

CLOCK\_GEN = 1 --> +Vsat  
CLOCK\_GEN = 0 --> -Vsat  
Vseuil=1.65 V

Sheet: ESP32

File: esp32.sch

SONDE DIN8 CONDUCTIVIMETRE

----- 1 -----  
Mesure 2 fils directe  
JP10 JP8 Open  
JP1 JP9 JP2 JP4 Closed

----- 2 -----  
Mesure 4fils directe  
JP10 JP2 JP1 JP8 Open  
JP4 JP9 Closed

----- 3 -----  
Mesure 4fils ampli instru  
JP2 JP4 JP1 JP9 Open  
JP10 JP8 Closed

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Sonde BNC ultrason  
JP10 JP4 JP2 JP1 JP9 Open  
JP8 Closed

Usage by LPKF

ADTP

Sheet: /

File: NGL\_Proto.sch

Title: NGL\_Proto

Size: A4

Date: 2022-05-02

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Rev: V1

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The schematic diagram illustrates the connections for the ESP32 module (U4: ESP32-WROOM-32D-N16). Key components and their 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 SW3 switch is connected to the SW\_Push pin (2) and GND.
- Sensors:** The OUT\_NTC and OUT\_BAT pins (4 and 5) are connected to a 4.7K resistor (R18) and a 4.7K resistor (R19) respectively, which are then connected to GND via a 4.7K resistor (R18) and a 4.7K resistor (R19).
- UART:** The TXD0 (35) and RXD0 (34) pins are connected to a 4.7K resistor (R18) and a 4.7K resistor (R19) respectively, which are then connected to GND via a 4.7K resistor (R18) and a 4.7K resistor (R19).
- GPIOs:**
  - IO0 (25) is connected to a SW4 switch (SW\_Push) and GND via a 4.7K resistor (R21).
  - IO2 (24) is connected to GND.
  - IO4 (14) is connected to MISO (2).
  - IO5 (16) is connected to MOSI (3).
  - IO12 (13) is connected to CLK (4).
  - IO13 (23) is connected to CS (5).
  - IO14 (27) is connected to GND.
  - IO15 (28) is connected to GND.
  - IO16 (30) is connected to GND.
  - IO17 (31) is connected to GND.
  - IO18 (33) is connected to GND.
  - IO19 (36) is connected to GND.
  - IO20 (37) is connected to GND.
  - IO21 (10) is connected to GND.
  - IO22 (11) is connected to GND.
  - IO23 (12) is connected to GND.
  - IO24 (8) is connected to GND.
  - IO25 (9) is connected to GND.
  - IO26 (32) is connected to GND.
  - IO27 (33) is connected to GND.
  - IO28 (34) is connected to GND.
  - IO29 (35) is connected to GND.
  - IO30 (36) is connected to GND.
  - IO31 (37) is connected to GND.
  - IO32 (10) is connected to GND.
  - IO33 (11) is connected to GND.
  - IO34 (12) is connected to GND.
  - IO35 (13) is connected to GND.
  - IO36 (14) is connected to GND.
  - IO37 (15) is connected to GND.
  - IO38 (16) is connected to GND.
  - IO39 (17) is connected to GND.
  - IO40 (18) is connected to GND.
  - IO41 (19) is connected to GND.
  - IO42 (20) is connected to GND.
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  - IO44 (22) is connected to GND.
  - IO45 (23) is connected to GND.
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  - IO203 (13) is connected to GND.
  - IO204 (14) is connected to GND.
  - IO205 (15) is connected to GND.
  - IO206 (16) is connected to GND.
  - IO207 (17) is connected to GND.
  - IO208 (18) is connected to GND.
  - IO209 (19) is connected to GND.</

Wiring diagram for the NEO module:

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

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

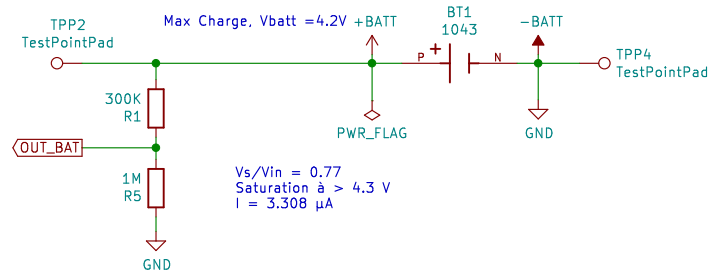
B1 B2

B4 B3

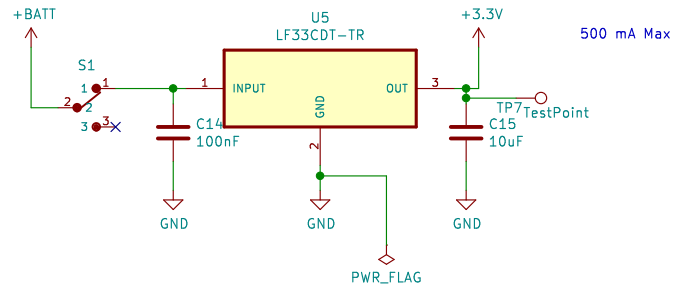
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Id: 2/5

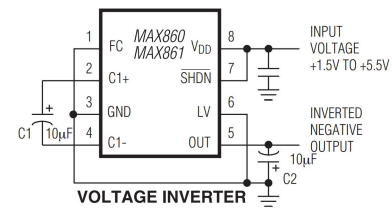
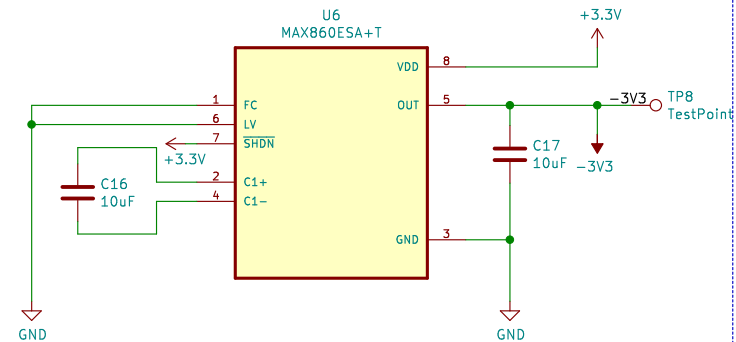
## Porte pile 18650 + Pont div Sens



## 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

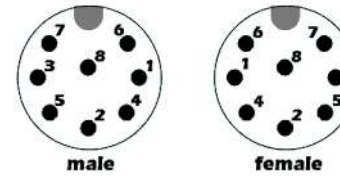
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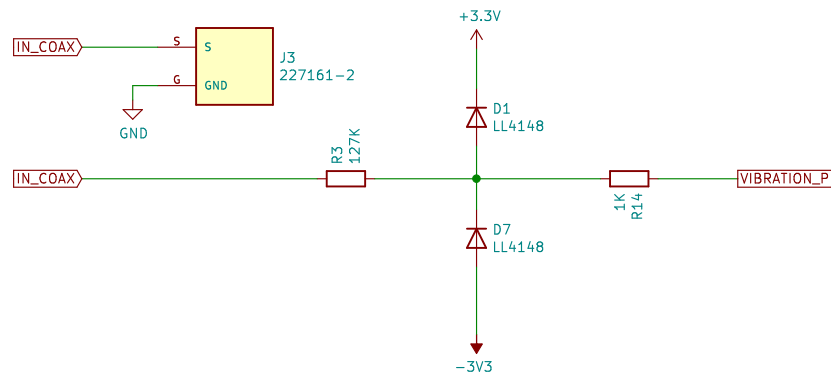
Id: 3/5

Connecteur Male sur PCB

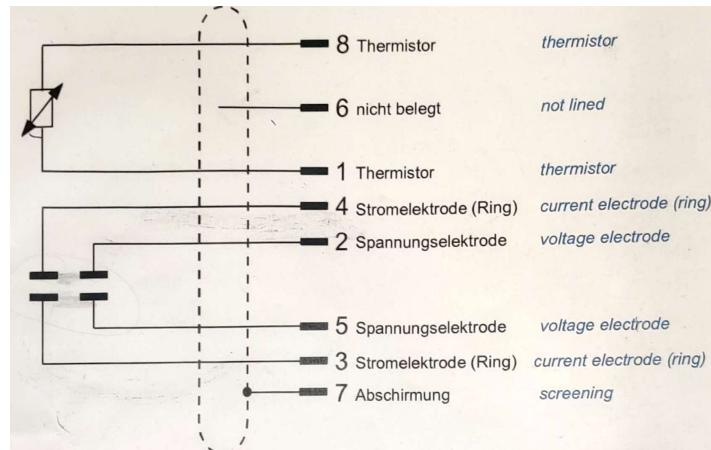
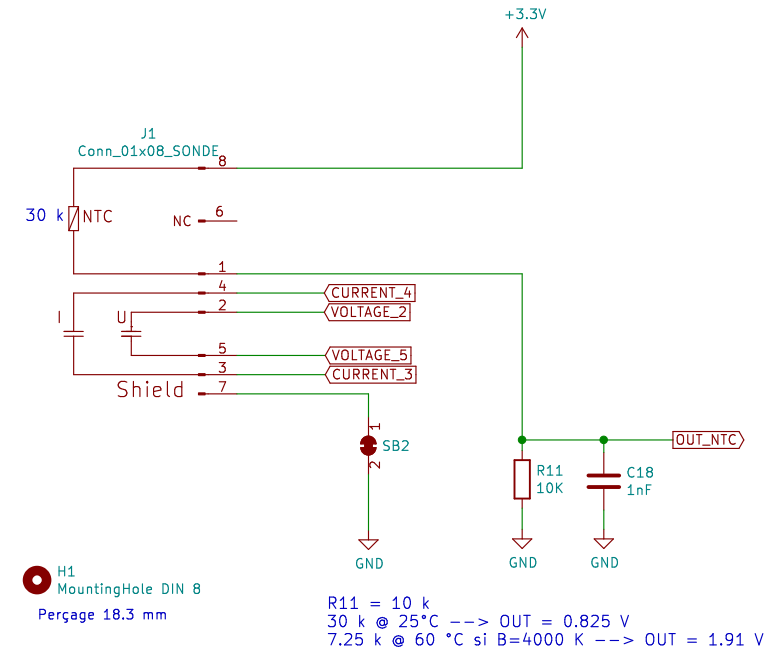
8 pin DIN



### 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

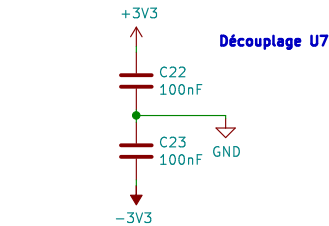
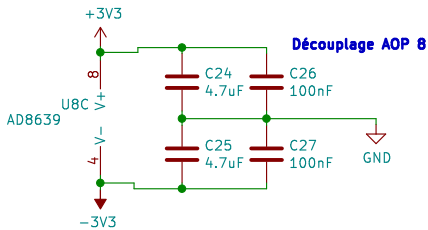
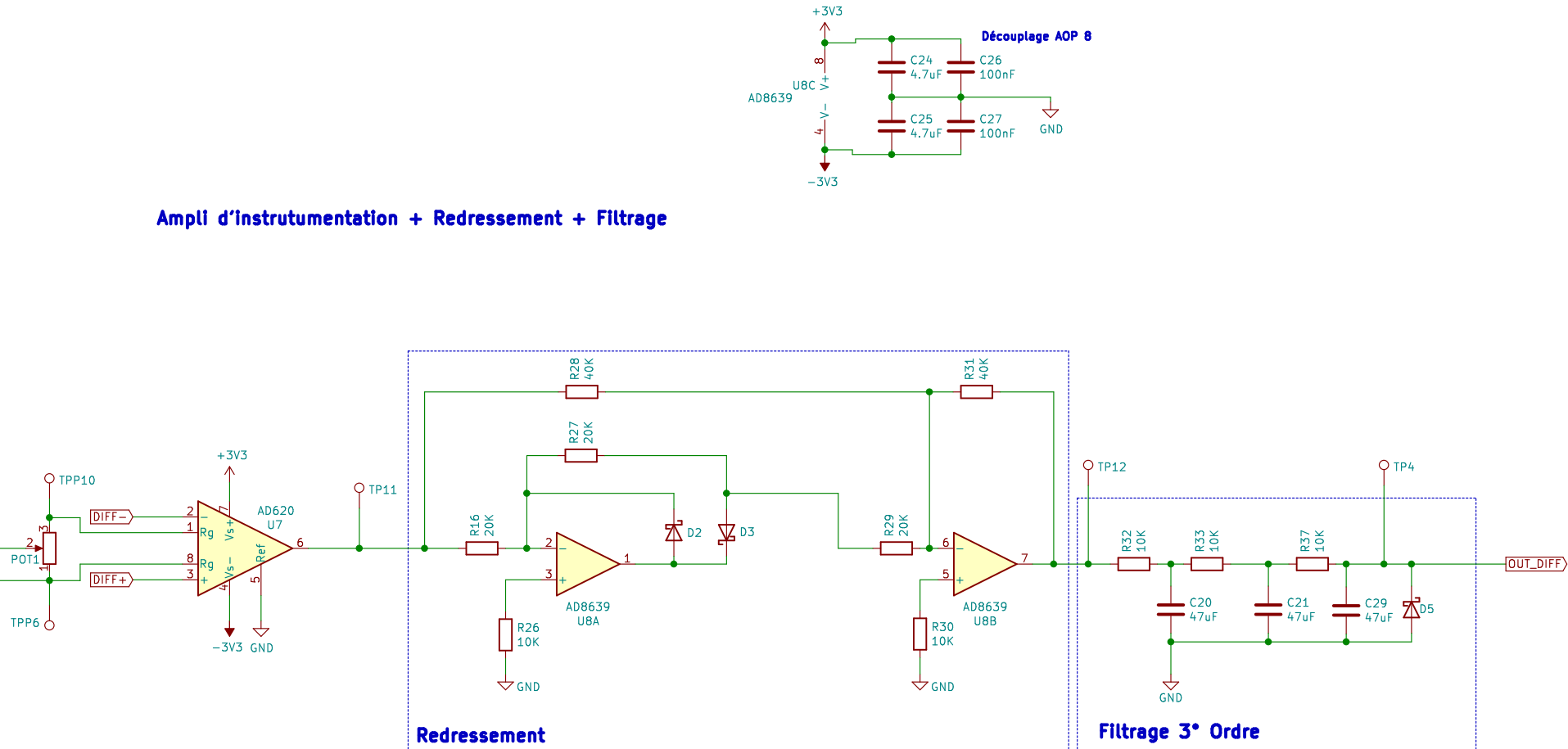
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Rev: V1

Id: 4/5

Ampli d'instrumentation + Redressement + Filtrage



|   |       |         |
|---|-------|---------|
| Sheet: /Ampli Diff/<br>File: Ampli Diff.sch |       |         |
| Title:                                      |       |         |
| Size: A4                                    | Date: | Rev:    |
| KiCad E.D.A. kicad (5.1.10)-1               |       | Id: 5/5 |