- solutions from market
  - LOA24 siemens
    - high price, no possibility to change times, need to buy another one for every change, lack of heater control
    - easy tests https://automatyka-siemens.pl/9-automaty-palnikowe/automaty-palnikowe-loa/?gclid=CjwKCAjwkNOpBhBEEiwAb3MvvWZxZmn7hWOx98VN18wIBMNbPJcvadHqSX_fpMajfZ7AazFE_9B1uxoCsxcQAvD_BwE
  - LOA24 weite
    - good price, compatibility with siemens ready furnaces, compatibility with common testers, questionable accuracy
    - lack of heater control
    - https://pl.aliexpress.com/item/4000687622911.html?src=google&src=google&albch=shopping&acnt=708-803-3821&slnk=&plac=&mtctp=&albbt=Google_7_shopping&albagn=888888&isSmbAutoCall=false&needSmbHouyi=false&albcp=20234370916&albag=&trgt=&crea=pl4000687622911&netw=x&device=c&albpg=&albpd=pl4000687622911&gclid=CjwKCAjwkNOpBhBEEiwAb3MvvacmySfhdUqoM7T5fPQpqQ7WGB4fDpAkOZKOLRYbzZJV5VduXnVPHBoCWgoQAvD_BwE&gclsrc=aw.ds&aff_fcid=f40c2a2274d349d7b339c5b6131fb4de-1697978145554-02060-UneMJZVf&aff_fsk=UneMJZVf&aff_platform=aaf&sk=UneMJZVf&aff_trace_key=f40c2a2274d349d7b339c5b6131fb4de-1697978145554-02060-UneMJZVf&terminal_id=b2169ae43b674fe3b46af07b38ef8436&afSmartRedirect=y
- design goals
  - communication between pi pico and raspberry pi
  - code in c
  - basic functionality implementation
    - starting procedure
    - error handler (e.g. flame went down)
  - creating API communication for remote control
  - adding screen to raspberry pi (displaying basic parameters and manually changing them via buttons)
  - PCB design with Cortex M0 microprocessor
- milestones
  - design code for basic functionality in python 05.11.23
  - test for basic functionality in python 10.11,23
  - design code for basic functionality in c 01.12.23
  - test for basic functionality in c 5.12.23
  - creating communication with web services for remote control 15.12.23
  - PCB design 31.12.23 (with order)
  - hardware testing with all peripheral devices connected (test in real environment) 15.01.24
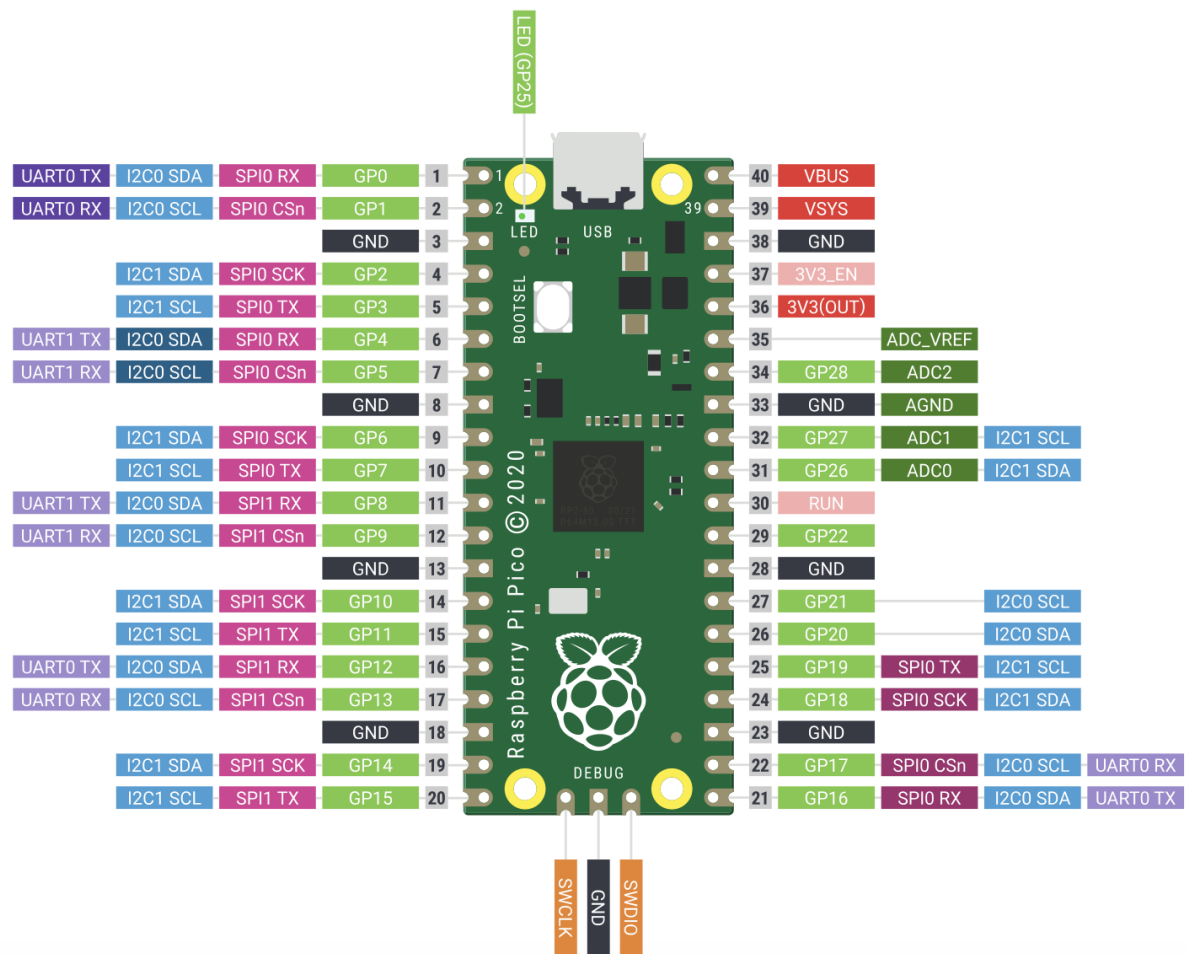
Pin 1,2 - UART to raspberry (UART0)

Pin 4 - flame detector (GPIO2)

Pin 5 - heater (GPIO3)

Pin 6 - fan (GPIO4)

Pin 7 - ignition magneto (GPIO5)

Pin 9 - electrovalve (GPIO6)

Pin 10 - temp sensor (1 - wire)

Pin 11,12 - screen (I2C0)

Pin 14,15,16 - control buttons (GPIO 10,11,12)