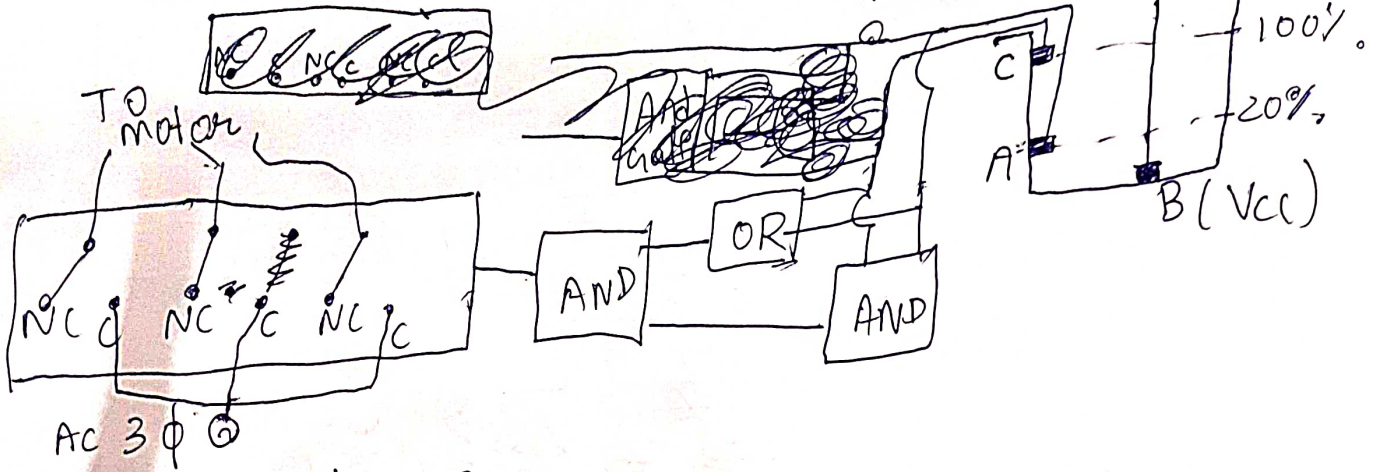


Full Bridge Diode Rectifier

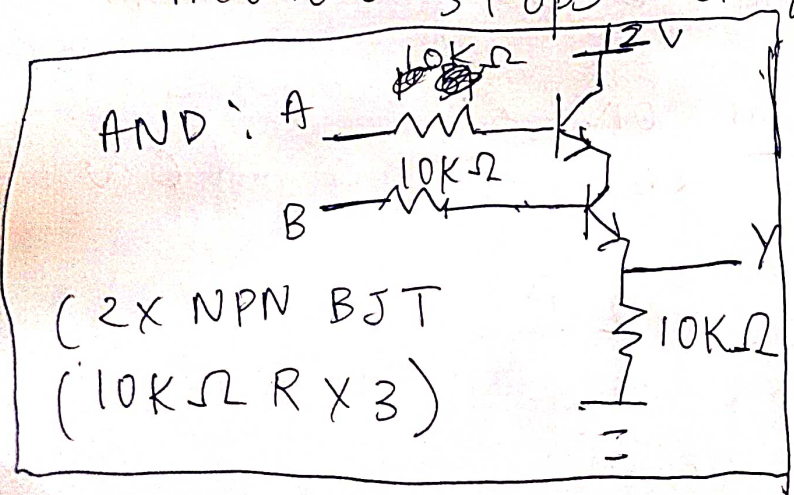


A	C	A · C	
0	0	0	→ motor starts
0	1	0	→ (No change)
1	0	0	↓
1	1	1	→ Motor stops

So $Y = (A + C) \cdot (A \cdot C) =$

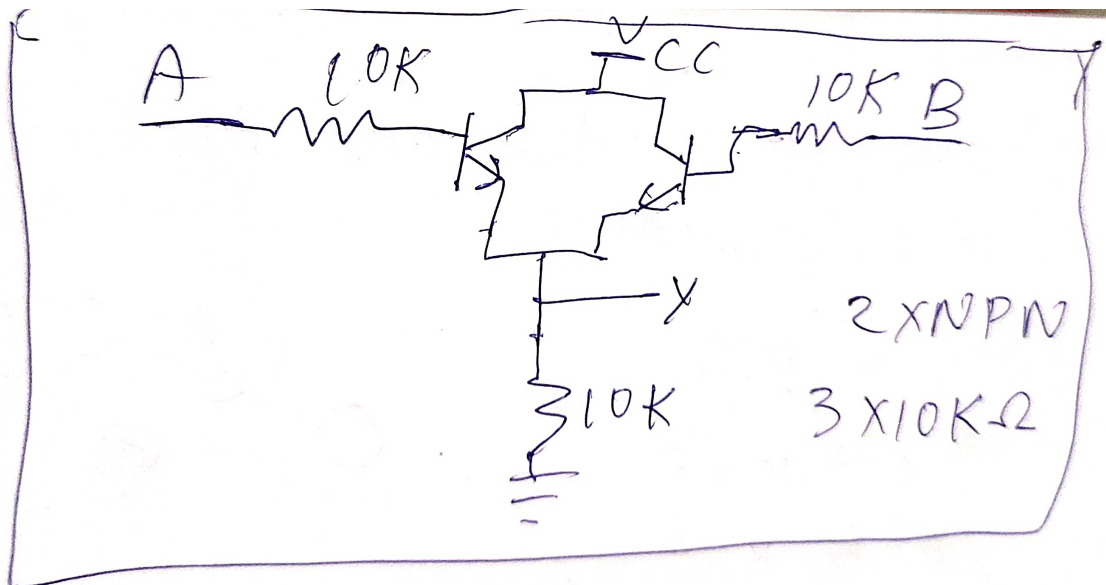
and motor starts at $Y = 0$.

motor stops at $Y = 1$



Doing this ensures high current can pass (400V, 2A rated).

OR
gate



The input is 3 Phase but our controller uses 1 phase and then using a transformer with turn ratio around 20:1 we get 12V ac.

We use full ~~wave~~ Bridge Diode rectifier.

As the electrical circuit uses transformer so its isolated and we will not get shock later from water tank.

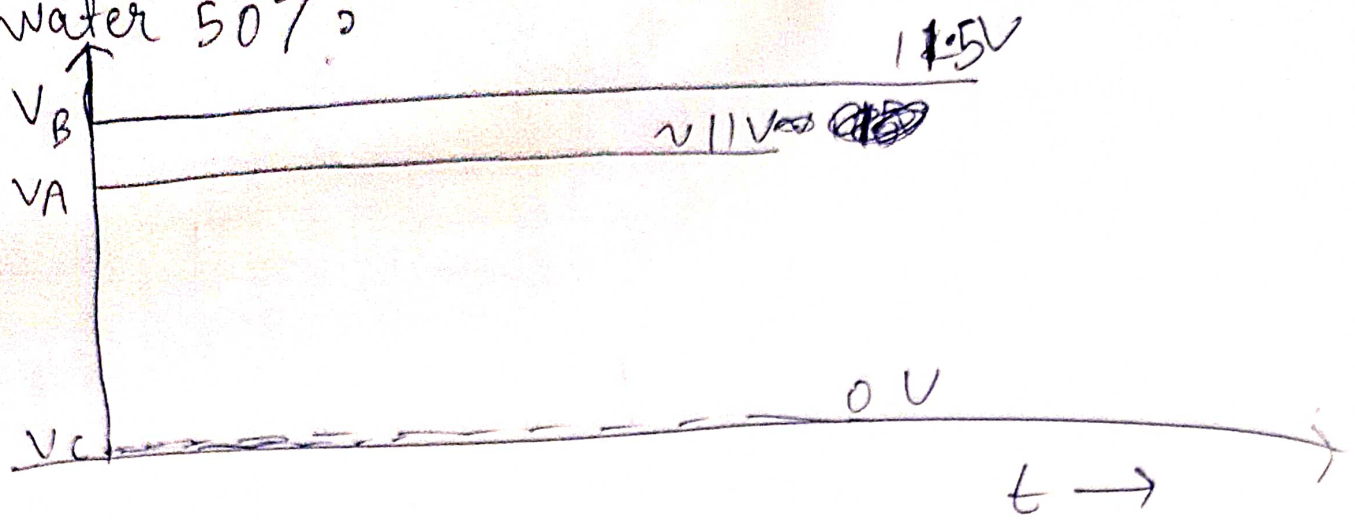
The output from Diode rectifier is ~~goes through capacitor~~ thus safe.

Our logic part works as when water level is between 20-100 the A has voltage in $[5, 12]V$ while C has 0V.

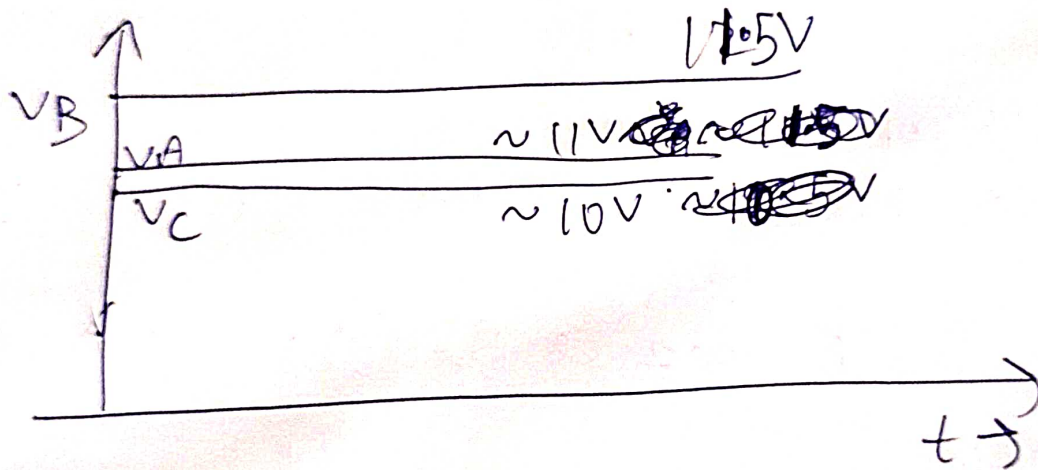
$$\text{So } (A+C) \cdot (A \cdot C) = (1+0) \cdot (1 \cdot 0) = 0$$

So pump is OFF.

Water 50%



Water = 15%



Water 100%

