



AUTOMATED WATER LEVEL CONTROL SYSTEM FOR FARMERS

To automate the management of water in a reservoir using a level sensor that monitors volume and controls a pump, ensuring consistent water availability without overflow or dry spells.



Manual monitoring and filling of water reservoirs is labour-intensive, error-prone, and can result in delays that affect crop irrigation. A reliable, automated system is needed to maintain optimal water levels without constant human oversight.



A LEVEL SENSOR IS INSTALLED IN A RESERVOIR TO CONTINUOUSLY MONITOR THE WATER LEVEL. THE SYSTEM IS CONFIGURED WITH TWO CRITICAL THRESHOLDS:

- **Low-Level Threshold:** When the water level drops below this point, the sensor signals the system to activate a pump.
- **High-Level Threshold:** When the water level reaches this point, the sensor signals the system to deactivate the pump.

The pump draws water from a dam or similar water source and fills the reservoir until the upper limit is reached. This operation is fully automated.





FUNCTIONAL WORKFLOW



➤ CONTINUOUS MONITORING ➤ LOW-LEVEL TRIGGER ➤ HIGH-LEVEL TRIGGER

The level sensor regularly measures the water level inside the reservoir.

If the sensor detects the level is below the predefined low threshold, the system:

- Sends a signal to start the pump.
- Begins refilling the reservoir using water from the dam.

Once the sensor detects that the water has reached the high threshold, the system:

- Sends a signal to stop the pump.
- Ensures no overflow or wastage.



KEY BENEFITS



➤ HANDS-FREE OPERATION:

Eliminates the need for daily manual checks.

➤ WATER SECURITY:

Ensures water is always available when needed for irrigation.



➤ ENERGY EFFICIENCY:

Prevents unnecessary pump operation, reducing energy costs.

➤ RELIABILITY:

Reduces human error, ensuring consistency in reservoir management.

