

µContrôleur ESP32

The diagram illustrates the internal components and connections of the ESP32 microcontroller (U4, ESP32-WROOM-32D-N16). Key components and connections include:

- Power Supply:** A +3.3V supply is connected to the EN pin (3) via a 4.7K resistor (R17) and a 100nF capacitor (C19). A push-button switch (SW3, SW_Push) is connected to the EN pin and ground.
- Temperature Sensor:** The OUT_NTC and OUT_BAT pins (4 and 5) are connected to a temperature sensor module (J2) via 4.7K resistors (R18, R19).
- UART:** The TXD0 (35) and RXD0 (34) pins are connected to a UART module (J2) via 4.7K resistors (R18, R19).
- GPIOs:** Various GPIO pins are connected to different modules:
 - IO0 (25) and IO2 (24) are connected to a push-button switch (SW4, SW_Push) via a 4.7K resistor (R21).
 - IO4 (26) and IO5 (29) are connected to a +3.3V supply via 1K resistors (R2, R3).
 - IO12 (14) is connected to the MISO pin (16) of the SPI flash (J4).
 - IO13 (16) is connected to the MOSI pin (3).
 - IO14 (13) is connected to the CLK pin (4) of the SPI flash.
 - IO15 (23) is connected to the CS pin (5) of the SPI flash.
 - IO16 (27) is connected to ground.
 - IO17 (28) and IO18 (30) are connected to ground.
 - IO19 (31) is connected to the CLOCK_GEN module.
 - IO21 (33) is connected to the SCL pin (1) of the I2C module (J5).
 - IO22 (36) is connected to the SDA pin (2) of the I2C module.
 - IO23 (37) is connected to ground.
 - IO25 (10) is connected to ground.
 - IO26 (11) is connected to the RST pin (1) of the NEO module via a 4.7K resistor (R20).
 - IO27 (12) is connected to ground.
 - IO32 (8) is connected to ground.
 - IO33 (9) is connected to the LED pin (1) of the D10 module via a 25R resistor (R15).
- Flash Memory:** The SPI flash (J4) is connected to the microcontroller via the MISO, MOSI, CLK, and CS pins.
- Other Components:** The diagram also shows a 100nF capacitor (C19), a 4.7K resistor (R17), a 4.7K resistor (R21), a 4.7K resistor (R18), a 4.7K resistor (R19), a 4.7K resistor (R20), a 25R resistor (R15), a push-button switch (SW3, SW_Push), a push-button switch (SW4, SW_Push), a temperature sensor module (J2), a UART module (J2), a SPI flash (J4), and an I2C module (J5).

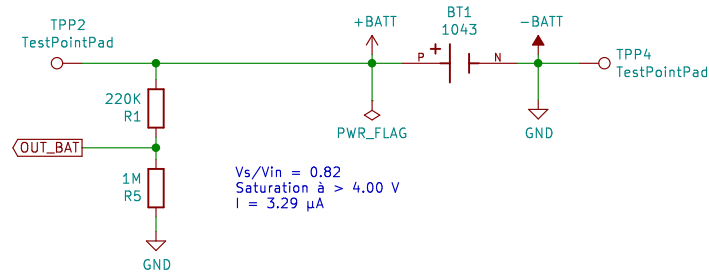
ADC 16 Bits _ 15 SPS _ I²C

B1 B2

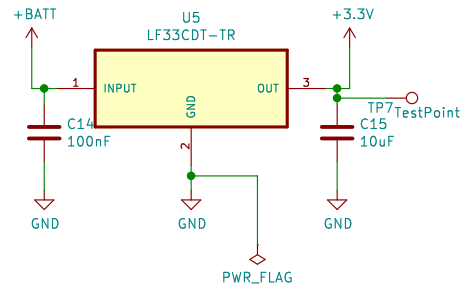
B4 B3

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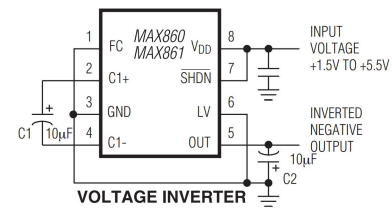
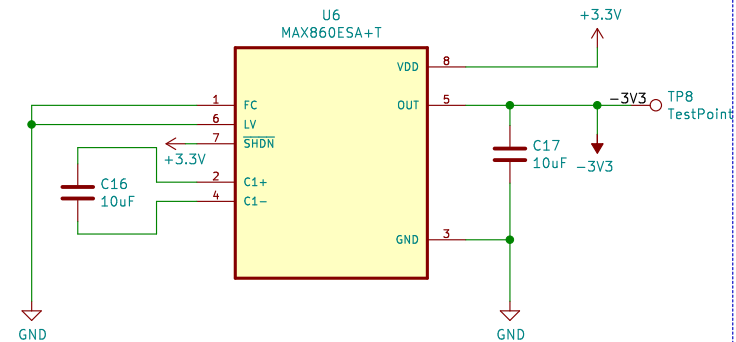
Porte pile 18650 + Pont div Sens



LDO 3.7 V --> 3.3 V



Inverseur 50 mA



Sheet: Connecteur_Entrées

File: Connecteur_Entrées.sch

Usage by LPKF

ADTP

Sheet: /ESP32/Alim/

File: Alim.sch

Title: NGL_Proto

Size: A4 Date: 2022-05-02

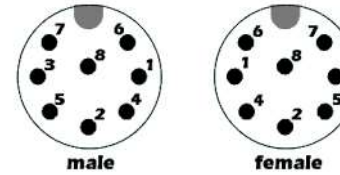
KiCad E.D.A. kicad (5.1.10)-1

Rev: V1

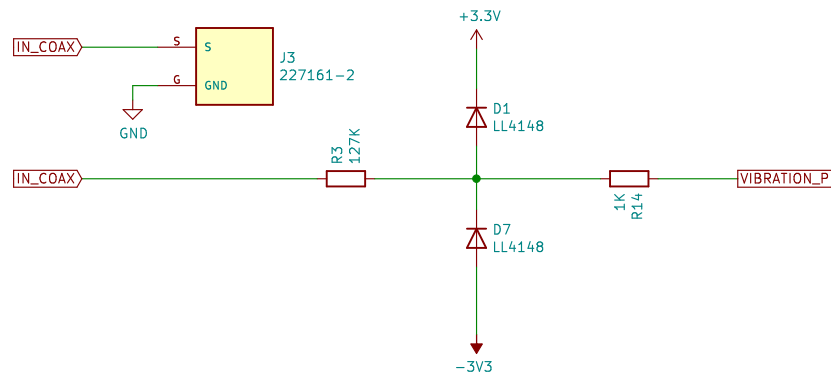
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Connecteur Male sur PCB

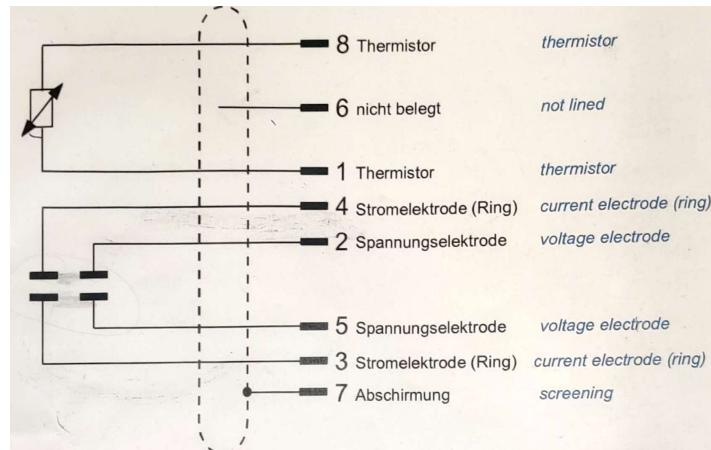
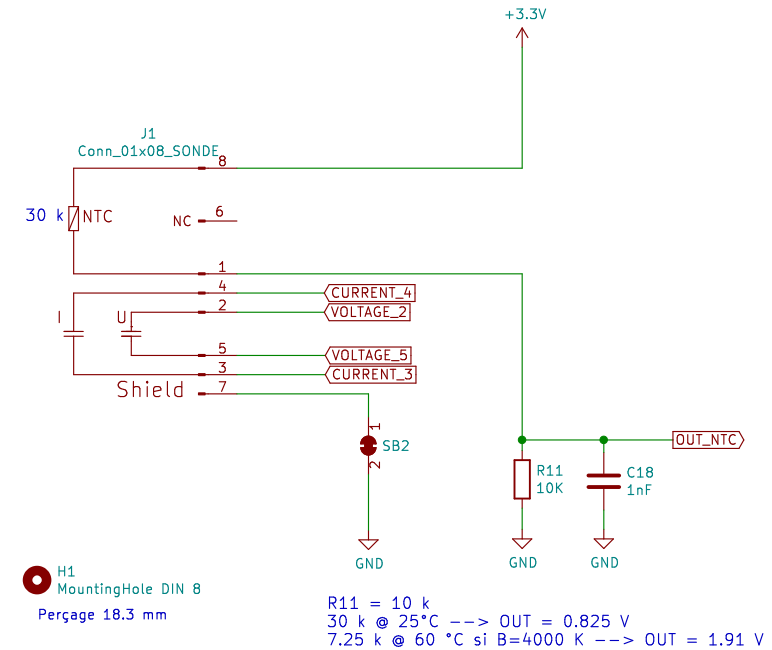
8 pin DIN



Connecteur signal d'entrée COAX + Protection



Connecteur Signal d'entrée 8 DIN + NTC



Usage by LPKF !

ADTP

Sheet: /ESP32/Alim/Connecteur_Entrées/
File: Connecteur_Entrées.sch

Title: NGL_Proto

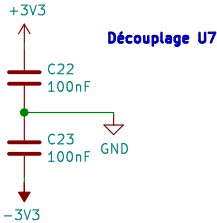
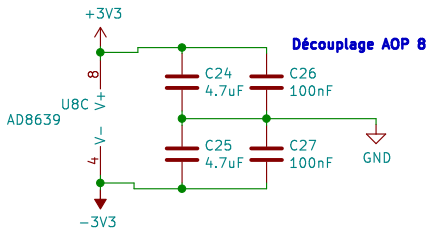
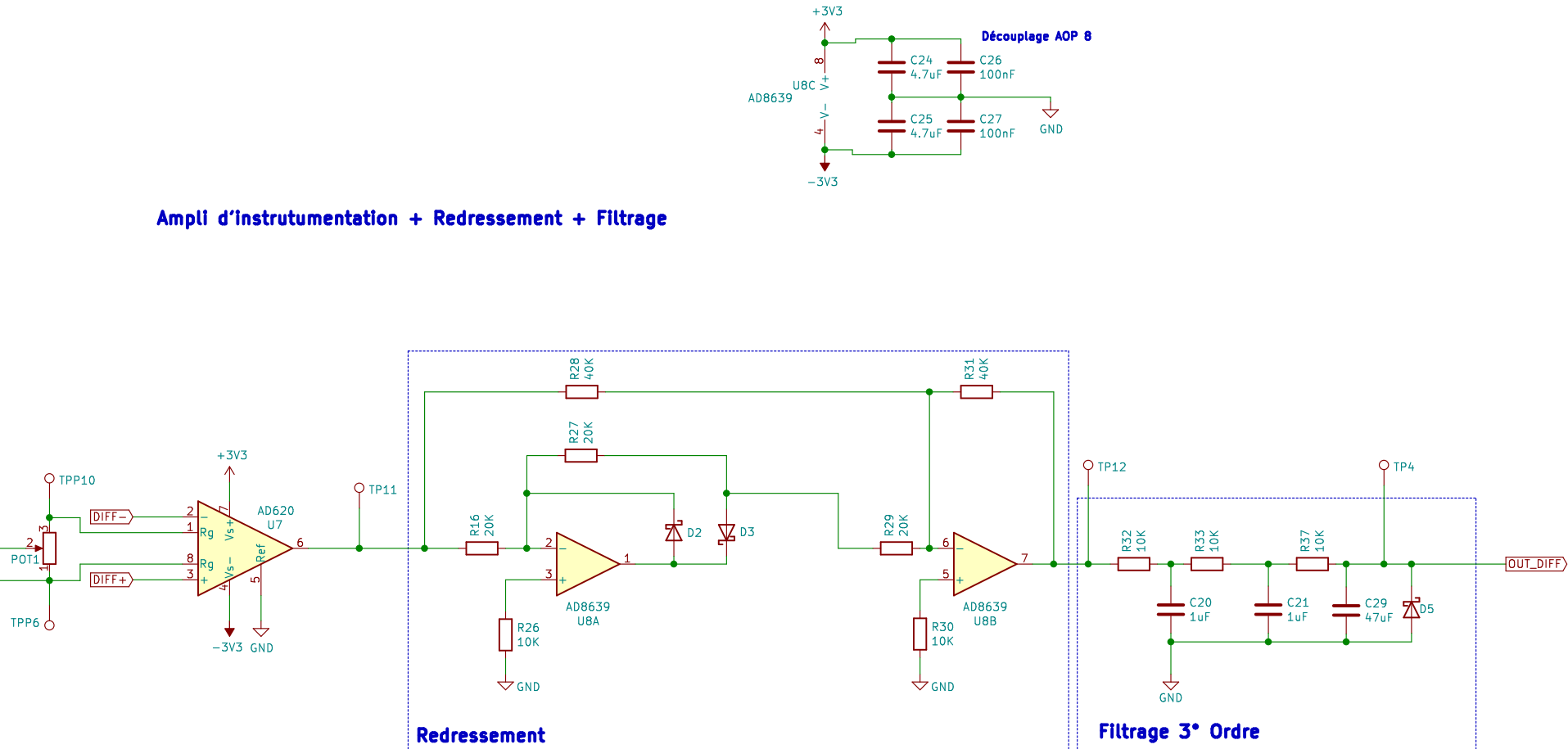
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Rev: V1

Id: 4/5

Ampli d'instrumentation + Redressement + Filtrage



Sheet: /Ampli Diff/ File: Ampli Diff.sch		
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