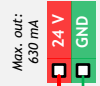


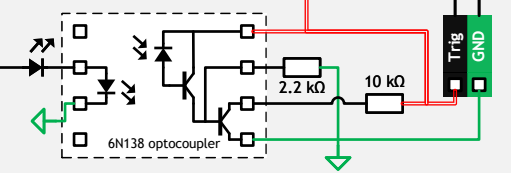
24 V power supply
TRACO TBLC-15-124



5 V power supply
TRACO TBLC-06-104



Trigger out



Note: active high at the microcontroller to pull the trigger signal low.

To camera & SprayTec

Droplet det. photodiode readout

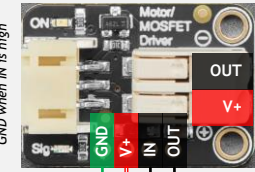
To PDA BNC cable (???
Core mantle)

Voltage divider to convert
10 V output to 3.3 V



Droplet detection laser control
Adafruit MOSFET Driver

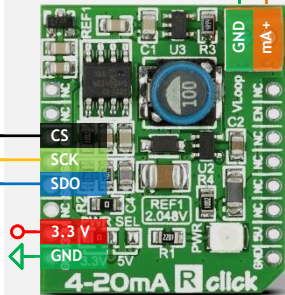
OUT is switched to
GND when IN is high



To laser
phono jack
(5 V center,
GND outer)

Pressure sensor readout
MIKROE 4-20 mA R-click

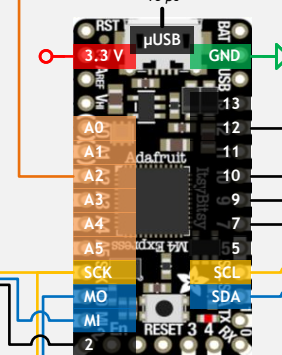
To pressure sensor



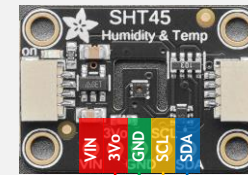
Passive current
receiver (no vol-
tage provided,
scratched out!)

Microcontroller
Adafruit ItsyBitsy M4 Express

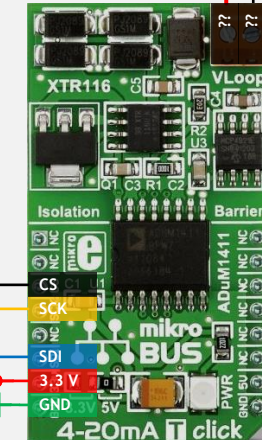
To pc



Humidity & temp. sensor
Adafruit SHT45



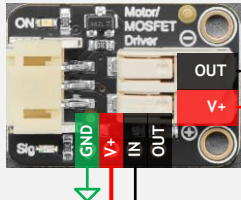
Valve #2 control
MIKROE 4-20 mA T-click




Active current transmitter
with 1.4 V drop over Vloop
terminals, so current is
regulated with a 22.6 V
differential over pins mA+
and mA- of the valve.

Valve #1 control
Adafruit MOSFET Driver

OUT is switched to
GND when IN is high



DESCRIPTION		DATE
Wiring diagram Twente Cough Machine		2025-12-05
DRAWN BY	URL	
Tommie Verouden	github.com/TFLVerouden/cough-machine-control	
		University of Twente Physics of Fluids