

	1	2	3	4	5	6	7	8
A								
B								
C								
D								
E								
F								

Block Diagram



File: Block Diagram.kicad_sch

Cover



File: Cover.kicad_sch

Power Management



File: power_management.kicad_sch

Microcontroller



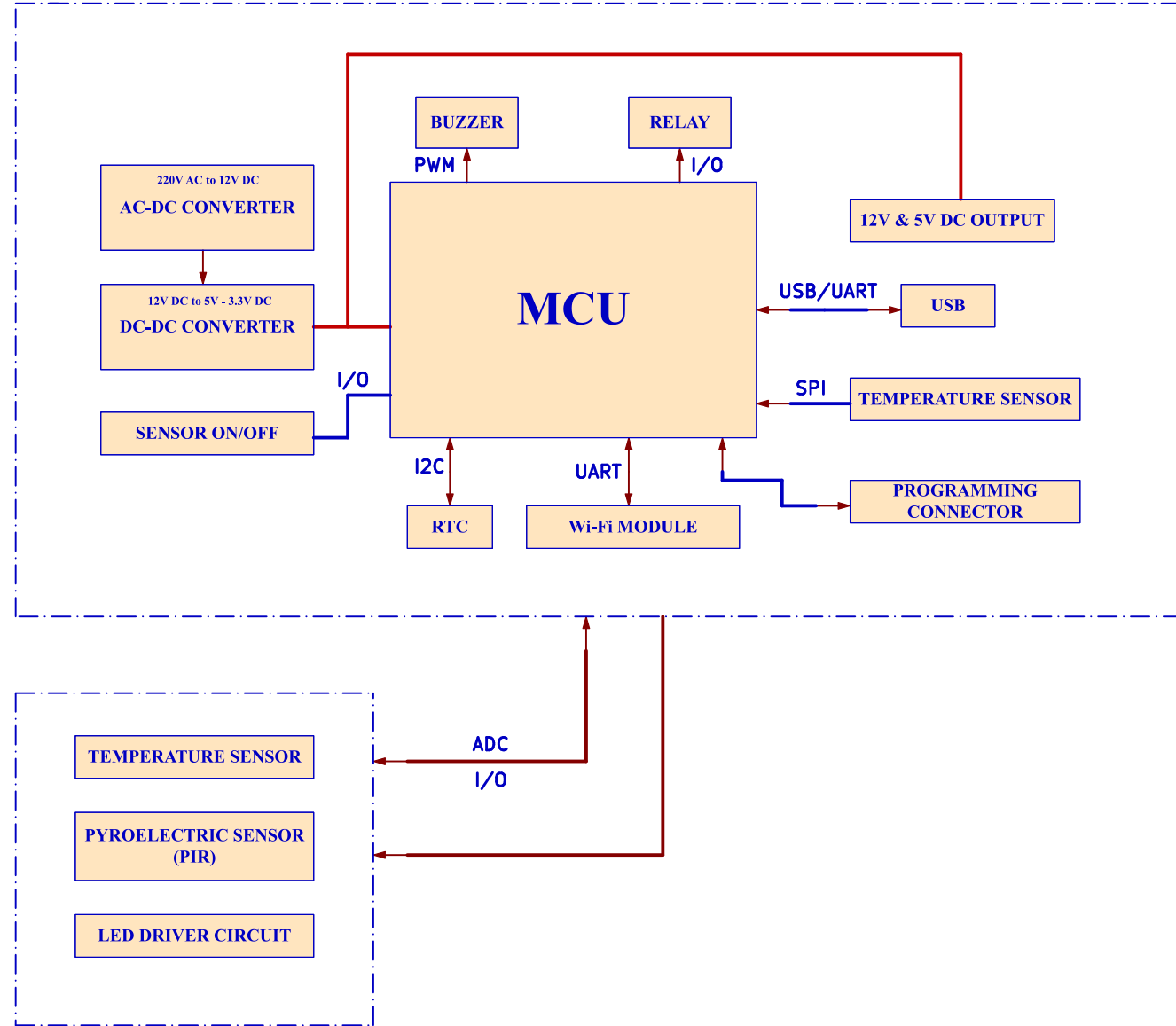
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Sensor Board



File: sensor_board.kicad_sch

Sheet: / File: xBowtie_Eğitim.kicad_sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. 9.0.1	Id: 1/6	



KOMPONENTLER:
RTC: M41T006MF
WIFI MODULE: ESP32-WROOM-32E (4 MB)
PYRO SENSOR: LHI878
TEMPERATURE OUTSIDE: TFPT1206
TEMPERATURE INSIDE: MAX6662
MCU: STM32F103C6T6
RELAY: ALQ112
BUZZER: CMI-9650IC - 0580T
SENSOR ON/OFF: EG1215AA
AC-DC CONVERTER: BV302S12010-ZU
Bridge Rectifier: DB105STR
DC-DC CONVERTER: LM2675(5V) / AP7361(3.3V)
LED DRIVER MOSFET: SSM3K357R

Designed by
Yusuf Karabocek

Sheet: /Block Diagram/
File: Block Diagram.kicad_sch

Title: Block Diagram

Size: A3

Date:

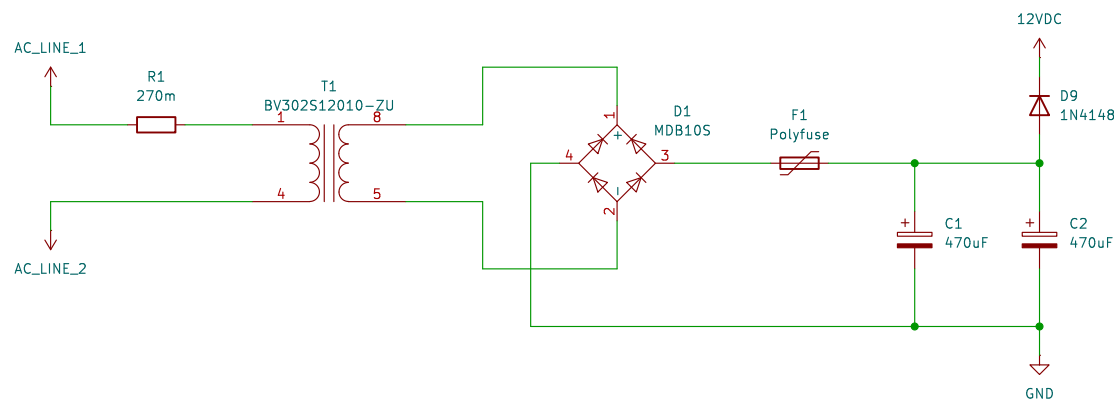
Rev:

KiCad E.D.A. 9.0.1

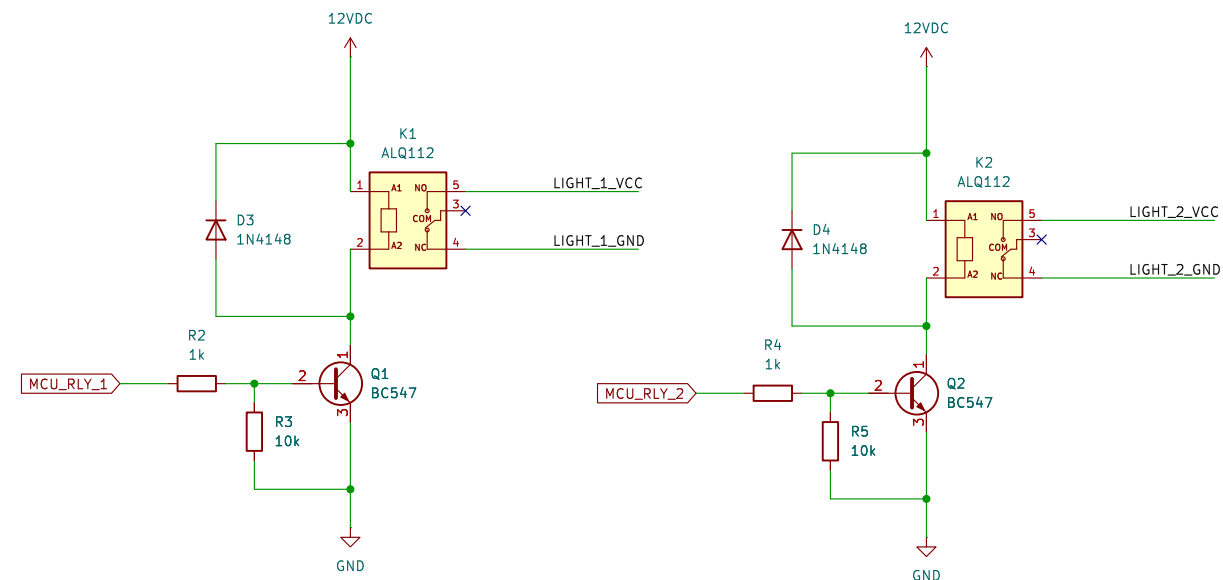
Id: 3/6

Sistem 220V AC 50Hz Türkiye ev şebeke bağlantısı ile çalışabilmelidir.
Sistemden kullanıcıya kullanabileceği 12V DC ve 5V DC güç çıkışları olmalıdır.
Sistem USB arayüzü ile bilgisayara bağlanabilir ve veri aktarabilir olmalıdır.
Sistem gerçek zamanlı saat bilgisini kullanıcıya verebilmelidir.
Sistem ortam sıcaklık verisini anlık olarak kullanıcı aktarabilmelidir.
Bir hareket algılandığında sistem kullanıcıya veri gönderebilmelidir.
Bir hareket algılandığında kullanıcı isterse sesli veya görüntülü uyarı alabilecektir.
Sistem hareket algılanacak ortamda güvenlik kamerası görünümüne sahip olmalıdır.
Sistem Wi-Fi özelliği ile de tüm verileri kullanıcıya gönderebilecektir.
Kullanıcı isterse işlemci içerisinde koştan yazılıma müdahale edebilecektir.

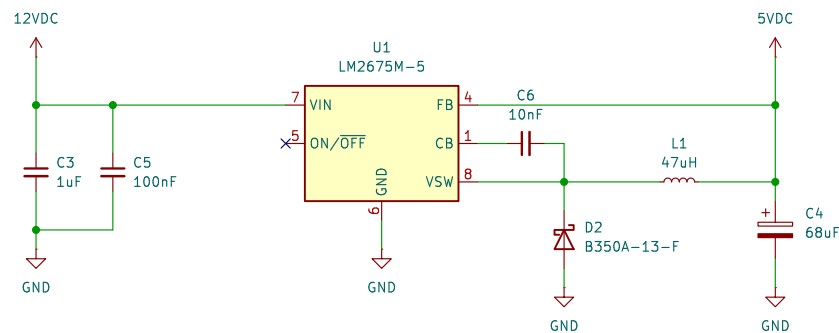
AC/DC CONVERTER



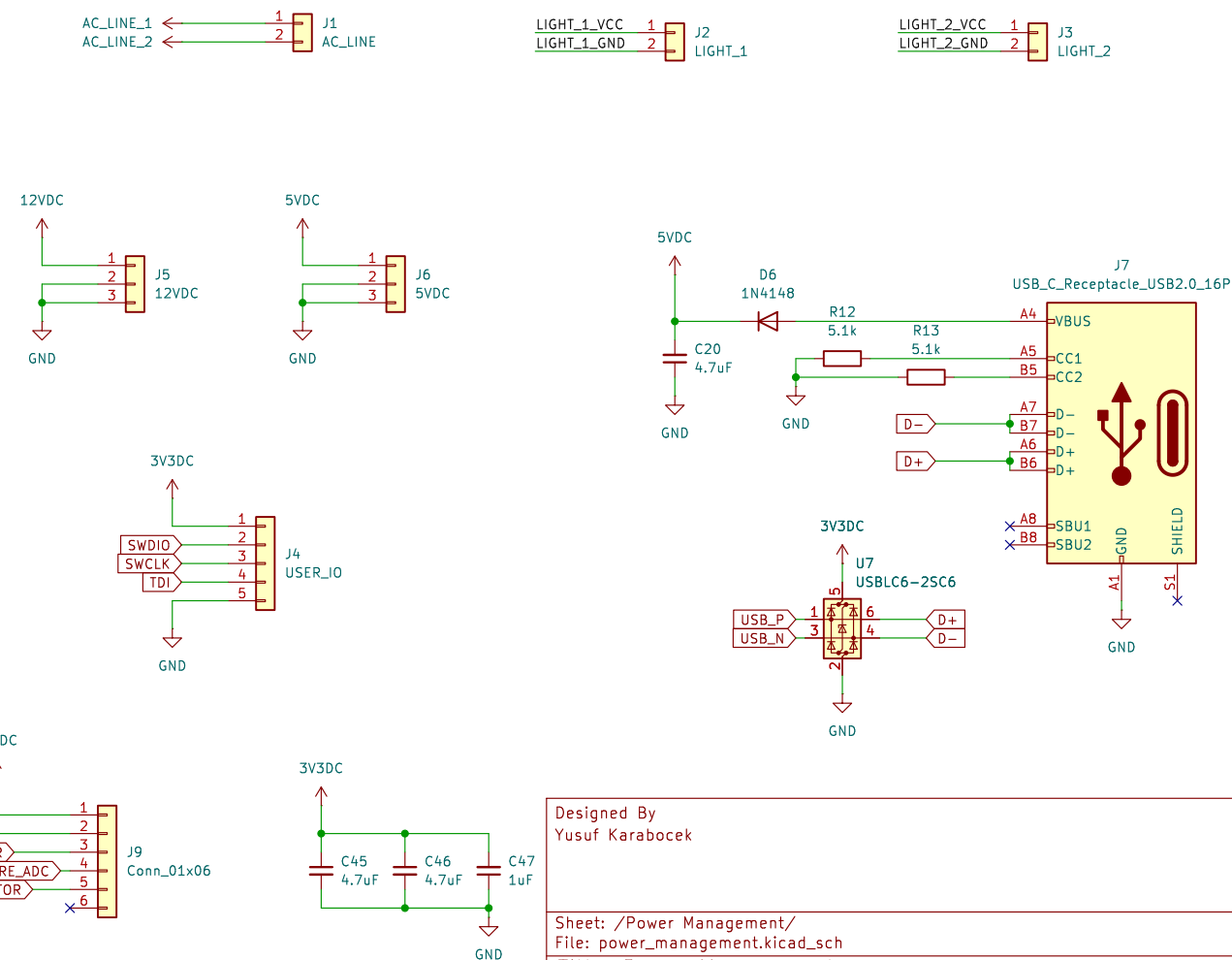
RELAY



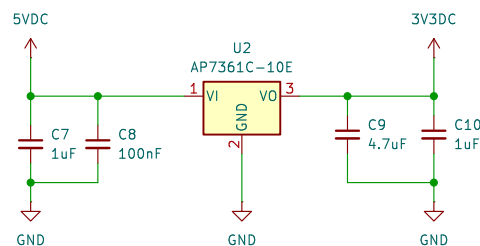
[12VDC- 5VDC] DC-DC CONVERTER



CONNECTOR



[5VDC- 3VDC] DC-DC CONVERTER



Designed By
Yusuf Karaboccek

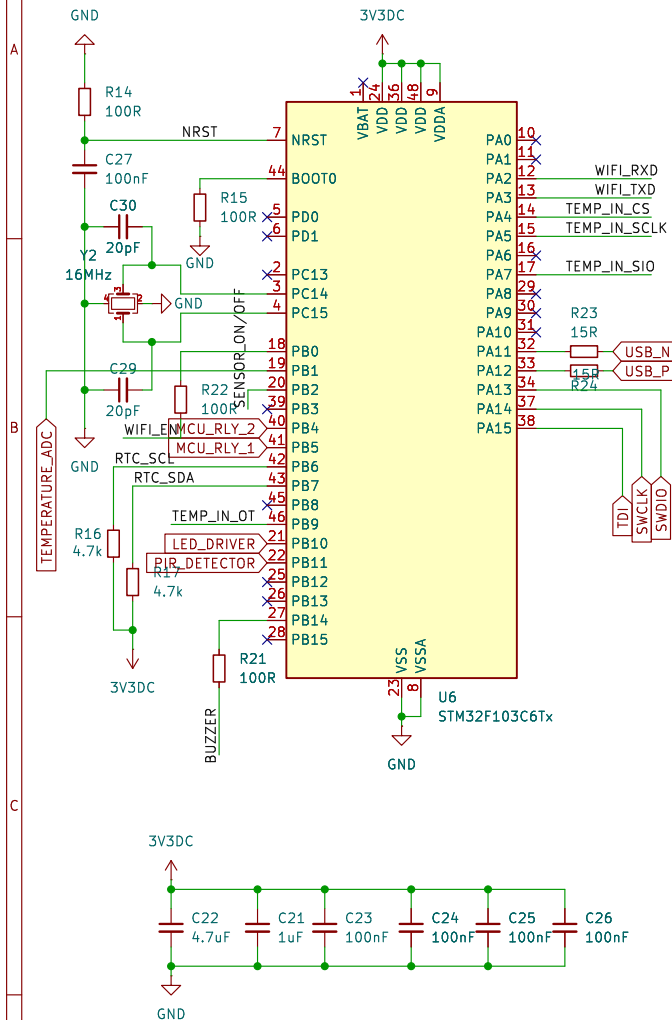
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Title: Power Management

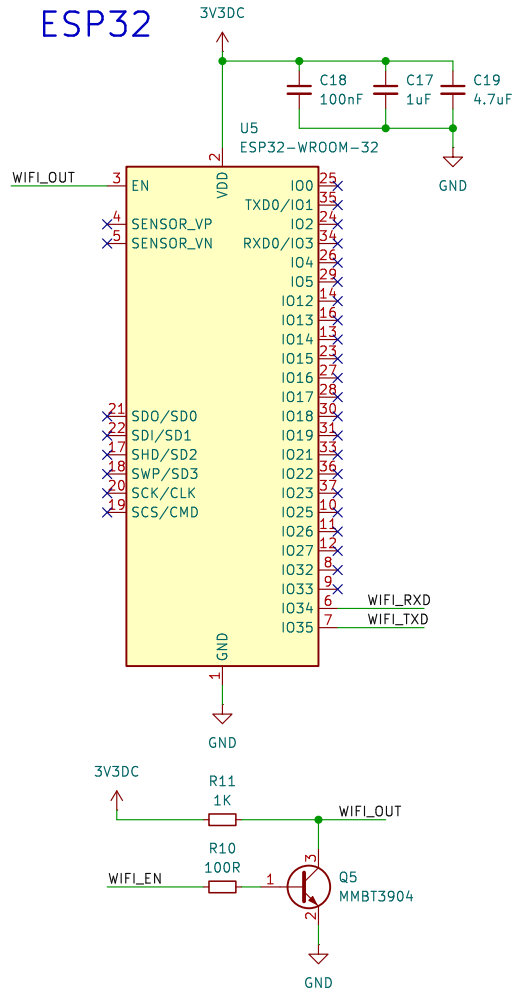
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KiCad E.D.A. 9.0.1

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Id: 4/6

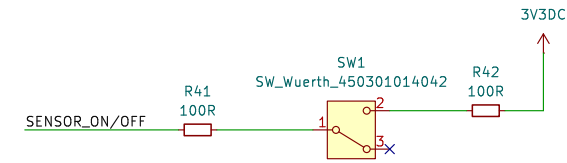
STM32F103C6T6



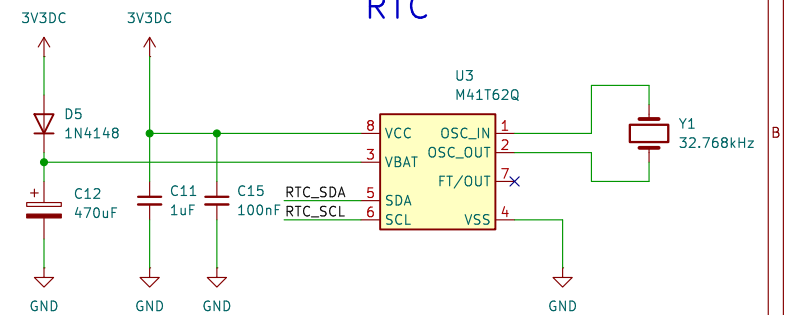
ESP32



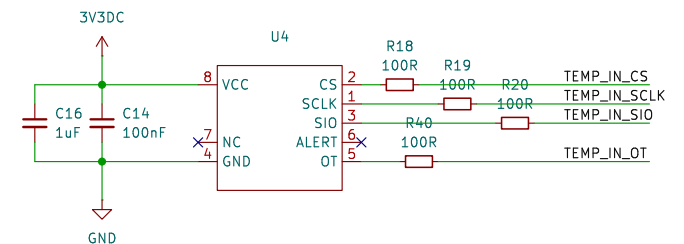
SENSOR ON/OFF



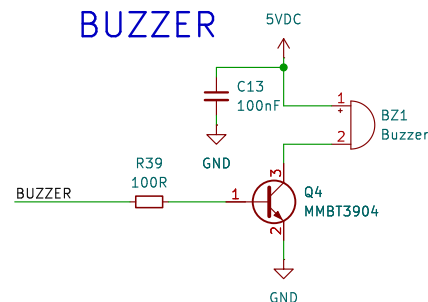
RTC



TEMPERATURE SENSOR



BUZZER



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Yusuf Karabocek

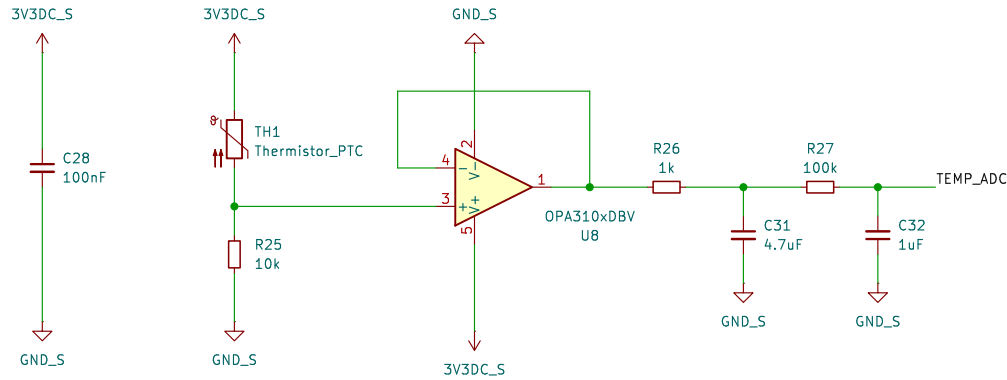
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Title: Microcontroller

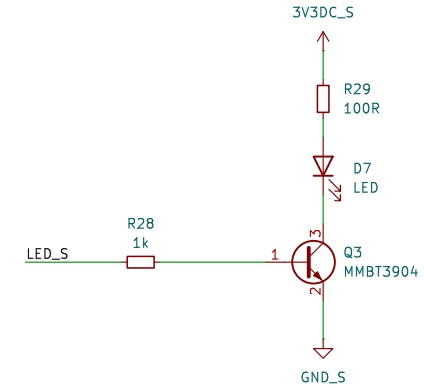
Size: A4 Date: 2025-03-26
KiCad E.D.A. 9.0.1

Rev:
Id: 5/6

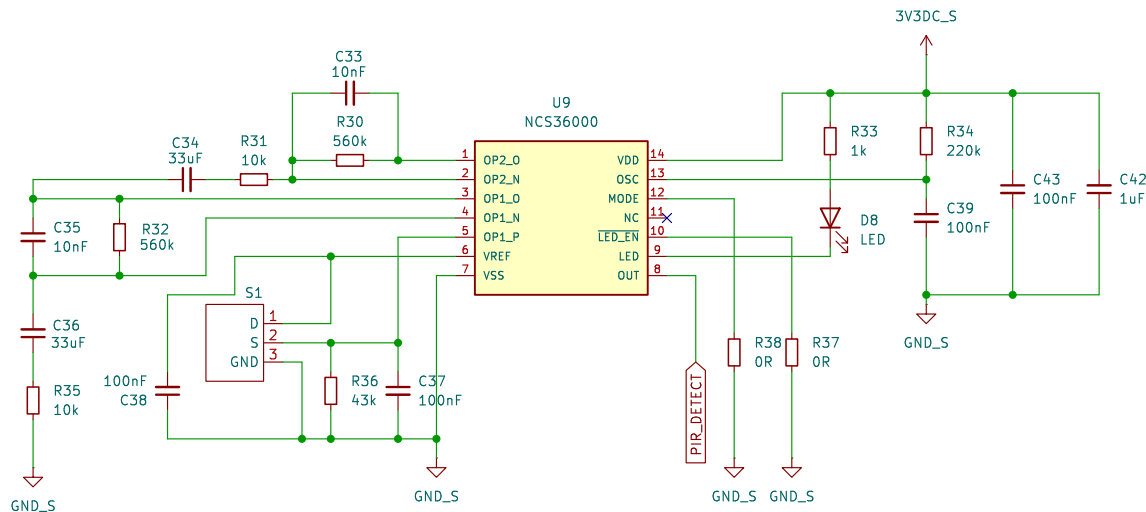
TEMPERATURE SENSOR AND FILTER



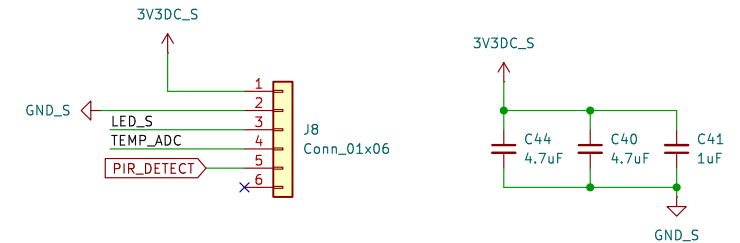
LED_DRIVER



PIR DETECTOR



CONNECTOR



Designed by
Yusuf Karabocek

Sheet: /Sensor Board/
File: sensor_board.kicad_sch

Title: Sensor Board

Size: A4 Date: 2025-03-26
KiCad E.D.A. 9.0.1

Rev:
Id: 6/6