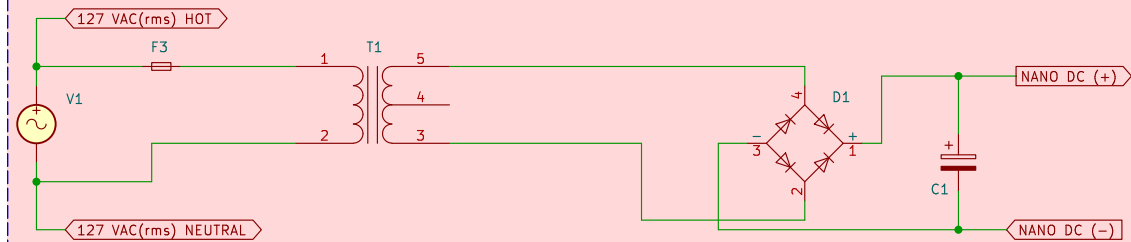
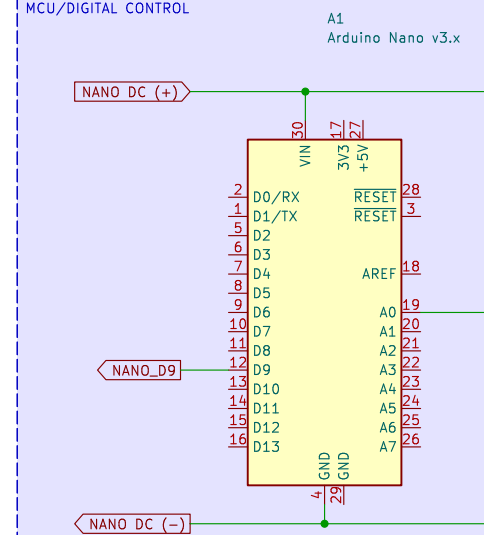


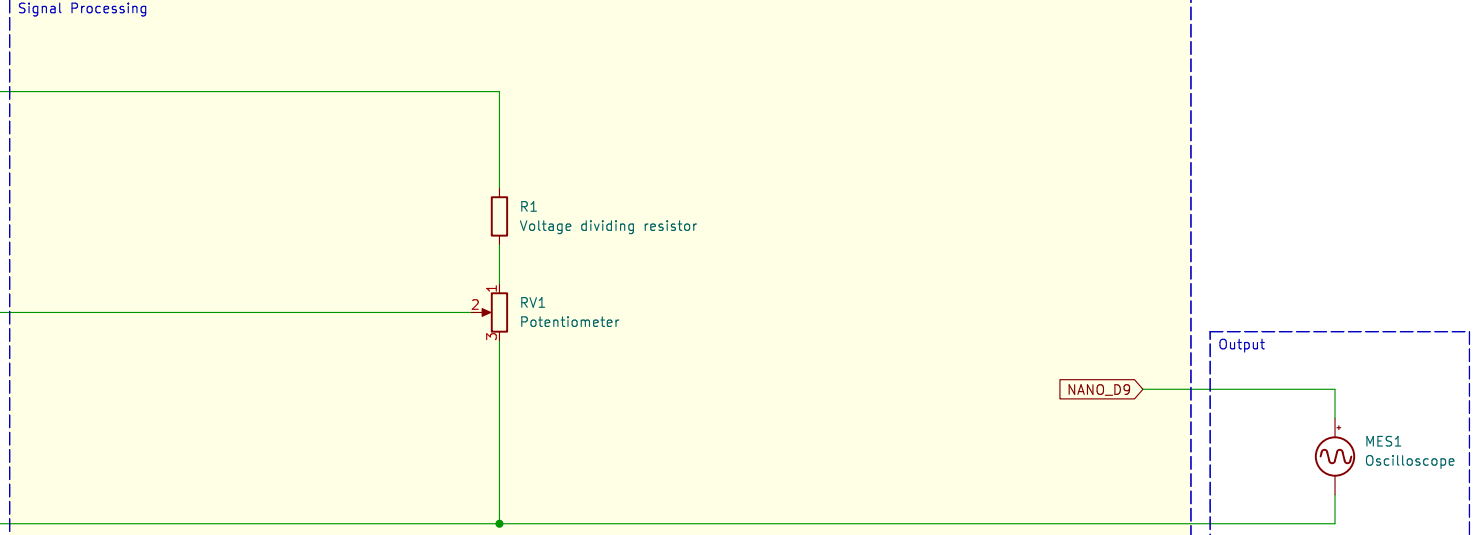
AC TO DC
MCU POWER MANAGEMENT



MCU/DIGITAL CONTROL



Signal Processing



ID	Component	Use	Qty
A1	Arduino Nano v3.x	PWM signal generation, input handling	1
C1	Polarized capacitor	AC to DC sourcing	1
D1	Diode Bridge Rectifier	AC to DC sourcing	1
F3	Fuse	Overcurrent protection	1
MES1	Oscilloscope	PWM signal monitoring	1
R1	Voltage dividing resistor	MCU input signal processing	1
RV1	Potentiometer	UI interface, MCU input signal processing	1
T1	Transformer	AC to DC sourcing	1
V1	Mains VAC	System power sourcing	1

Further reading:
FR1. Atmel (2015). ATmega328P 8-bit AVR Microcontroller with 32K Bytes In-System Programmable Flash DATASHEET. [online]. Available at: https://ww1.microchip.com/downloads/en/DeviceDoc/Atmel-7810-Automotive-Microcontrollers-ATmega328P_Datasheet.pdf.
FR2. Monk, S. (2017). Electronics Cookbook: Using PWM Outputs to Control Power Output. [online]. <https://learning.oreilly.com>. Available at: <https://learning.oreilly.com/videos/electronics-cookbook/> [Accessed 25 Apr. 2025].
FR3. Scherz, Paul, and Simon Monk. "Practical Electronics for Inventors." <https://learning.oreilly.com>. O'Reilly Media, Inc., Apr. 2016. <https://learning.oreilly.com/library/view/practical-electronics-for-inventors/>. Accessed Apr. 2025. ISBN 978-1-25-958754-2, e-ISBN 978-1-25-958755-9.

Contact: <https://sites.google.com/view/b-eng-jarl/home>

Sheet: /
File: UI_PWM.kicad_sch

Title: Arduino Nano: potentiometer-driven fast PWM implementation

Size: A4	Date: 2025-05-02	Rev: 1
KiCad E.D.A. 9.0.1		Id: 1/1