

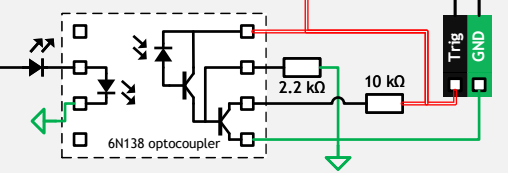
24 V power supply
TRACO TBLC-15-124



5 V power supply
TRACO TBLC-06-104



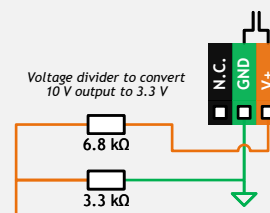
Trigger out



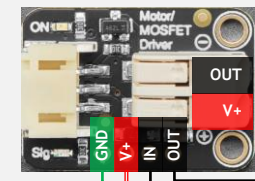
Note: active high at the microcontroller to pull the trigger signal low.

Droplet det. photodiode readout

To PDA BNC cable (??? Core mantle)

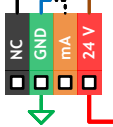


Droplet detection laser control
Adafruit MOSFET Driver



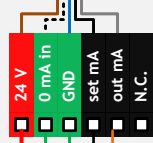
OUT is switched to GND when IN is high

To pressure sensor



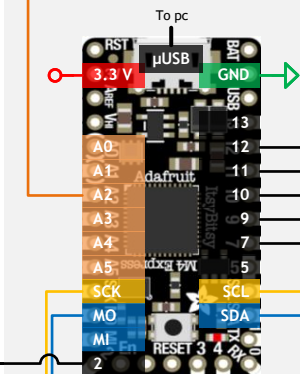
Pressure regulator control
MIKROE 4-20 mA T-click

To press. reg.

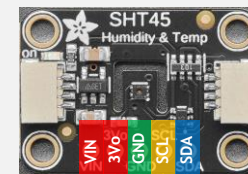


Active current transmitter with 1.4 V drop over Vloop terminals, so current is regulated with a 22.6 V differential over pins mA+ and mA- of the regulator.

Microcontroller
Adafruit ItsyBitsy M4 Express

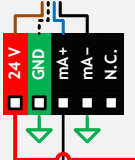


Humidity & temp. sensor
Adafruit SHT45



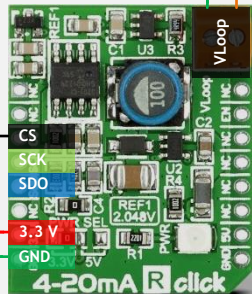
Valve #2 control
MIKROE 4-20 mA T-click

To valve



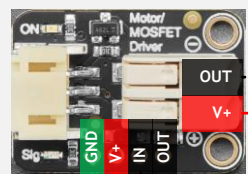
Active current transmitter with 1.4 V drop over Vloop terminals, so current is regulated with a 22.6 V differential over pins mA+ and mA- of the valve.

Pressure regulator readout
MIKROE 4-20 mA R-click




Passive current receiver (no voltage provided, scratched out!) -> TO BE CHECKED

Valve #1 control
Adafruit MOSFET Driver



OUT is switched to GND when IN is high

DESCRIPTION		DATE
Wiring diagram Twente Cough Machine		2025-12-09
DRAWN BY	URL	
Tommie Verouden	github.com/TFLVerouden/cough-machine-control	
		University of Twente Physics of Fluids