

# μContrôleur ESP32

The diagram illustrates the electrical connections for an 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 SW\_Push button (SW3) is connected to the EN pin and ground.
- Temperature Sensor:** An NTC thermistor (R18) is connected to the OUT\_VP (4) and OUT\_VN (5) pins. A 4.7K resistor (R19) is connected to the OUT\_VN pin and ground.
- UART:** The TXD0 (35) and RXD0 (34) pins are connected to a UART module. A 4.7K resistor (R18) is connected to the TXD0 pin and ground.
- GPIOs:** Several GPIO pins are connected to ground (GND): IO17, IO18, IO19, IO20, IO21, IO22, and IO32. IO10 is connected to a 3.3V supply.
- Flash Memory:** The IO6 to IO11 pins are reserved for SPI flash memory.
- Other Components:** A SW\_Push button (SW4) is connected to the IO25 pin and ground. A 4.7K resistor (R21) is connected to the IO25 pin and ground. A 4.7K resistor (R20) is connected to the IO11 pin and ground. A 25R resistor (R15) is connected to the IO9 pin and ground. A D10 LED is connected to the IO9 pin and ground.
- External Modules:** An I2C module (J5) is connected to the SCL (1) and SDA (2) pins. A SPI module (J4) is connected to the MISO (14), MOSI (16), CLK (13), and CS (23) pins.

Wiring diagram for the NEO module:

- Pin 1 of J6 is connected to +BATT.
- Pin 2 of J6 is connected to NEO.
- Pin 3 of J6 is connected to GND.

ADC 16 Bits \_ 15 SPS \_ I<sup>2</sup>C

U9  
MCP3426A0-E\_SN

OUT\_SENS 1 CH1+  
2 CH1-  
OUT\_DIFF 7 CH2+  
8 CH2-  
SCL 5 SCL  
SDA 4 SDA

VDD 3  
VSS 6

+3.3V  
C1 100nF  
GND

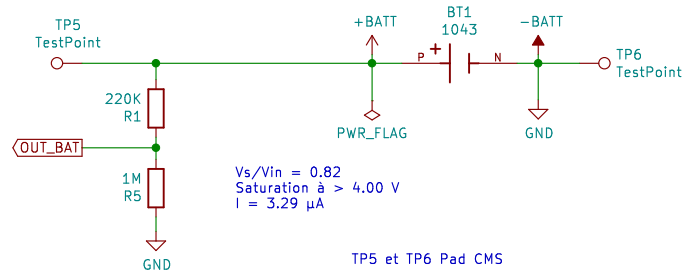
B1 B2

B4 B3

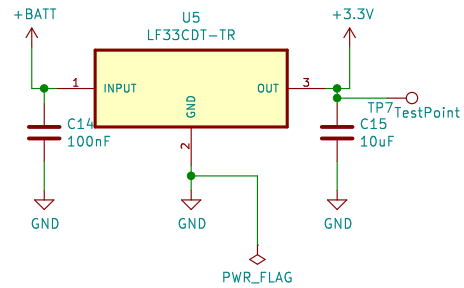
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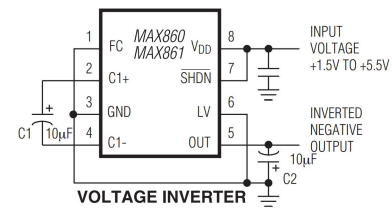
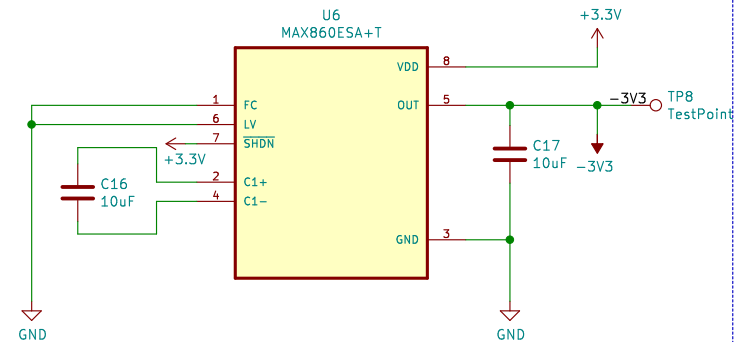
## Porte pile 18650 + Pont div Sens



## 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

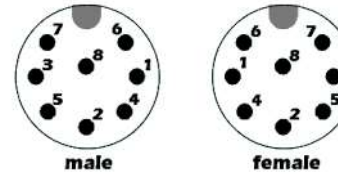
KiCad E.D.A. kicad (5.1.10)-1

**Rev: V1**

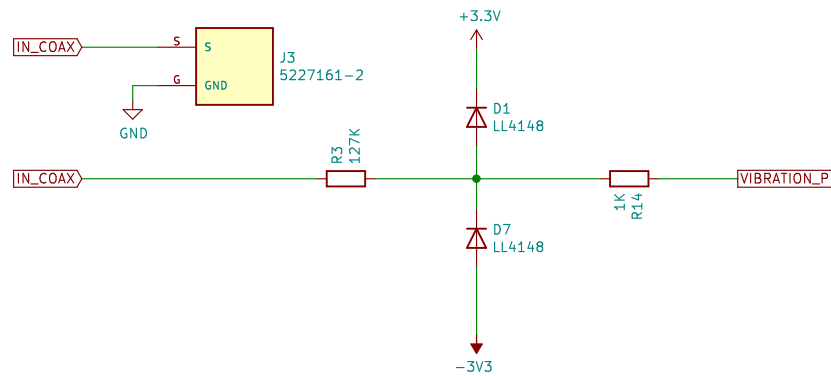
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Connecteur Male sur PCB

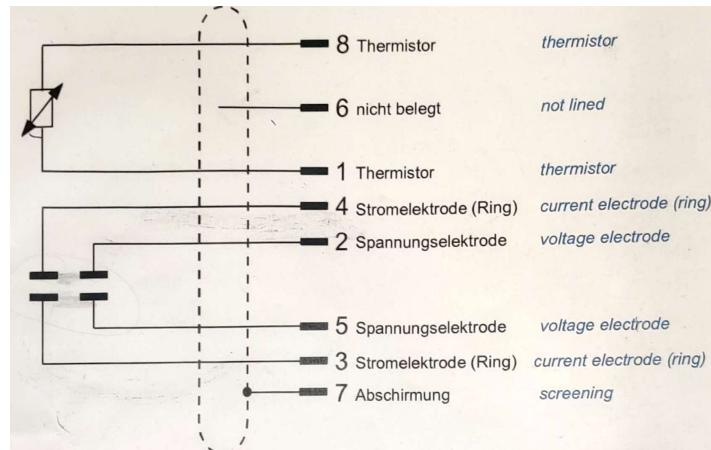
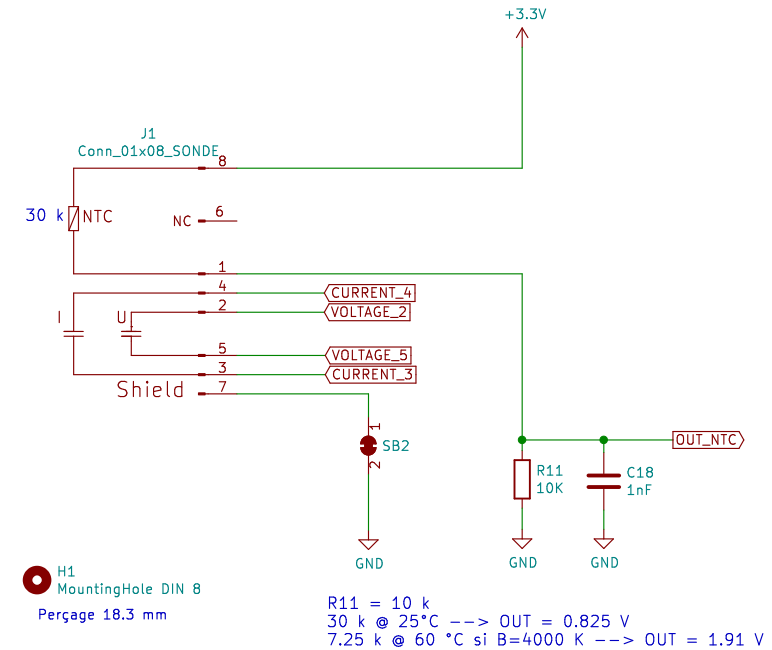
8 pin DIN



### 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

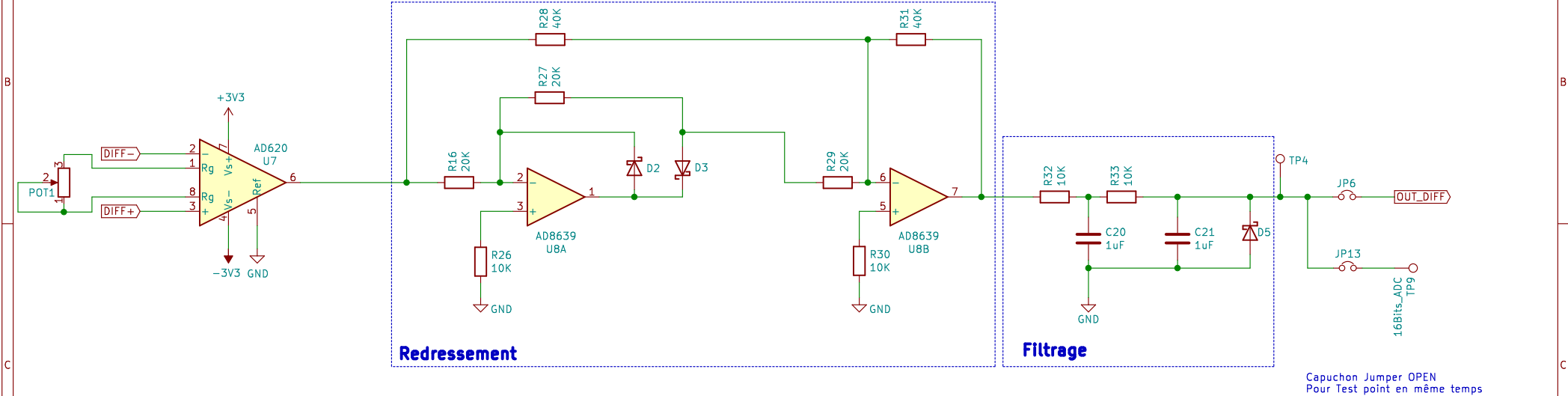
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Rev: V1

Id: 4/5

Ampli d'instrumentation + Redressement + Filtrage



Capuchon Jumper OPEN  
Pour Test point en même temps

|   |       |         |
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| Sheet: /Ampli Diff/<br>File: Ampli Diff.sch |       |         |
| Title:                                      |       |         |
| Size: A4                                    | Date: | Rev:    |
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