

```
1 from XRPLib.encoded_motor import EncodedMotor
2 from XRPLib.pid import PID
3 from XRPLib.timeout import Timeout
4 import time
5 import math
6
7 import uasyncio as asyncio
8
9 class Pump:
10     @classmethod
11     def get_default_pump(cls):
12         motor = EncodedMotor.get_default_encoded_motor(4)
13         return Pump(motor, 1.5, 10, -1)
14
15     def __init__(self, motor, turns_to_ml, purge_ml, dispense_direction):
16         self.motor = motor
17         self.turns_to_ml = turns_to_ml
18         self.purge_ml = purge_ml
19         self.dispense_direction = dispense_direction
20
21     def stop(self):
22         self.motor.set_effort(0)
23
24     async def turn(self, turns):
25         start = self.motor.get_position()
26         print(f"Start pos: {start}")
27         self.motor.set_effort(self.dispense_direction)
28
29         while abs(self.motor.get_position() - start) < turns:
30             print(f"Current pos: {self.motor.get_position()}")
31             await asyncio.sleep(0.1)
32
33         self.motor.set_effort(0)
34
35     async def water(self, ml):
36         turns = ml * self.turns_to_ml
37         await self.turn(turns)
38
39
```