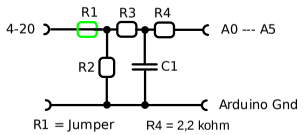
Arduino universal 12x input PCB inputs; 0-20mA, 4-20mA 0-10V, 24V pushbutton, 24V PNP and NPN sensors etc.

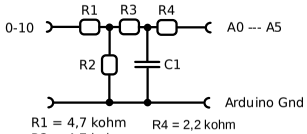
It is the best to build analog inputs to a separate PCB and digital (opto) inputs to another to get galvanic isolation.

4-20mA 0-20mA analog input 1



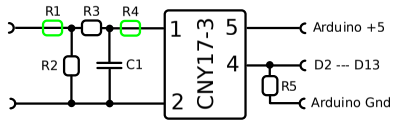
R1 = Jumper
R2 = 250 ohm
R3 = 10 kohm
R4 = 2,2 kohm
R5 = ---
C1 = 1 uF polyester capacitor
Spacing 5mm

0-10V analog input 2



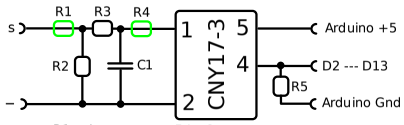
R1 = 4,7 kohm
R2 = 4,7 kohm
R3 = 10 kohm
R4 = 2,2 kohm
R5 = ---
C1 = 1 uF polyester capacitor
Spacing 5mm

2-6V digital input 3



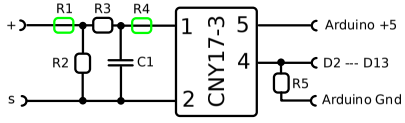
R1 = Jumper
R2 = 1 kohm
R3 = 100 ohm
R4 = Jumper
R5 = 2,2 kohm
C1 = 1 uF polyester capacitor
Spacing 5mm

5-30V digital PNP input 4



R1 = Jumper
R2 = 4,7 kohm
R3 = 2,2 kohm
R4 = Jumper
R5 = 2,2 kohm
C1 = 1 uF polyester capacitor
Spacing 5mm

5-30V digital NPN input 5

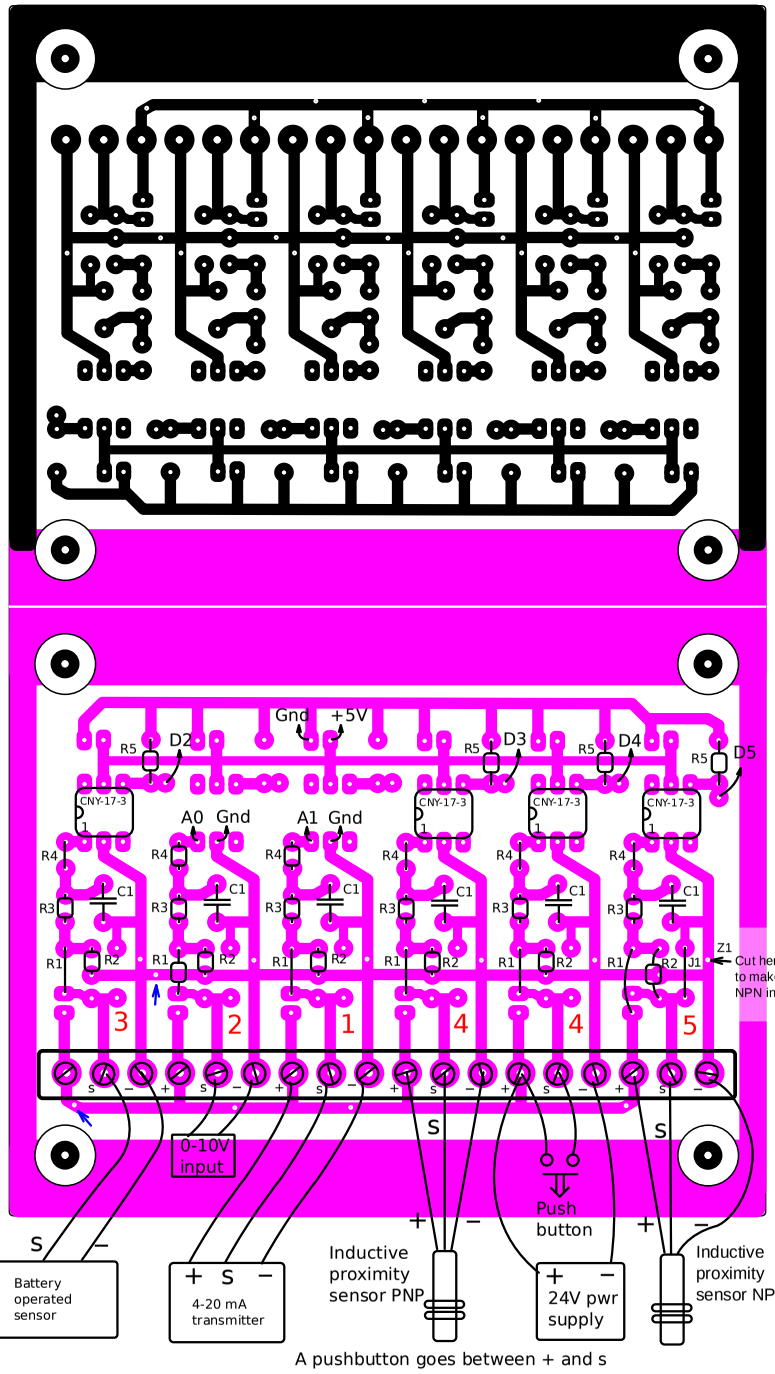


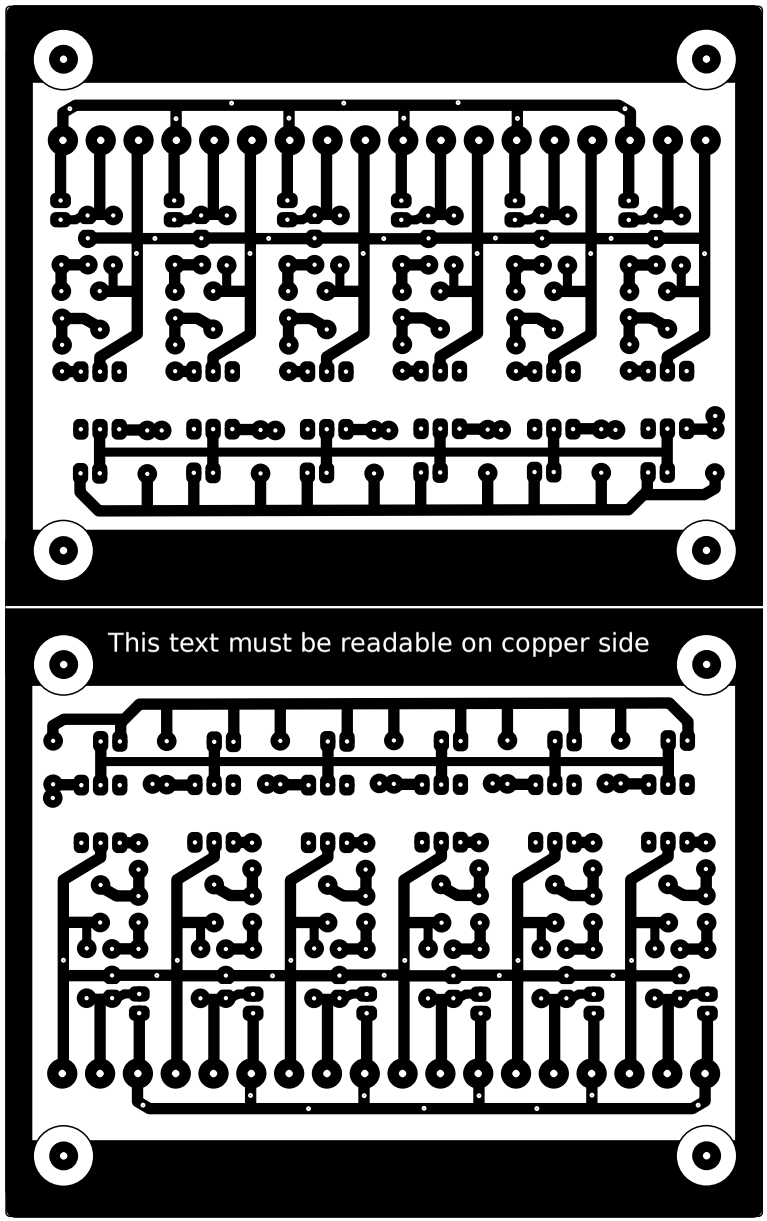
R1 = Jumper
R2 = 4,7 kohm
R3 = 2,2 kohm
R4 = Jumper
R5 = 2,2 kohm
J1 = Jumper
Z1 = Cut the copper
C1 = 1 uF polyester capacitor
Spacing 5mm

R3 & C1 generates a RC low pass filter, alter as needed. R4 is to protect arduino inputs especially when connecting wires power on.

This drawing is produced with Inkscape program running on Ubuntustudio

Markus Hantola





Cut the copper where pointed with arrows to get a potential free optoisolated input for a self-powered device.

Drilling Screw-connectors 1,5mm
Other components 0,6mm
PCB mounting holes 3mm

PCB size 160 x 100 mm