title : Electronic diagram `Humidity controller`
author : Dennis van Gils
url   : https://github.com/Dennis-van-Gils/project-humidity-controller
date   : 10-12-2021

18 mA

air

MS

aquarium air pump
220 VAC, 4 W, 100 l/h
Oase OxyMax 100

220 VAC

24 VDC PSU
max 0.75 A
XP POWER VEL18US240-EU-JA

wall socket

Europlug

Europlug

Europlug receptacle
MAX DRAW
40 W, 190 mA !!!

PC - Python

barrel conn.

PSU GND

enclosure

fast-acting fuse
220 VAC 200 mA
EATON BUSSMANN HHT

screw
term

10 mA

BME280 0x76
Pimoroni PIM472

2-6V SDA SCL NC GND

Phoenix plug (2x)
Phoenix 1500363 (2x)

brown   1
white   2
blue   3
black   4

3V3

GND

PSU 24V

valve #1
valve #2

cut traces

μUSB

RESET
3V3
AREF
GND
A0
A1
A2
A3
A4
A5
SCK
MOSI
MISO
RX_D0
TX_D1
D4

RST
3V3
AREF
GND
A0
A1
A2
A3
A4
A5
SCK
MOSI
MISO
RX_D0
TX_D1
D4

Adafruit
Feather
M4 Express
Adafruit #3857

BAT
EN
USB
D13
D12
D11
D10
D9
D6
D5
SCL
SDA

3V3
3V3
GND
GND
BAT
EN
USB
D13
D12
D11
D10
D9
D6
D5
SCL
SDA

Terminal Block Breakout FeatherWing
Adafruit #2926

3V3

GND

SS relay

1   6

GND

2   5

3 **Infineon** 4
   PVT312

PSU 24V

SS relay

1   6

GND

2   5

3 **Infineon** 4
   PVT312

SS relay

1   6

GND

2   5

3 **Infineon** 4
   PVT312

330 Ω
330 Ω
330 Ω

valve #1

valve #2

PSU GND

Phoenix 1500363
Phoenix plug

1 brown
2 white
3 blue
4 black

13 mA

solenoid valve
NO, 24 VDC, 3 W
SMC VDW20GA
#1

1
2

gas in   out

solenoid valve
NO, 24 VDC, 3 W
SMC VDW20GA
#2

1
2

gas in   out

BME280 0x77
Pimoroni PIM472

2-6V SDA SCL NC GND

brown   1
white   2
blue   3
black   4

3V3

GND