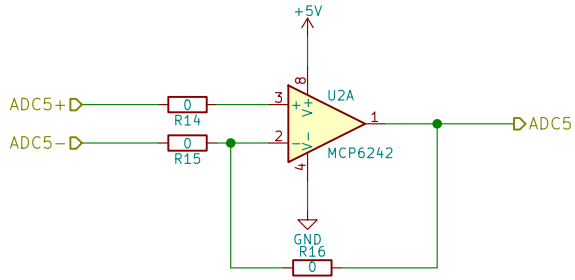
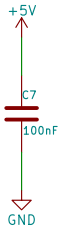
Sheet: /F2 windvane/
File: F2_windvane.sch

Title: Windvane function

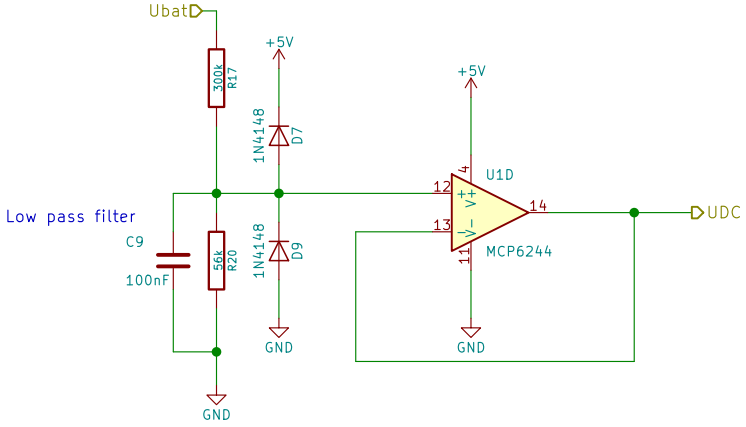
Size: A4	Date: 2017-04-03	**Rev: 2.0.1**
KiCad E.D.A.	kicad 4.0.5+dfsg1-4bpo8+1	Id: 3/5

Not used amp. Connect to the ADC5 pin.

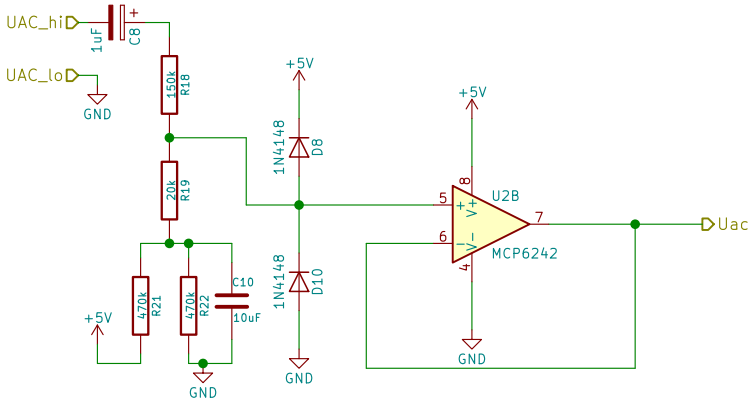




Batteries monitoring



For 6V batteries : R17 = 100kOhms, R20 = 470kOhms
30V : R17 = 300kOhms, R20 = 56kOhms
15V : R17 = 150kOhms, R20 = 56kOhms



The AC wattmeter come from OpenEnergyMonitor's works

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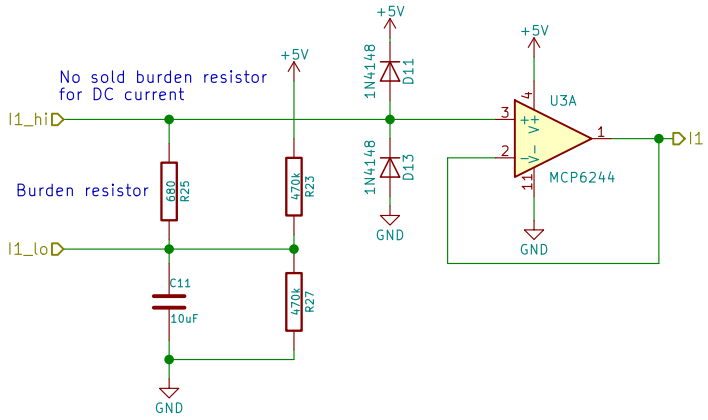
Sheet: /F3_Voltage_sensors/
File: F3_Voltage_sensors.sch

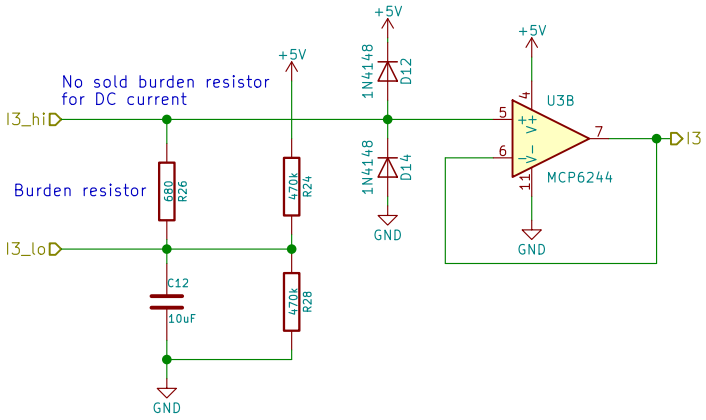
Title: AC/DC voltage conversion

Size: A4	Date: 2017-04-03	**Rev: 2.0.1**
KiCad E.D.A. kicad 4.0.5+dfsg1-4bpo8+1		Id: 4/5

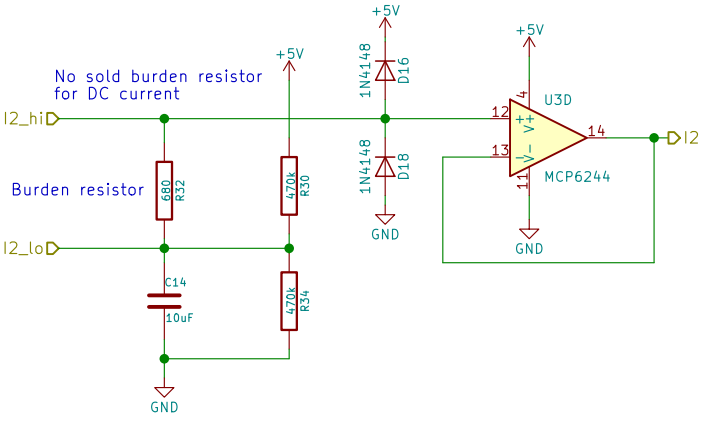
Current sensor 1 , select the burden resistor value



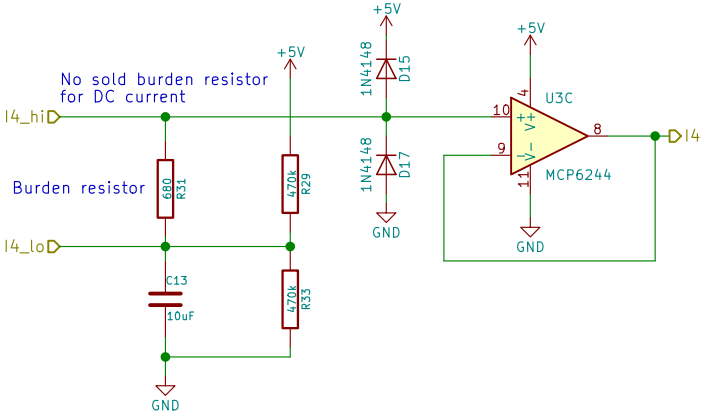
Current sensor 3 , select the burden resistor value



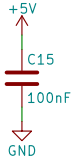
Current sensor 2 , select the burden resistor value



Current sensor 4 , select the burden resistor value



Burden Resistor (ohms) = (AREF * CT TURNS) / (2√2 * max primary current)
ex :
180 : 16A
90.9 : 32A



AGPLv3
LONGUET Gilles
ALEEA

Sheet: /F4_Current_sensors/
File: F4_Current_sensors.sch

Title: AC/DC current conversion

Size: A4	Date: 2017-04-03	**Rev: 2.0.1**
KiCad E.D.A. kicad 4.0.5+dfsg1-4bpo8+1		Id: 5/5