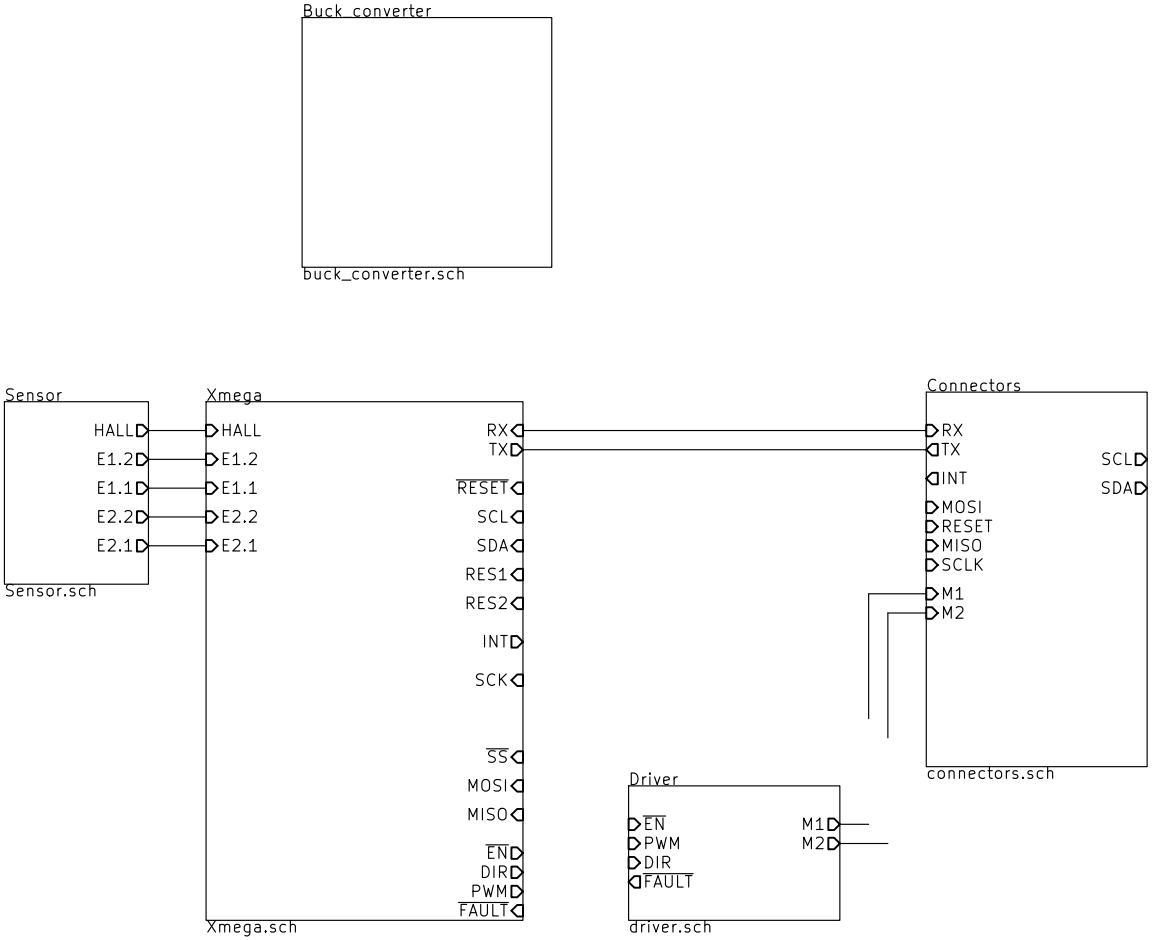

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Zebro

Sheet: /
File: Motor_driver.sch

Title: ROOT

Size: A4	Date: 2017-01-19	**Rev: 0**
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LET OP FOOTPRINT HALL

Hall sensor

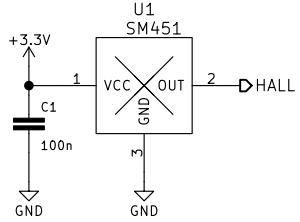
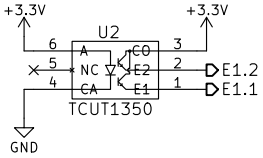
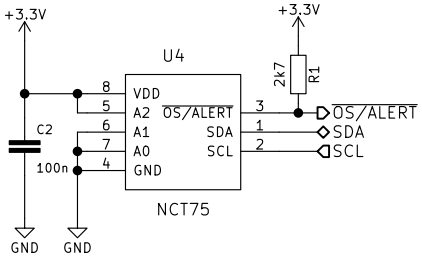
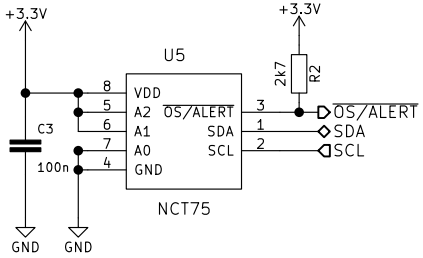


Photo Encoder



Temp Sensor





Choose NCT75MNR2G for SOIC package @ Mouser

I2C pins??? genoeg op Xmega??

Concept Version 0.1 Lisanne Kesselaar **Zebro**		
Sheet: /Sensor/ File: Sensor.sch		
Title: Sensors		
Size: A4	Date: 2017-01-19	**Rev: 0**
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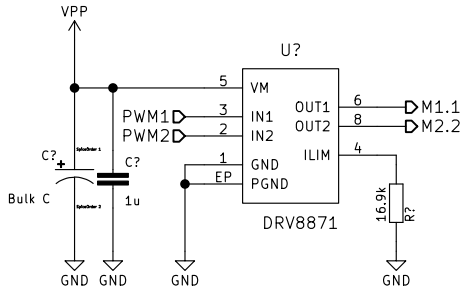
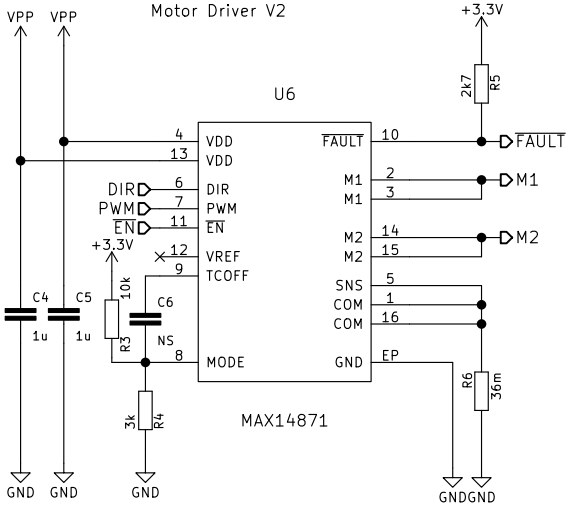
Motor Driver V1



Imax (A) = Vilm(kV)/Rilm(kOhm) --> Rilm(kOhm)=64(kV)/3.8(A)=16.8(kOhm)
Closest realisic value is 16.9 --> Imax 3.79A

Motor Driver V2



Vref -> NC to use internal ref (1V)
Solder Rx and Ry for automatic current regulation (CX NS)
Solder CX for fixed off-time regulation 15us typical
tOFF (us) = Coff (pf) / 10 (Rx and Ry NS)
IM_max = Vref / (Av x Rsense)
2.8A (driver max I) = 1 (internal ref) / (10 (datasheet) x Rsense) --> Rsense is +-36mOhm

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Sheet: /Driver/
File: driver.sch

Title: Motor Driver

Size: A4	Date: 2017-01-19	**Rev: 0**
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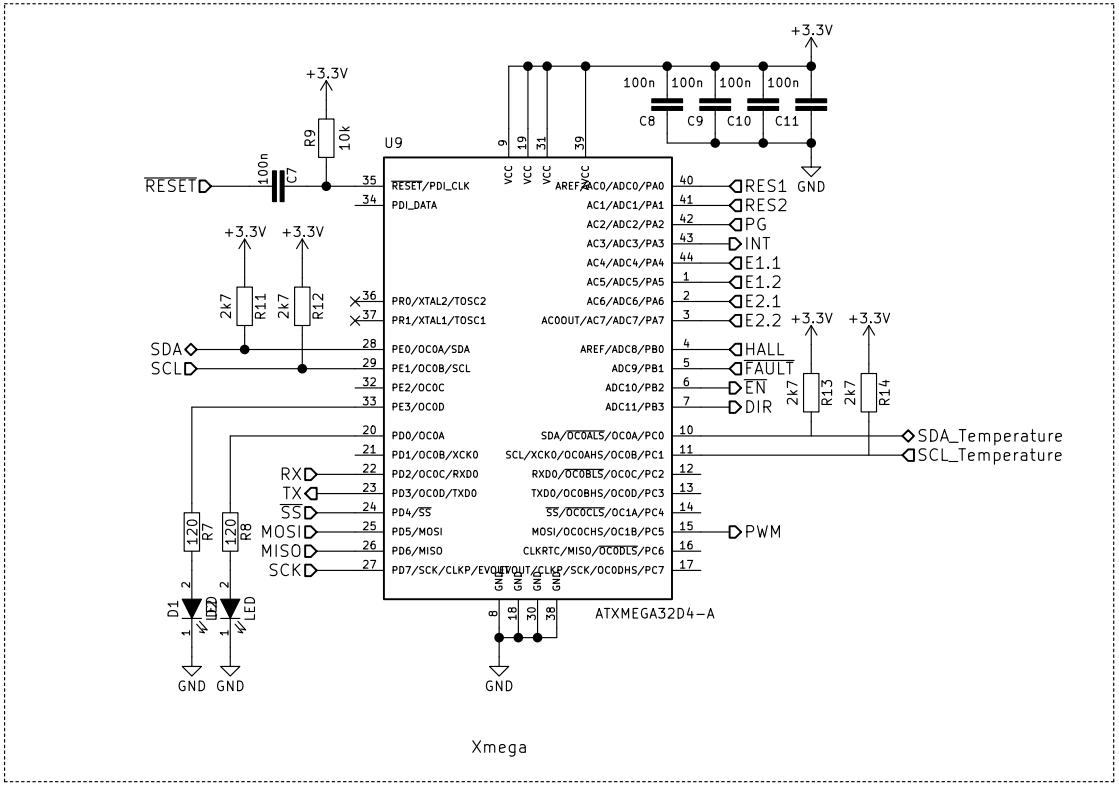

MISO MOSI SCK SDA SCL INPUT/OUTPUT

USB: http://www.atmel.com/Images/doc8388.pdf

Filter Caps Vcc

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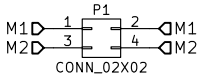
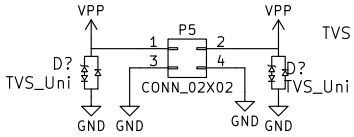
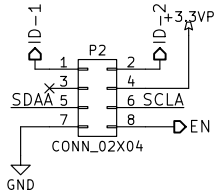
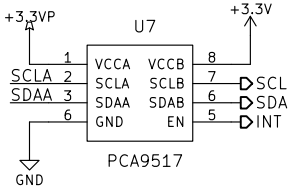
Sheet: /Xmega/ File: Xmega.sch		
Title: Xmega		
Size: A4	Date: 2017-01-19	**Rev: 0**
KiCad E.D.A. kicad 4.0.4-stable		Id: 4/6

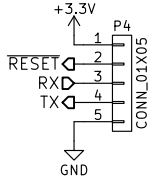


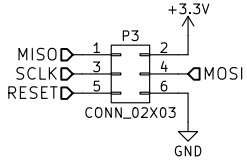


TVS diode: CDSOD323T05 Uni directional tot 8V









TO ADD:
TVS DIODES
USB conn?

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Sheet: /Connectors/
File: connectors.sch

Title: Connectors

Size: A4	Date: 2017-01-19	**Rev: 0**
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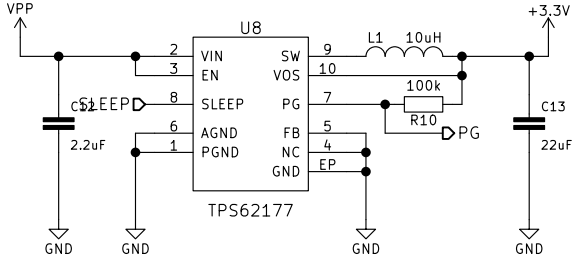
Zie datasheet voor lay-out and components MOUSER

Input Capacitor: Ceramic
Output Capacitor: Ceramic



Concept Version 0.1		
Lisanne Kesselaar		
Zebro		
Sheet: /Buck_converter/		
File: buck_converter.sch		
Title: Buck Converter		
Size: A4	Date: 2017-01-19	**Rev: 0**
KiCad E.D.A. kicad 4.0.4-stable		Id: 6/6