

# Resin exchange controller V1.0

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by Lucas Schmirl, dept. industrial engineering, UAS Technikum Wien, mr22m015@technikum-wien.at

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## Control an arduino Nano and 2 channel Relais to be used with the DLP-System.

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- The push of a button triggers the corresponding Relais circuit (total: 2x 12V).
- Additionally the Relais states are visible at the OLED screen.
- For further use, the Arduino will take digital or analog signals from the DLP-System and can be programmed to act as desired.

### Wires

#### Control

- **Inputs:** 2 Buttons wired to D2 (Button 1) and D3 (Button 2) each to GND
- **Outputs:** 2 Relais signals wired to D6 (Relais 1) and D7 (Relais 2)
- **OLED screen:** I2C connection SDA to A4 and SCK to A5

#### Power

- **Arduino** gets powerd either with mini-USB (5V) or VIN and GND (7V-12V) (current option 2)
- DCDC-Buck is included (currently set to 5V)
- **The Relais** get powered from
  - control signal from arduino (with jumper) from external source (5V DC) (without jumper)
  - external power source (max: 10A 250VAC, 30VDC)

### Convenient connections

For the ease of maintainance, the lid of the control box can be taken off and the components which are fixed to the lid are connected to the system via connectors.

- Momentary switch 1
- Momentary switch 2
- Oled screen

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## Control a stepper motor with arduino uno

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controlled from PC (USB-connection) using python.



## Requirements

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install python3 for windows

install pip:

```
python3 -m pip install --upgrade pip
```

install pyserial:

```
python3 -m pip install pyserial
```

run program with:

```
python3 ./PcToArduino.py
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