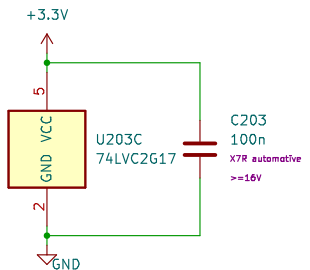
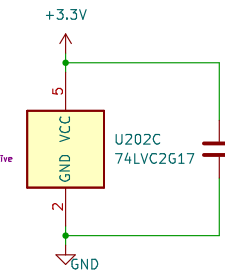
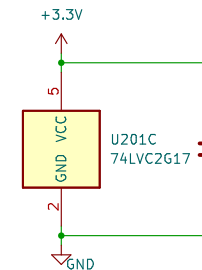
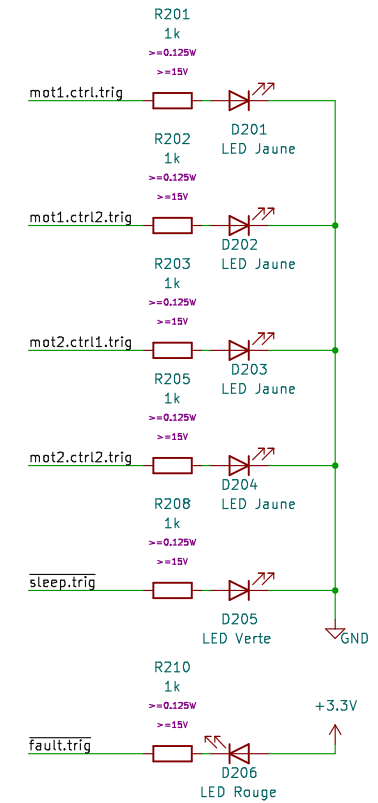
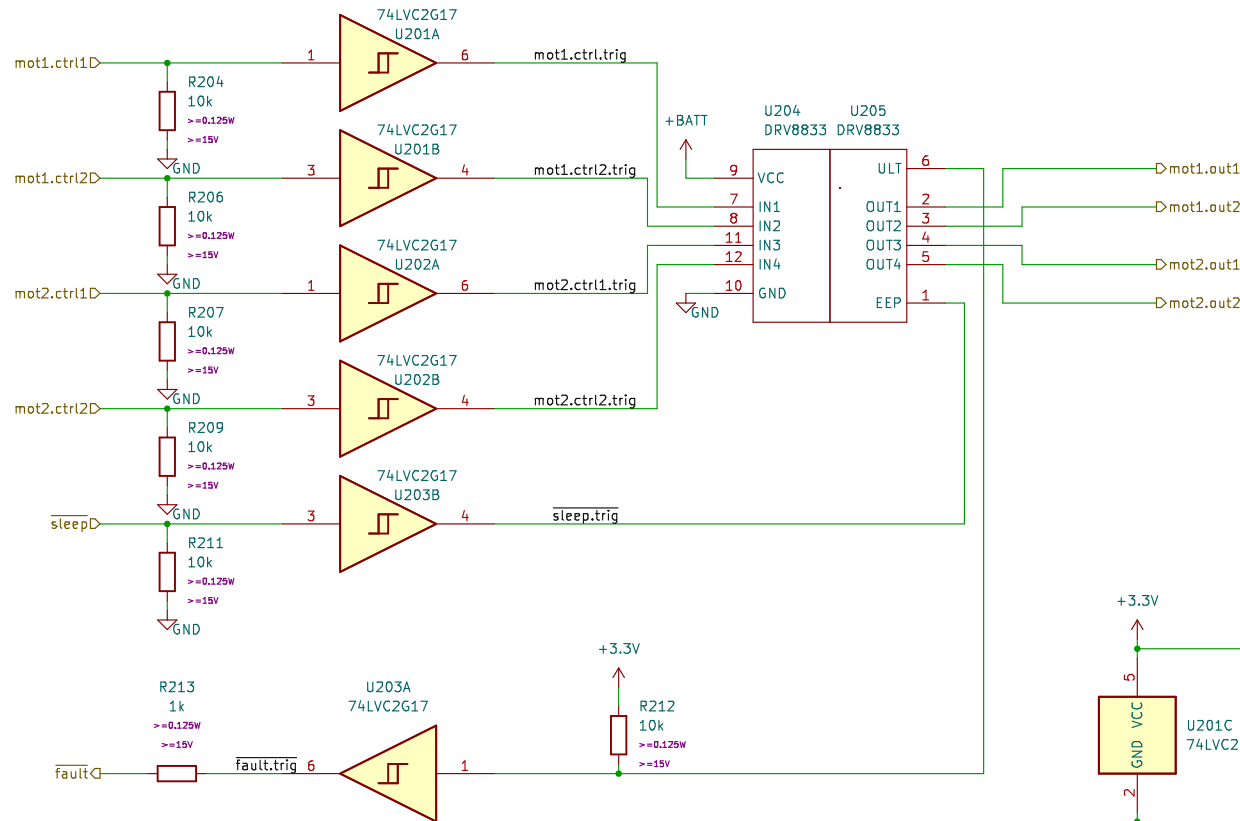




# Interface Pont en H Pilotage des Moteurs Liens avec les deux Moteurs:



Moteur ContrC4le

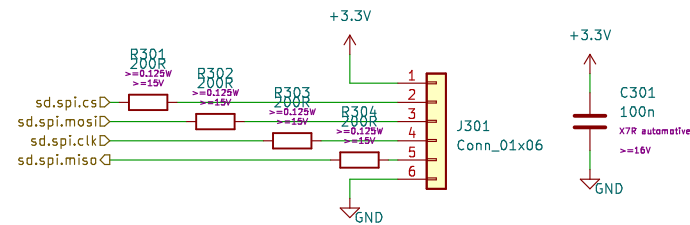
Table logique Motx\_Ctrl1 et Motx\_Ctrl2

Motx_Ctrl1	Motx_Ctrl2	Action
0	0	Freinage Rapide
0	1	Sens rotation Reverse
1	0	Sens rotation Forward
1	1	Freinage Lent

Switch : Quand ON,  
mode Sleep (GND)

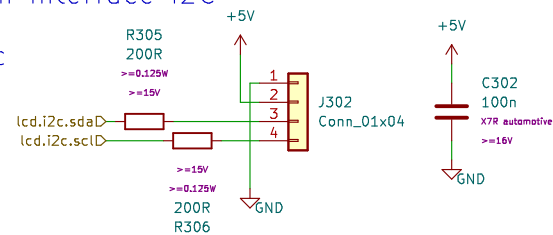
### Carte Micro SD : Module Référence (MircoSD Card Module)

- 1: 3,3Vdc
- 2: CS
- 3: MOSI
- 4: CLK
- 5: MISO
- 6: Gnd

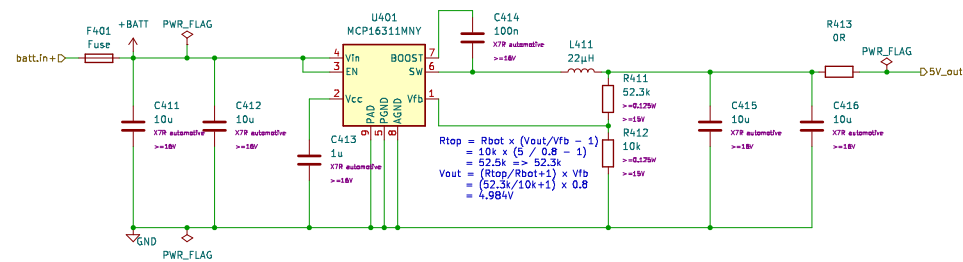


### Ecran LCD : Interface (2 Lignes X 16 Colonnes) Utilisation Interface I2C

- 1: Gnd
- 2: 5Vdc
- 3: SDA
- 4: SCL



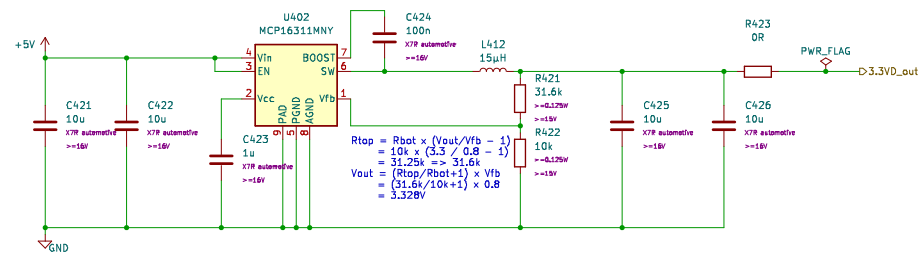
Bloc Batteries:  
 Deux batteries Lilon en série.  
 Possible mise en parallèle de deux blocs série.  
 Tension nominale par batonnet: 3,6 C 3,7Vdc  
 Tension Nominale par bloc: 7,2 C 7,4Vdc  
 – max 8,4V (4,2V/batonnet)  
 – min 6,4V (3,2V/batonnet)



Vout: 5V  
 Tout: 0,8A  
 Ldcr = 0,108m  
 Junction = 211°C/W

$D = Vout / Vin$   
 $Vin: 6V \Rightarrow D = 5/6 = 0,83$   
 $Vin: 8,4V \Rightarrow D = 5/8,4 = 0,60$   
 $ton = D \times Td$   
 $Vin: 6V \Rightarrow ton = 0,83 \times 1/500kHz = 1,66\mu s$   
 $Vin: 8,4V \Rightarrow ton = 0,60 \times 1/500kHz = 1,2\mu s$   
 $DeltaI_L = (Vin \cdot Vout) / L \times ton$   
 $Vin: 6V \Rightarrow DeltaI_L = (6 \times 5) / 22\mu H \times 1,66\mu s = 75mA$   
 $Vin: 8,4V \Rightarrow DeltaI_L = (8,4 \times 5) / 22\mu H \times 1,2\mu s = 185mA$   
 $Iave = Iout + DeltaI_L/2 = 0,8 + 0,185/2 = 893mA$

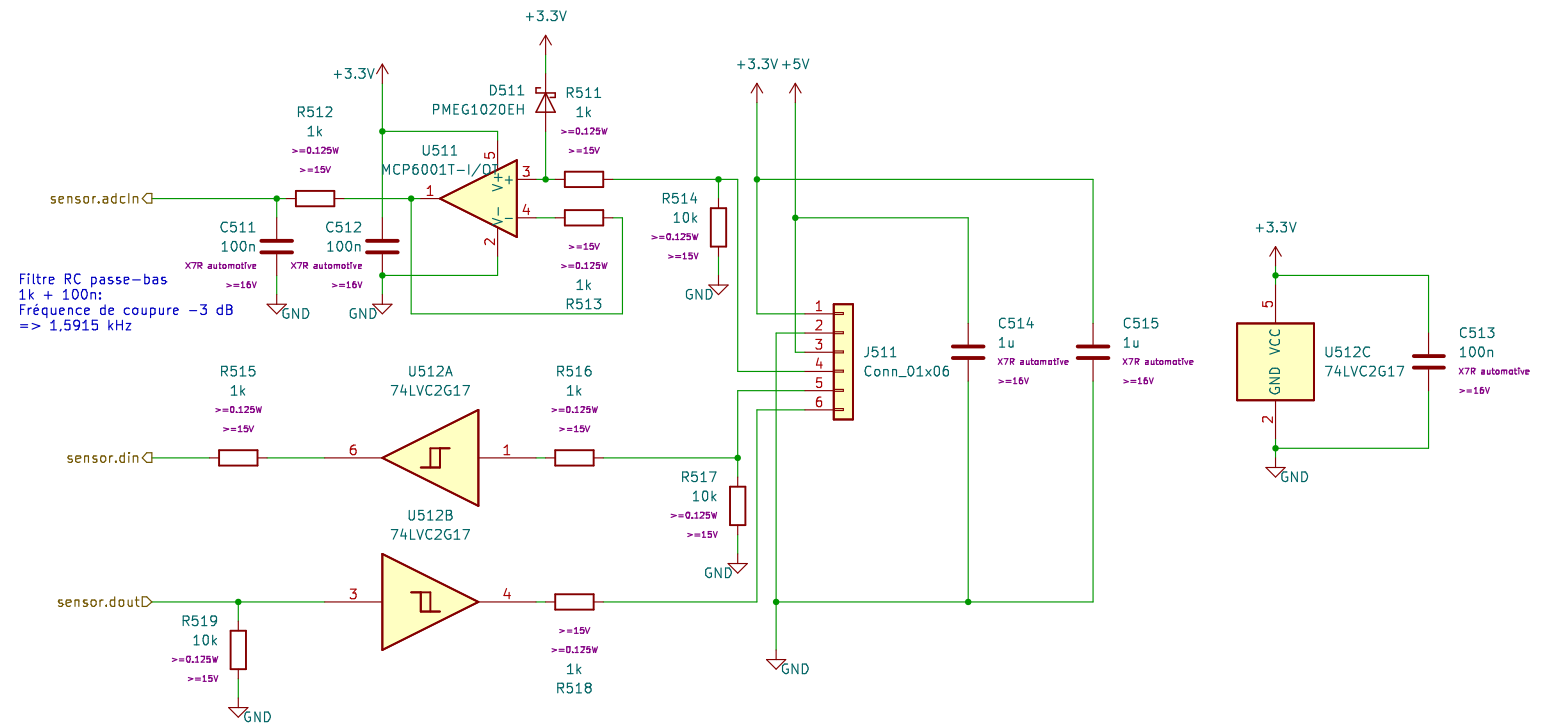
$PdisTotal = Vout \times Iout / Efficiency \cdot (Vout \times Iout)$   
 $= 5 \times 0,8 / 0,93 \cdot (5 \times 0,8) = 301mW$   
 $Pdiss = Tout \times Tout \times Idcr = 0,8 \times 0,8 \times 0,1 = 64mW$   
 $Puc = PdissTotal + Pdiss = 0,301 + 0,064 = 237mW$   
 $Temp Rise = Junction \times Puc = 211 \times 0,237 = 30^\circ C$



Vout: 3,3V  
 Tout: 0,8A  
 Efficiency: 8%  
 Ldcr = 0,108m  
 Junction = 211°C/W

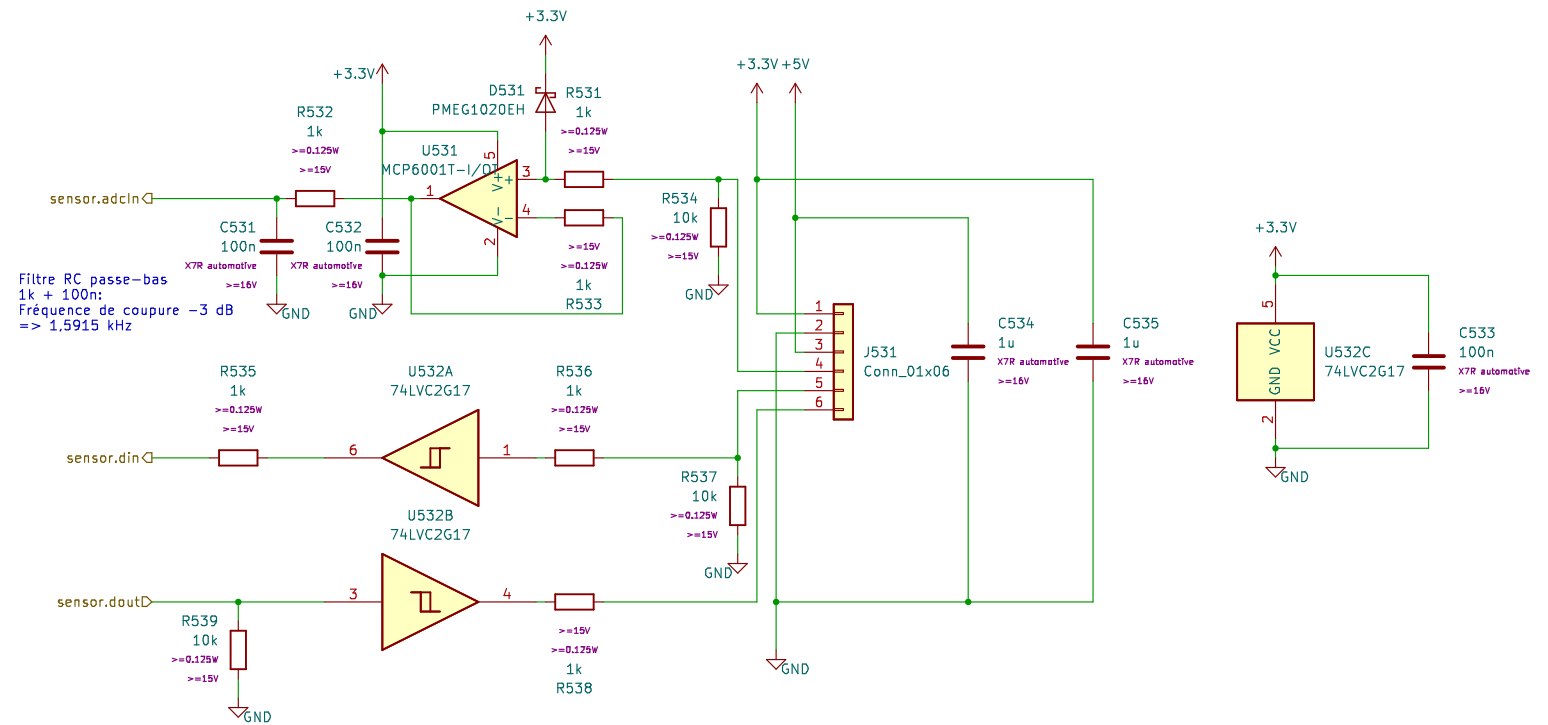
$D = Vout / Vin$   
 $Vin: 6V \Rightarrow D = 3,3/6 = 0,55$   
 $Vin: 8,4V \Rightarrow D = 3,3/8,4 = 0,39$   
 $ton = D \times Td$   
 $Vin: 6V \Rightarrow ton = 0,55 \times 1/500kHz = 1,1\mu s$   
 $Vin: 8,4V \Rightarrow ton = 0,39 \times 1/500kHz = 0,78\mu s$   
 $DeltaI_L = (Vin \cdot Vout) / L \times ton$   
 $Vin: 6V \Rightarrow DeltaI_L = (6 \times 3,3) / 15\mu H \times 1,1\mu s = 96mA$   
 $Vin: 8,4V \Rightarrow DeltaI_L = (8,4 \times 3,3) / 15\mu H \times 0,78\mu s = 263mA$   
 $Iave = Iout + DeltaI_L/2 = 0,8 + 0,263/2 = 913mA$

$PdisTotal = Vout \times Iout / Efficiency \cdot (Vout \times Iout)$   
 $= 3,3 \times 0,8 / 0,08 \cdot (3,3 \times 0,8) = 339mW$   
 $Pdiss = Tout \times Tout \times Idcr = 0,8 \times 0,8 \times 0,1 = 64mW$   
 $Puc = PdissTotal + Pdiss = 0,339 + 0,064 = 351mW$   
 $Temp Rise = Junction \times Puc = 211 \times 0,351 = 74^\circ C$



Partie Capteurs:  
 Capteur de position  
 Capteur de contact



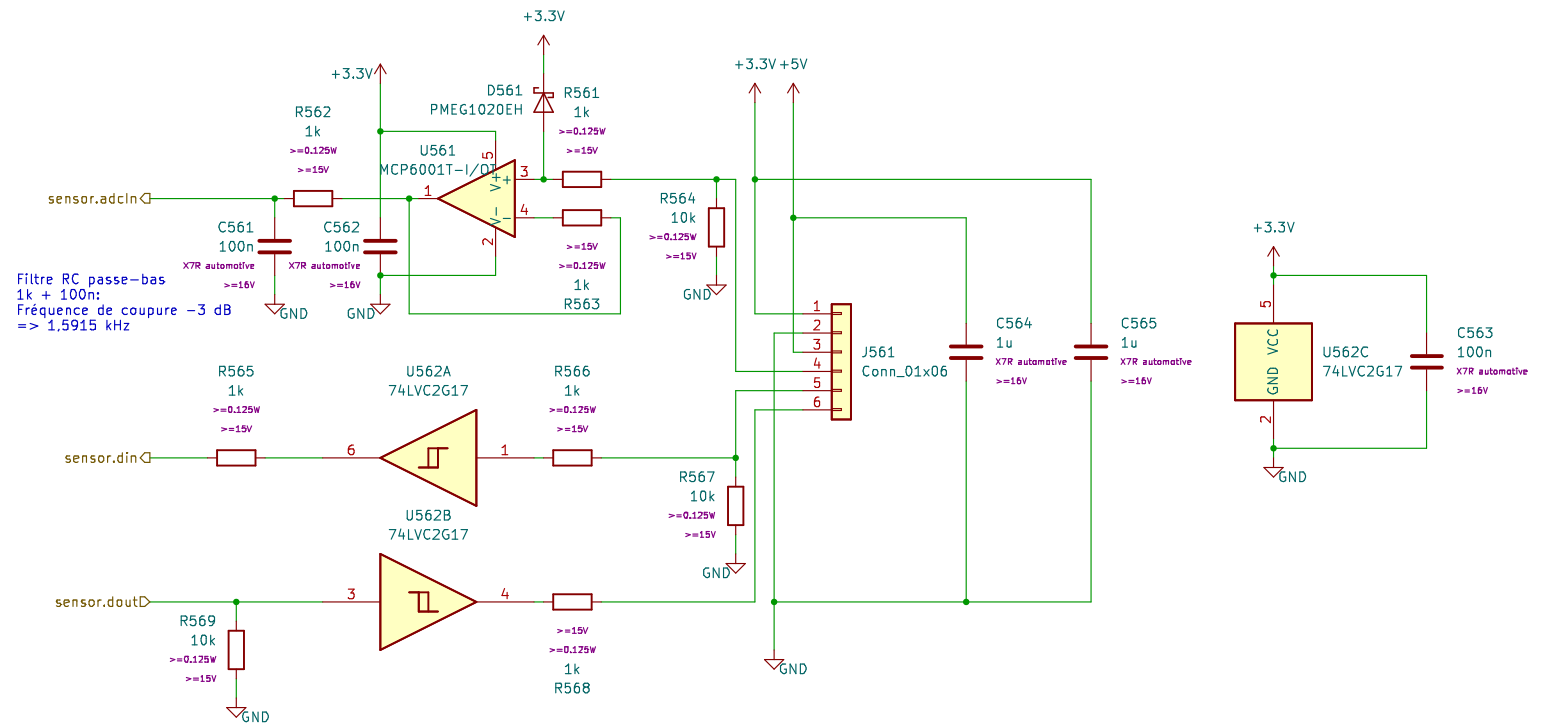


Partie Capteurs:  
 Capteur de position  
 Capteur de contact









Partie Capteurs:  
 Capteur de position  
 Capteur de contact