REFLOW CONTROLLER

V1

MAX31856

File: thermo_amp.kicad_sch

STM32_IOC

File: stm32.kicad_sch

InputOutput

File: IO.kicad_sch

Power

File: power.kicad_sch

Features:

- Powered by STM32
- 3.3V @ 48 MHz
- MAX31856 thermocouple interface
- 0.96" 128×64 OLED LCD
- 4 push buttons – up, down, select/START, back/STOP
- LED for status indication
- 1 terminal block for thermocouple type K
- 2 terminal block for driving SSR to control heating element/oven
- 1 terminal block for driving 5V fan
- 1 buzzer output
- 1 reset button
- JTAG pins breakout
- Unit is powered through a 220v –> 5v converter

Notes:

- All resistors 0.0625W 1% unless otherwise specified
- All capacitors are rated 50V X7R 10% unless otherwise specified

Electrodonkey

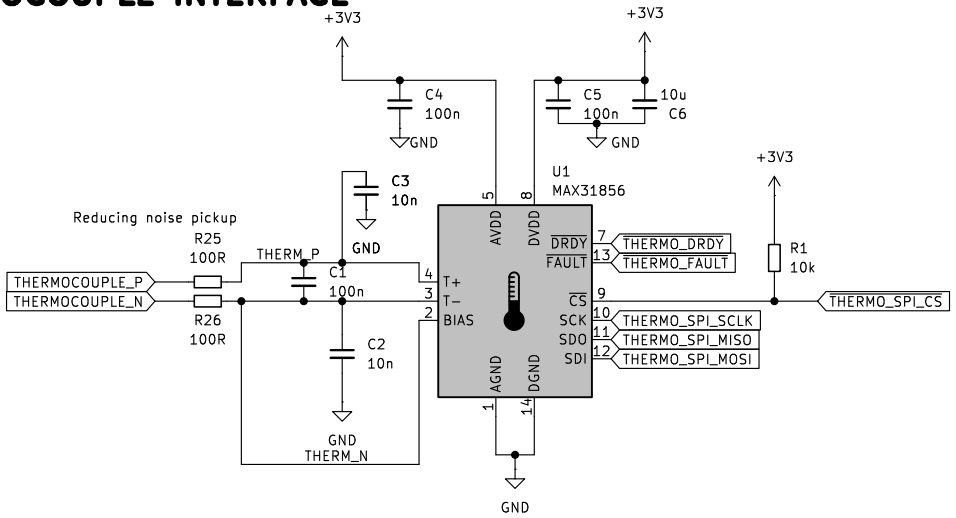
Sheet: /

File: reflow_master.kicad_sch

Title: ElectroDonkey Reflow Master

Size: A4	Date: 2024–06–04	**Rev: V1**
KiCad E.D.A. 8.0.2		Id: 1/5

THERMOCOUPLE INTERFACE

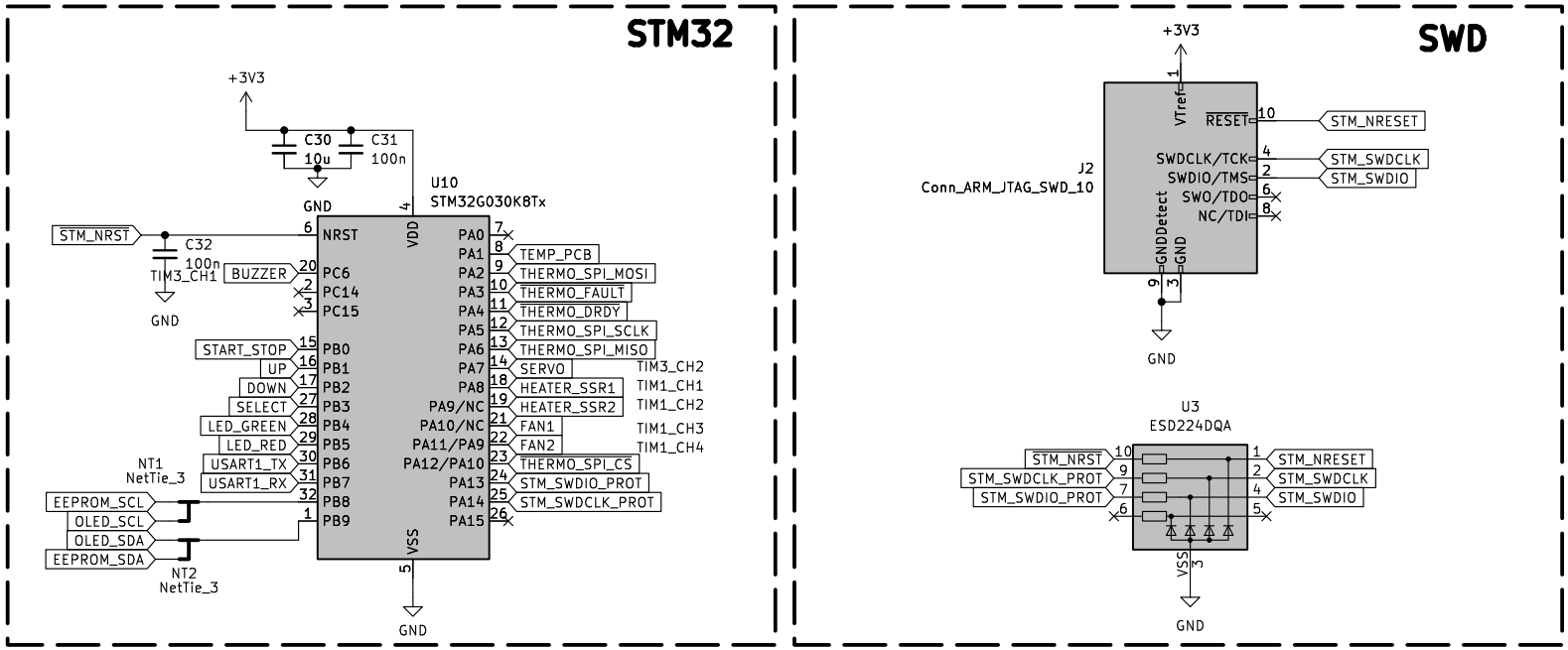


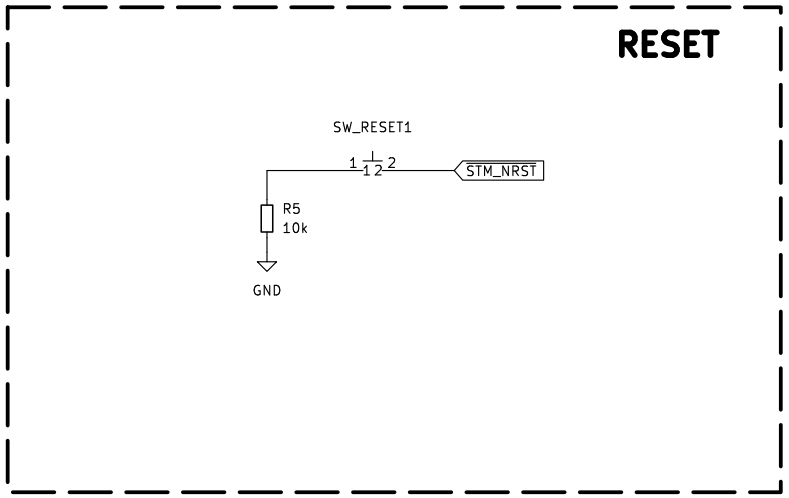
Electrodonkey

Sheet: /MAX31856/
File: thermo_amp.kicad_sch

Title: ElectroDonkey Reflow Master

Size: A4	Date: 2024−06−04	**Rev: V1**
KiCad E.D.A. 8.0.2		Id: 2/5





Electrodonkey

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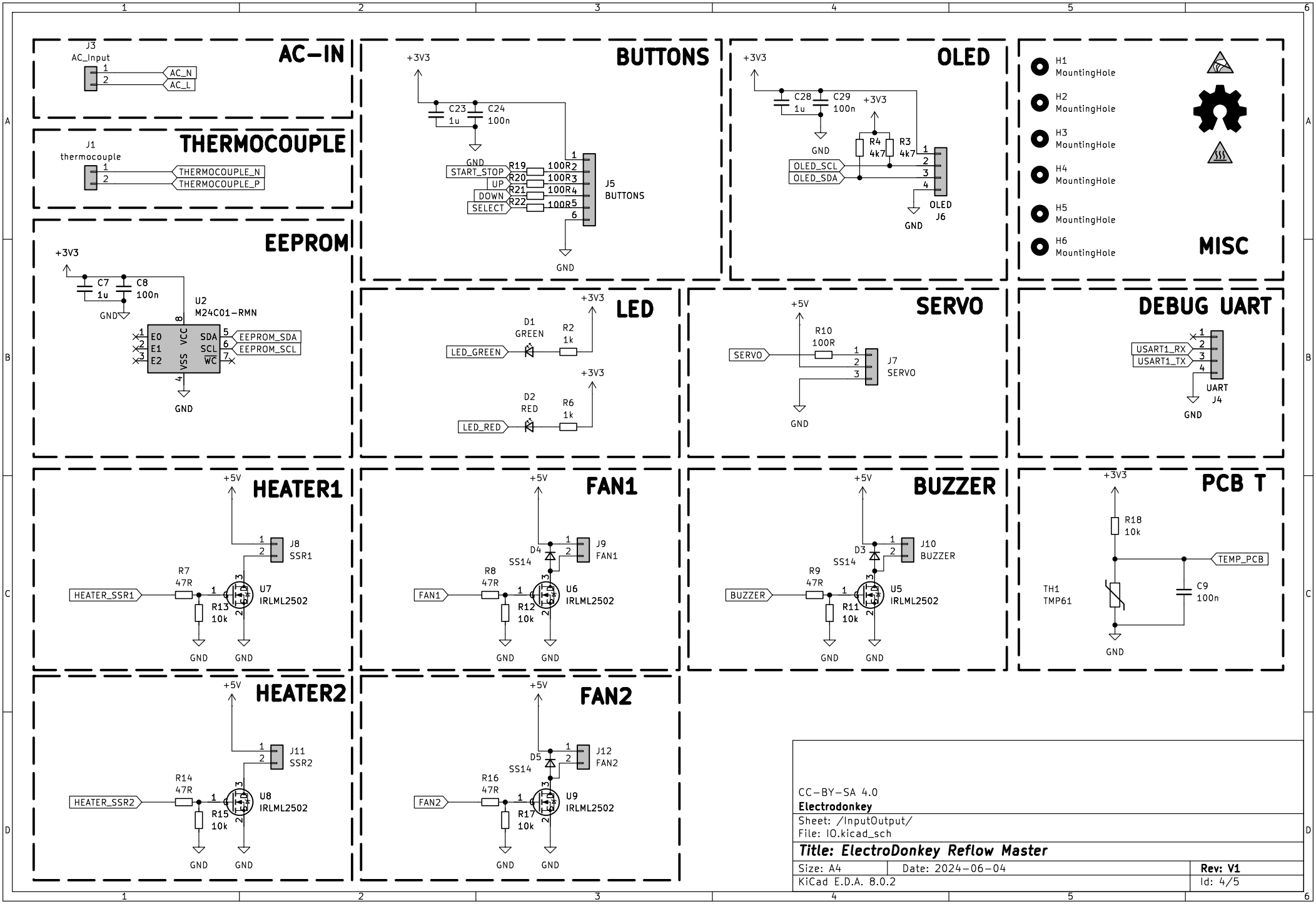
Title: ElectroDonkey Reflow Master

Size: A4	Date: 2024-06-04	**Rev: V1**
KiCad E.D.A. 8.0.2		Id: 3/5



Electrodonkey

Sheet: /InputOutput/
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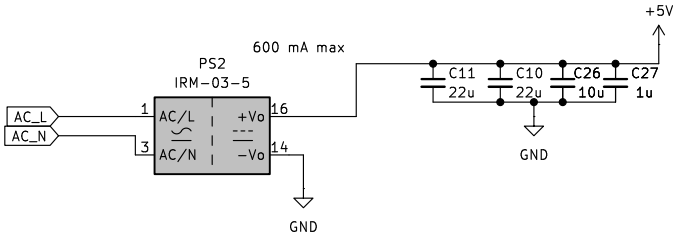
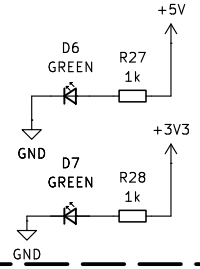
Size: A4	Date: 2024-06-04	**Rev: V1**
KiCad E.D.A. 8.0.2		Id: 4/5

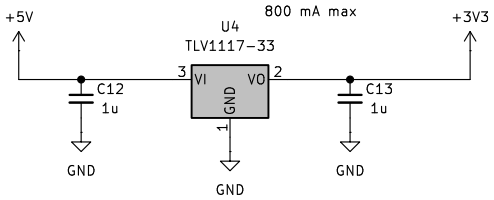
220V AC -> 5V DC CONVERTER



LED



3V3 LDO



Electrodonkey

Sheet: /Power/
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Size: A4	Date: 2024-06-04	**Rev: V1**
KiCad E.D.A. 8.0.2		Id: 5/5