



The idea:

- rain is caught by the 150mm diameter funnel
- for winter season there is a heating foil stucked onto the funnel



metall funnel

heating foil

- the water is collected in the metall container and weighted with the load cell
- the weight difference is registered with the arduino and calculated as cumulated rainfall and given as 1 impulse per 0.1mm/m² to the TX module. Maybe 0.05mm/m² resolution is possible.

- the water can be drained with the valve when there was no rain for example 6h before to have always some volume left and it is not necessary to drain during active rain



metall container

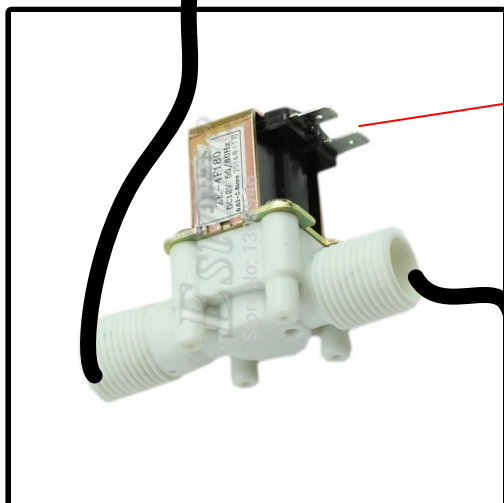
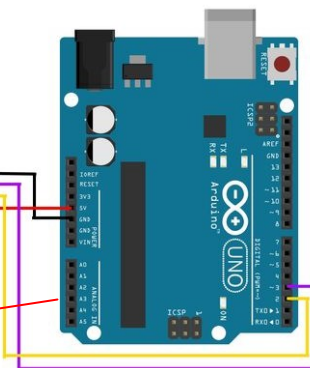
load cell



HX711 DAC



Arduino



magnetic valve

Image sources:

- <https://www.aliexpress.com/item/New-12V-Electric-Solenoid-Valve-Magnetic-DC-N-C-Water-Air-Inlet-Flow-Switch-1-2/32785400617.html>
- https://images-na.ssl-images-amazon.com/images/I/513bgTSK1uL._SY450_.jpg
- https://www.esska.de/esska_de/bilder/lbilder/95117030801X_1040297732132_g.jpg
- <https://publicdomainvectors.org/de/kostenlose-vektorgrafiken/Regnerisches-Wetter/38692.html>
- <https://i.pinimg.com/236x/30/bd/70/30bd70be286235a5be6f0a9324a848d9--ikea-kitchen-kitchen-utensils.jpg>
- <https://cdn.instructables.com/FH7/R58E/J7UR7KPT/FH7R58EJ7UR7KPT.LARGE.jpg>